FEEDBACK

MLA – FOSTERING PROSPERITY

SPRING 2025

mla
MEAT & LIVESTOCK AUSTRALIA

MLA fosters the long-term prosperity of the Australian red meat and livestock industry by delivering world-leading outcomes that fuel global competitiveness, sustainability and producer profitability.

Cover: WA beef producers Kent and Michelle Rochester with their sons Thomas (left) and Kobi (right). Turn to page 6 to learn how the Rochesters are embracing ag-tech to run their enterprise. Cover story: Clare Le
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MLA acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this publication.

MLA acknowledges the Traditional Custodians of the lands on which we live, work and care for. We pay our respects to Elders past and present, as we recognise their history, culture, connection to land and water, and share in their commitment to caring for Country.

A note from the MD

Welcome to the spring edition of *Feedback* magazine.

MLA AGM

Firstly, MLA's Annual General Meeting and MLA Updates event will be in Adelaide on November 19 and 20 – turn to page 2 and 3 for more details. I hope to see you there.

Tarrifs

Since our last edition, domestic conditions and our broader trading environment have continued to shift rapidly.

In early August, the US further increased tariffs against many of its trading partners. For Australia, the baseline tariff level of 10% remained unchanged, with Australian red meat continuing to fulfil a critical need in the US market and demand remaining incredibly strong.

The US tariffs are creating complexity around the world, which is spilling over to Australia's trade dynamics – but the overall story is that Australia is continuing to meet global need through our reputation for consistent quality and supply. In doing so, the Australian red meat industry significantly contributes to the national economy.

Beef exports hit a new all-time high in July, breaking records for the second month in a row.

By the end of July 2025, Australia had exported 1.3 million tonnes of red meat year-to-date, which was 11% higher than the first seven months of 2024 (which itself was a record export year).

Drought in the south is having an impact on lamb and mutton, with exports falling as production has weakened in Victoria, NSW and South Australia over the winter months.

With the tightening of supply, we have seen record lamb prices, driven by strong international demand and competition from processors. MLA's Manager for Market Information, Stephen Bignell, explains the sheep and lamb market dynamics in more detail on page 4.

The cattle market has also been generally very strong, and the latest beef producer intentions survey showed some producers are holding back cattle in anticipation of higher prices.

Strategic plan

I have been talking with many stakeholders about MLA's new *Strategic Plan 2030*.

One of the key themes of discussion has been the importance of productivity-driven sustainability investments.

This is a key feature of *Strategic Plan 2030*, particularly as we focus on investments that assist Australia to achieve its net zero ambitions.

Our commitment to reducing emission and emission intensity remains firm. MLA will accelerate investment in practical, science-based solutions that help producers lower emissions, reduce emissions intensity per kilogram, increase carbon storage in the landscape and improve productivity.

This work includes deepening our understanding of the biogenic methane cycle to improve how we measure and reduce emissions and support on-farm changes that deliver both economic and environmental value. We will also continue investing to deliver methane as a trait in genetic evaluations, feed supplements that reduce methane in feedlot and extensive systems, and technology that reduces the cost of measuring soil carbon and sequestration.

We will continue to track our performance towards climate and carbon neutrality as a key benchmark for our industry.

Turn to page 36 to see how producers in WA are responding to climate challenges. This edition also shares the stories of producers who are adopting R&D outcomes to achieve on-farm productivity, through genetics, feedbase and innovation.

Maintaining EU market access

New European Union Deforestation Regulations (EUDR) come into effect on 30 December 2025.

As a result, European importers of beef, beef products, leather and hides will require access to the lifetime geolocation data of the cattle these products are sourced from.

To ensure you remain compliant with the new regulations, I encourage all EUCAS producers to share their geolocation through the Livestock Production Assurance (LPA) Geolocation tool as soon as possible.

The Geolocation tool enables industry to demonstrate the lifetime credentials required to maintain EU access while allowing producers to retain control of their data. This geolocation data is then shared securely with feedlots and processors via the National Livestock Identification System (NLIS).

While the EUDR won't come into effect until 30 December 2025, EUCAS producers will need to provide a geolocation if they wish to supply a EU supply chain.

Act now to maintain EU access

Scan or click the QR code to learn more about EUDR. You can opt-in to share your geolocation now by logging in to your LPA account via **mla.com.au/mymla**

Michael Crowley – MLA Managing Director

I am always keen to hear MLA members' thoughts and feedback – please email me at **managing.director@mla.com.au**

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Get involved in research that matters to you

MLA and the Grains Research and Development Corporation (GRDC) are again joining forces to support mixed farming businesses across Australia through a new round of Producer Demonstration Site (PDS) projects.

This initiative targets producers operating livestock and grain enterprises. It builds on the success of the 2024 pilot, which supported five projects to establish 32 new demonstration sites and engage 49 core producers and more than 600 observer producers.

By participating in the joint MLA/GRDC PDS Program, producers can trial new practices tailored to their unique farming systems, learn directly from peers, and contribute to shaping climate-resilient, sustainable agriculture.

Preliminary applications for the 2025 Partnership PDS call are now open, and close on Friday, 3 October.

Scan or click the QR code to visit the MLA/GRDC Partnership PDS page for guidelines and application form:

AGM voting packs move online

MLA's 2025 AGM will be a hybrid event taking place on 20 November online and in-person as part of the MLA Updates in Adelaide, SA.

This year, in-line with MLA's ongoing commitment to sustainability, we are changing the way we deliver documents to members for the AGM.

All members who have provided an email address will receive their AGM packs electronically. If MLA does not have an email recorded, those members will be sent a Notice of Access letter detailing where they can find the documents relevant to the AGM.

Any member who wishes to receive a printed version of the AGM documents can request this by advising us of their preference.

For more information visit **mla.com.au/agm**

Are you the industry's next ambassador?

Are you – or is someone you know – passionate about the red meat industry and keen to help shape its future? You could join the ranks of MLA's Red Meat Ambassadors, with applications now open for the next round of the popular program.

Since its inception in 2021, the program has trained more than 500 passionate individuals from across the red meat supply chain. Ambassadors are equipped with skills (such as in storytelling, social media and public engagement) to effectively engage their communities and share the positive story of the Australian red meat industry.

Workshops will be held in Brisbane, Sydney, Melbourne, Adelaide and Darwin over the next 12 months.

Scan or click the QR code to find out how to be involved:

Lamb wins a Lion

MLA's 2025 Summer Lamb campaign, 'The comments section', won a Silver Lion at this year's Cannes International Festival of Creativity.

The festival, held annually in Cannes, France, is the world's most prestigious celebration of creativity in advertising and communications.

Summer Lamb was one of only 15 campaigns globally to receive a Silver Lion – it was also the first Silver Cannes Lions win in the Film category for Australian Lamb in the campaign's 20-year history.

The campaign stood out in a field of 1,636 global entries, including work from some of the world's most iconic brands such as Apple, Nike, L'Oréal, Adidas and Budweiser.

Created by Droga5 ANZ, part of Accenture Song, and directed by Max Barden from The Sweetshop, 'The comments section' cleverly brought to life Australian social media comments by reimagining them as a real-world cauldron of opinions, misunderstandings and cultural clashes.

This milestone win reinforces the Summer Lamb campaign's legacy as a platform that delivers impact for Australian lamb producers and levy payers.

Watch 'The comments section' by scanning or clicking the QR code:

Australia pioneers world-first FMD vaccine

A world-first biodegradable vaccine to protect livestock from foot-and-mouth disease (FMD) has been developed through a $20 million, five-year research partnership between MLA, Tiba Biotech and the NSW Government.

While Australia remains FMD-free, modelling from Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) has estimated an FMD incursion could cost the Australian economy up to $80 billion. An incursion would have a catastrophic impact on trade, animal welfare and farm productivity.

MLA Managing Director, Michael Crowley, said while it was hoped that an FMD vaccine would never be needed, the research represented a proactive approach to managing biosecurity risk.

"FMD is present in countries near to Australia and is front of mind for industry in terms of potential biosecurity risks," Michael said.

"Vaccination may not necessarily be required in the event of a disease incursion, but this research demonstrates that the Australian industry is proactive and prepared."

Rigorous process

Researchers found that the new vaccine demonstrated strong, effective immune response and safety in preliminary trials in Germany. Vaccinated cattle did not contract FMD when exposed to the disease and, importantly, they did not shed the virus.

The new biodegradable vaccine uses mRNA to induce an immune response, rather than an actual virus. mRNA vaccines have been proven safe for animals and for consumers.

Following these trials, the vaccine must now undergo a rigorous evaluation process with the Australian Pesticides and Veterinary Medicines Authority (APVMA) before approval for use on livestock.

"The delivery of an FMD vaccine is part of the Minns Government's commitment to safeguarding livestock from key biosecurity threats and ensuring the state's agriculture industry can thrive," NSW Minister for Agriculture, Regional and Western NSW, Tara Moriarty, said.

"Developing local capacity to produce vaccines against emergency animal diseases is a critical priority for the NSW Government, Australia's livestock industries and our economy."

Safety and effectiveness

Australian-based Tiba Co-Founder, Peter McGrath, said the company is focused on working with regulators to ensure vaccine safety and effectiveness.

"Australia is now at the forefront of livestock vaccine development, bringing with it the potential to develop manufacturing capacity, jobs and exports," Peter said.

"Livestock mRNA vaccines offer a safe, efficient and effective approach to protecting animal health, benefiting both the agricultural industry and consumers.

"Unlike current mRNA technologies, our vaccines can be stored long term at standard refrigeration temperatures and even at room temperature for at least one month. This is a critical advantage in livestock applications."

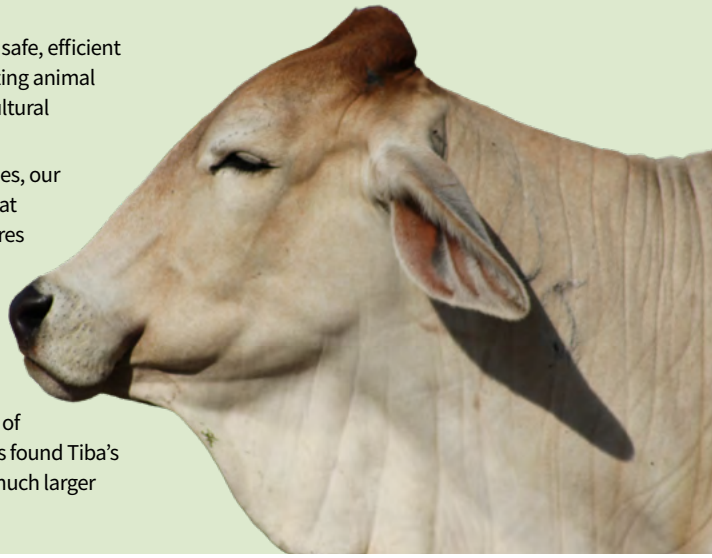
The research included an extensive evaluation of the safety of Tiba's vaccines. These evaluations found Tiba's vaccines safe at very high doses much larger than would ever be administered.

The project is also conducting similar research to develop a vaccine for lumpy skin disease, which is also a significant exotic disease threat to Australia.

mRNA vaccines allow the animal to create proteins and antibodies to trigger an immune response. They do this without entering the nucleus of cells and disappear from the animal within days, leaving antibodies behind for protection against the virus.

The project has also included input from the Queensland Department of Agriculture and Fisheries, the German Friedrich-Loeffler-Institut and Canadian Food Inspection Agency. ■

Scan or click this QR code to read answers to frequently asked questions about the FMD vaccine:



Countdown to Updates

MLA's flagship event, MLA Updates, is heading to Adelaide, SA, in November.

The MLA Updates program – on **Thursday 20 November** – includes practical demonstrations, presentations and panel sessions, as well as MLA's Annual General Meeting (AGM) and a sundowner social event.

MLA's Managing Director Mick Crowley will share insights into how the first year of MLA's *Strategic Plan 2030* is delivering practical outcomes to improve producers' productivity, profitability and sustainability. The Red Meat Council of Australia will host a forum.

More speakers will be announced closer to the event.

MLA UPDATES

Towards 2030: Driving prosperity through productivity, profitability and sustainability

MLA Updates will be preceded by a field trip on **Wednesday 19 November** to Adelaide University Roseworthy Campus hosted in partnership with Livestock SA. Wednesday will also feature the LivestockSA AGM and industry dinner.

Mark the date in your calendars and keep an eye out for more details at **updates.mla.com.au** or sign up to *The Weekly* e-newsletter at **mla.com.au/enews**

The stock/take

with Stephen Bignell, Manager – Market Information

MLA's Market Information team unpacks trends and data, to help inform your business.

Lamb and sheep prices have surged in 2025. All saleyard indicators have broken new records. The trade lamb and heavy lamb prices have edged close to $12/kg carcase weight (cwt), with mutton prices nearing 750¢/kg cwt. Here, I take a look at why, and what it means on-farm.

Why prices have reached record highs

Lamb slaughter and production volumes are predicted to be the second highest on record for the 2024–25 financial year – only behind 2023–24.

This demonstrates the high volume of lamb Australia is producing. However, despite such large amounts of product, prices have remained high.

The reason? Strong demand – this is what allows industry to receive record prices while at the same time producing high quantities of lamb.

In particular, strong demand is coming from the US, China, the Middle East and North Africa.

There's also a domestic factor at play. In the past three years, processors and the lamb and sheep supply chain have invested in capacity, allowing Australia to process 40 million head of small stock annually. To recoup the investments in capacity, these plants need to operate with high throughput. This has created more processor demand for lamb than ever before.

The role of weather

Prices are also being driven high by the drought and dry conditions across southern Australia – especially in SA, Victoria and southern NSW.

It's unusual for a drought condition to coincide with high prices. Usually, dry conditions dampen prices as it would result in a flush of animals hitting the market.

The protracted nature of the dry, which started in late 2023, has impacted both the weights of animals hitting the market (they are lighter than expected) as well as the predicted future supply of lambs (which is expected to drop in late 2025 through into 2026).

The expectation of falling supply going forward is having a big impact on prices – the anticipation about future supply constraints is significant.

Seasonal impact to pricing

Historically, lamb prices increase in the winter months as lambing and processor maintenance shutdowns occur. There is traditionally a supply gap and price rise before the new season lambs hit the market in early spring.

The lamb sector has not seen a winter supply gap since 2020, for a range of reasons including COVID-related supply chain disruptions and floods. However, coming into 2025, much of the nation's sheep-producing country has been experiencing extremely harsh weather conditions, pushing the sector back into regular seasonal supply cycles.

Top performers

All lamb and sheep categories are performing well in 2025 – some up more than 150% since the price drops experienced in 2023.

The price for lambs is helping drag up the price of mutton.

In early 2025 there was an abundance of lamb, allowing processors to be selective regarding the lambs they were purchasing.

The perceived lack of supply through the winter months has helped boost the price for light and Merino lambs, removing any discount that had existed. However, it wasn't until the tail end of winter that supply has actually reduced.

Implications of high prices

What do current high prices mean for producers going forward? MLA launched a new indicator for the sheep market in June 2025 – the Online Sheep Indicator (OSI), which tracks the price for restocker mutton sold via online channels.

The OSI is showing that the restocker market for sheep is strong for producers who have access to feed and water.

People are paying high prices for breeding ewes, especially Border Leicester–Merino ewes.

High restocker prices for breeding stock indicates producers expect the price for lambs will remain high for the foreseeable future.

The OSI has smashed through the $250/head ceiling and breeding ewes in the online channels are now fetching more than $254/head. This demonstrates the strong investment some producers are making in the future of their flocks and their positive sentiment. ■

Indicator highlights

- OSI at **$254/head**
- Some lambs have been fetching more than **$14/kg** at some individual saleyards

Stand-out indicator prices (average across all sale yards nationally)

Trade lamb	1195.19	¢/kg cwt
Heavy lamb	1182.01	¢/kg cwt
Mutton	748.64	¢/kg cwt

MLA market reports: **mla.com.au/prices-markets** MLA trends analysis: **mla.com.au/trends-analysis**
Insights team **insights@mla.com.au**

ON FARM

RESEARCH IN ACTION

Seasonal action plan

» Turn to page 25 to learn how the Connors family are managing liver fluke on their Running Creek, Victoria, beef property.

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Tap into a genetic solution to methane emissions

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Minimise the impacts of pasture dieback

Southern

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Fill the feed gap with flexible legumes

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Assess how adjusting drench timing can reduce resistance

Breaking down the barriers to success

Innovative WA beef producers Kent and Michelle Rochester are reaping the rewards of embracing ag-tech and thinking outside the box as they manage their thriving grassfed cattle finishing operation.

The multigenerational family farm on WA's south coast was settled by Kent's grandfather in 1956. It was planted out to blue gums in the 1990s. When Kent and Michelle bought the farm in 2005 they began transforming the plantation into a highly efficient grazing enterprise where they finish up to 3,000 yearling and heavy weaners year-round.

Adapting to change

While working in a vineyard when he was 21, Kent acquired a life-changing spinal injury, resulting in paraplegia. Although a significant setback for a young man just starting out in his career, his focus remained fixed on forging a future in agriculture. Kent's resilience and adaptability, along with the support of his family, has seen him push the boundaries both personally and within his business.

"Being in a chair has changed the way I farm, but I think there's some real positives that have come out of it," Kent said.

"I have time to think about things and analyse what's going on and make things happen that other people don't have time to sit back and see from the outside. I think that's a bonus."

Day-to-day, Kent conducts much of his work out in the paddocks in his converted ute and tractors. He also makes use of a range of ag-tech to keep on top of his cattle's daily gain and pasture utilisation.

"I live in my ute. I set it up a few years ago – I spent about a month just daydreaming how on earth I was going to make a dual-cab ute work," Kent said.

"I've done more than a million kilometres and I guess 10,000 hours in tractors and different machines and figuring some of that out took some doing.

"We built sling-type lifts to sling me into several loaders and tractors – the first few were a bit dodgy but now we have a really good set-up. We also have a few different seat lifts to transfer me from wheelchair height to 4WD seat height to allow me to access my mobile office."

SNAPSHOT

KENT AND MICHELLE ROCHESTER –
Manypeaks, WA

AREA
1,300ha (800ha pasture, remainder forestry and remnant bush)

ENTERPRISE
Grassfed finishing enterprise, turning off 3,000 Angus a year (1,000–2,500 on-farm at a time)

PASTURES
Ryegrass, clover, cereals and brassicas

SOILS
Sandy loam over clay or gravel

RAINFALL
700mm

Going green opens new markets

Following a particularly tough autumn in 2018, Kent and Michelle made a conscious choice to move further towards a regenerative farming approach.

They now supply the Coles Graze grassfed beef program and online regenerative farmers market company, Dirty Clean Food.

> **"I have time to think about things and analyse what's going on and make things happen that other people don't have time to sit back and see from the outside. I think that's a bonus."**

Kent and Michelle Rochester with their sons Kobi (left) and Thomas (right). Image: James Campbell for Coles Nurture Fund

The Rochesters' cattle have quickly learned where the virtual fence boundaries are thanks to their solar-powered collars. Image: James Campbell for Coles Nurture Fund

Switching from a breeding to a finishing operation worked in well with this shift.

"We moved over from breeding to grass finishing, mainly because I'm on this quest to be really efficient with our grass and gaining as many kilos of beef as we can from what we've got," Kent said.

Currently they are sitting at about 600kg beef/ha/year but Kent wants to keep pushing the boundaries.

"Profitability is a driver of getting more kilos of beef per hectare. It's pretty tough and the margins are really tight," Kent said.

Virtual fencing fast-tracks gains

Implementing an intensive rotational grazing system was the next logical step to boost their pasture utilisation efficiency, and their 2024 investment in virtual fencing gave them the flexibility to fully realise the system's potential.

"Fencing plans, water plans, grazing plans were all on the table. There was no preset paddock plan or anything like that. That's what first got me looking into virtual fencing," Kent said.

"We changed everything up and the farm hasn't looked back since. We've gone to super-frequent shifts of grazing per paddock, kept a careful eye on how much pasture is left after each shift and moved to super high density."

He and Michelle gained further grazing management skills by attending a Grazing Matcher™ Profitable Grazing Systems (PGS) training course – designed to improve the productivity, profitability and resilience of producers by enabling them to better match grazing pressure, fertiliser application, animal requirements and market demands.

A moveable feast

The couple initially invested in 50 virtual fencing collars, and currently manage 500 cattle with the technology. Their next target is 1,200 collars – to be achieved with the help of a Coles Nurture Fund grant – and Kent's goal is to implement a virtual fence line that moves continually across the property, elegantly guided by information fed back to him in real-time.

"Once the cattle are trained to the fence, you can make a lot of changes," Kent said.

"I can't wait for the point where we can move over to a rolling fence that moves two to three metres an hour and literally rolls down the paddock."

The fencing technology also allows Kent to manually redraw fence lines and set up movements according to a pre-programmed schedule. Leaving enough space around water points and getting used to fences which he can't physically see has been important.

"The only constraint we've encountered so far is that it can take a bit of time for the signal to get to the collar and change the animal's coordinates," Kent said.

How the collars work

The solar-powered collars use GPS to monitor cattle's movements and emit beeps when they approach the virtual fence line. If they continue past it, an electrical pulse is administered.

"They turn around and realise where the boundary is. At first, we were worried about the welfare side of things, especially my wife. I thought I'd be looking at how adverse their reaction to it would be, but instead, we found

Kent's farm was featured as a virtual farm tour at MLA's recent Wagga Wagga MeatUp forum – scan or click the QR code to watch:

a positive reaction," Kent said.

"Seeing cattle that are gaining 2.5kg/day on grass and walking up to you and licking the ute's mirrors and looking really relaxed and really happy, reassured us that they were doing way better than I ever imagined."

Return on investment

In the long term, Kent and Michelle hope to set up most of their farm with virtual fencing, but at $350 per collar, they're keen to make sure there's a healthy return on investment.

"We saw amazing results with our first 50 collars, even in the first month. Although we had a really short growing season in 2024, we had a period where we were growing a lot of beef," Kent said.

Labour and infrastructure savings, along with the increase in productivity and grazing efficiency, are good reasons to keep going.

"I would like to think they'll be paid for in three or four years. I might be being a bit optimistic, but it's looking really good so far."

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Tech working in tandem

Virtual fencing is just one part of a suite of ag-tech that Kent uses at his property – and making sure it's all in sync has been the key to his success.

"The feedback on how often we're moving the cattle and what that's doing to them in real time in terms of weight gain is the main driver of our great results," he said.

"We know that if we move them, leave them but then keep them there too long, they're going to pull back in weight gain. If we move them too fast, we're wasting grass.

"Maximising what we can get out of that paddock and turning it into beef depends on meshing all those parts together."

Kent uses Optiweigh, a system to measure animal weights in real time, direct from the paddock, for ground-truthing the feeding of pasture and the rations they develop for supplementary feeding.

"It tells us whether they're gaining weight or losing weight and helps us understand what is happening in a paddock.

"Right now, I'm looking at the feed we're giving a particular mob and it's not working. They've flatlined on their weight gain so we'll change up their feed straight away," he said.

"We don't have to wait a month until they come back to the yards and then realise that we've missed a month of weight gain. It means we can act on things much faster."

Kent uses a grazing management app where he can log feeds, keep an eye on cost of production and tailor rations to achieve his target weights. This is particularly useful in an operation like Kent's that supplies beef every week to specific markets with set parameters around carcase weights.

Electronic identification (eID) tags help keep track of animals, particularly of their bloodlines.

"We get information on how we're doing and how they are performing. It informs our decisions around whether we should buy those bloodlines again and how they are going to grade in terms of eating quality." ■

Note: Use of virtual fencing is governed by relevant state authorities and is currently restricted in some jurisdictions. Click or scan the QR code to find out what legislation is relevant in your state:

TOOLBOX

- Grazing Matcher™ Profitable Grazing Systems program: **mla.com.au/pgs**
- MLA's Digital agriculture information: **mla.com.au/digital-agriculture**
- Search for ag-tech options: **agtechfinder.com**
- Attend an MLA MeatUp forum near you: **mla.com.au/meatup**

The Rochesters currently manage 500 cattle with the technology, and aim to increase this to 1,200.

Kent Rochester **kmfarm@bigpond.com**
Mitch Plumbe **mplumbe@mla.com.au**
Elizabeth Thelander **ethelander@mla.com.au**

Four steps to improve predator control

Livestock predators like wild dogs and foxes are a seemingly endless challenge for many producers, with the significant financial toll only adding to the distress.

As land use diversifies and ownership changes hands, building a collective effort to overcome predator numbers has become a priority for several communities.

Here, National Wild Dog Management Coordinator Greg Mifsud runs through the 'action cycle' and outlines strategies producers can use to help protect livestock against predators.

The action cycle

Despite being an ongoing issue for producers across the country, Greg said the strength and knowledge of management and participation in control waxes and wanes from year to year, allowing predator populations to do the same.

"At the moment I'm seeing a five to eight-year cycle where groups are established and there is a really strong level of knowledge and effort. But, as the crisis from impacts are managed, the level of control also drops off, leading to predators building in numbers again," Greg said.

"When land ownership changes, whether due to succession or people buying property, the depth of knowledge around how much work goes into predator management is often lost. In some cases, people moving into an area may not even know it's something they have to consider."

As well as leaving a gate open for rising predator numbers on those properties, neighbours can suffer too.

The increasing diversity of land use – including for mines, renewables or lifestyle blocks – also means a difference in interest to manage local predator populations.

National Wild Dog Coordinator Greg Mifsud (far right) consulting with producers in Victoria.

"Where we can, we need to raise awareness of the impact and resources available."

Greg recommends the *National Wild Dog Action Plan* as the best source of information for producers to use and share – visit **wilddogplan.org.au** to access the plan.

Practical ways to improve baiting

While a concentrated effort within a community is usually most effective, Greg said in cases where that isn't possible, there are still effective strategies to implement.

Wild dogs and foxes are creatures of habit and will use the same travel routes and corridors within the landscape. These include:

- vehicle tracks and fire breaks, particularly at junctions or where they lead to water
- ridgelines and valleys
- on the edges of crops in patches of native vegetation or grassland
- dry creek beds, creeks and drainage lines.

Pay particular attention to these corridors where they exist on the boundaries between properties.

Noting these frequently visited areas, Greg has four key steps to improve baiting:

1. Choose baiting sites where the predators are likely to find them; more isn't necessarily better.
2. Mark and record bait sites so they can be easily recognised and checked. Old ear tags or flagging tape work well.
3. Monitor and replace baits as they're taken, especially for foxes.
4. Once baits taken decline, use other controls (i.e. shooting or trapping) to remove any animals still around.

While these strategies can be used for both wild dogs and foxes, Greg said they require different levels of attention, particularly for sheep producers.

"When it comes to foxes, implementing a replacement baiting program four to six weeks before lambing will get rid of the foxes that are residents on your place, and any that might come from the neighbours."

This approach has led to a major increase in productivity in lamb survival, rather than the traditional approach of putting out one lot of baits just before lambing.

"With dogs, however, it needs to be an ongoing program, because you never know when they're going to turn up.

"Unlike foxes that can have a large impact on small lambs over a short space of time, wild dogs will attack and kill all age groups of sheep and goats."

Greg said baiting in coordinated programs, as well as small amounts of targeted baiting, trapping and shooting, may be necessary to minimise wild dog impacts.

"In cattle country, it's a numbers game. Manage the population and keep them low through seasonal baiting programs and deliver target control before calving and weaning when young stock are at their most vulnerable," he said.

Quantifying success

Although evident when they're at large, the population numbers of predators are often difficult to quantify.

"You'll rarely find a fox or dog carcase – they take the bait and die elsewhere," Greg said.

If predators have been consistently taking baits, then baits being left for longer periods of time is a promising sign of a decline in numbers.

Measuring against the damage is another indicator of numbers.

"It's useful to know your data, for example, lamb survival rates, so you can form a baseline for when you might have an issue, or when that issue is dealt with.

"Understanding and knowing the signs of wild dog and fox activity is also important."

Reporting predator sightings on the FeralScan app also helps producers and the community to monitor numbers.

Knowing the predator and understanding how to apply best practice control is crucial to improving animal health and productivity. ■

TOOLBOX

Find more tools for wild dog management at **wilddogplan.org.au**

Scan or click the QR code to learn about MLA's '*Less predators, more lambs*' Producer Demonstration Site:

Greg Mifsud **greg.mifsud@invasives.com.au** Alana McEwan **amcewan@mla.com.au**

Preparation creates fertile ground for more lambs

The PDS has been popular amongst producers, with strong attendance at field days on participating farms.

Joining ewe lambs provides producers with an opportunity to increase profitability from their existing flock – but the success of this practice hinges on the right approach.

In response to producers facing varied results from joining ewe lambs, an MLA Producer Demonstration Site (PDS) in southern NSW is implementing strategies to optimise results.

Since 2023, 21 producers have been refining their on-farm practices through the PDS to either begin joining ewe lambs or improve their success with this strategy.

Factors which discourage producers from adopting the practice include concerns about its impact on ewes' lifetime growth, performance and lamb survival rates.

However, utilising decision-making tools and understanding the additional management requirements and timing of these helps overcome these challenges to increase productivity and lamb survival.

Here, PDS coordinator Sally Martin from SheepMetriX outlines some of the management strategies being explored to help set producers on the right path.

Consider your calendar

According to Sally, producers can use a range of strategies to support ewe lambs to get back in lamb on their second joining.

"Ewe lambs are often joined later and have their lambs later in the season, outside the peak pasture growth curve, with weaning potentially over summer," she said.

"For the progeny, it is more challenging for them over the summer months, while the ewe lambs have a shorter window between weaning and the next joining to get back into condition.

"One of the first things we work through with producers is their production calendar, and how we might be able to shift and manipulate it to work this practice into their overall production system."

Rather than look to absolute weight targets at weaning for the ewe lamb progeny, Sally suggested setting a firm date to begin weaning, to give the ewes a guaranteed minimum recovery period before joining.

"This practice needs to be in conjunction with getting the weaners onto supplementary feed well before weaning and having the mindset that both the weaners and ewe lamb dams will need to be fed over summer," she said.

Determining standard reference weights

The standard reference weight (SRW) of a flock is the liveweight of a fully grown, bare-shorn, non-pregnant sheep in condition score three with no gut fill (i.e. empty).

Producers can use SRW as a decision-making tool when joining ewe lambs, particularly around nutrition management and setting weight targets.

"It's important to understand the capabilities of your ewe lambs. Every flock is different, so your decision to join may not be based on weight, but a percentage of your standard reference weight.

"We've been working with producers to help work out the SRW of their flock so we can set targets at key times in the reproduction cycle and determine what they need to be doing to keep their ewes on a rising plane of nutrition – increasing body weight and looking at growth rates," Sally said.

"At the end of the day we want to maximise ewe pregnancy while setting them up to ensure lamb survival."

A tool for everyone

Throughout the three-year PDS, producers of various breeds of sheep have been tuning into webinars and attending field days led by the SheepMetriX team to learn how the PDS is progressing, and what strategies are being used.

"All of the principles of good ewe management still apply, we're just tailoring them to a younger animal," Sally said.

As part of the PDS a decision support framework will be developed outlining the skills, knowledge and management factors to evaluate whether joining ewe lambs is the right decision for them.

Sally said preparation from the beginning will leave a producer with more options.

"If it's part of your breeding objective, you need to prepare your ewe lambs for joining from weaning, or earlier. If they're in the right condition and weight, you have the choice to pull that lever and be ready, rather than opportunistic and unprepared." ■

TOOLBOX

- Click or scan the QR code to get involved with this PDS:
- Find a PDS to join: **mla.com.au/PDS**
- Click or scan the QR code to access MLA's joining ewe lamb decision support tool:
- Learn more about SRW (module 10) and other tools to manage sheep: **makingmorefromsheep.com.au**

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Ewe lambs step on production accelerator

Joining his ewe lambs has helped southern NSW producer Dean Bourlet reach productivity goals in his seedstock and commercial enterprise. The practice has not only accelerated genetic gain and strengthened his flock management, but has also delivered an added bonus through improved cash flow from surplus stock sales.

Dean manages ewes, ewe lambs and trading cattle alongside his Poll Merino stud, which focuses on performance-driven genetics.

He joins ewe lambs annually and sells progeny through an annual ram sale.

The success of the practice demonstrates Dean's confidence in his flock's genetic merit, as well as the commercial viability and benefits of ewe lamb joining within a stud framework.

"As a seedstock producer, ewe lamb joining is an exciting opportunity to speed up the genetic advancement of my stud and identify the next generation of top rams up to two years earlier than traditional systems," he said.

Wanting to further progress his operation, Dean joined the 'Optimising ewe lamb joining outcomes' MLA Producer Demonstration Site (PDS) – see previous page. Through the PDS, he is exploring and testing ideas and benchmarking the results as part of a producer network.

Keeping a close eye on the flock

For many producers, finding success in joining ewe lambs means adjusting production processes to meet their joining and lambing requirements, which differ from ewes.

"I think because of this, an added benefit of joining my ewe lambs is keeping a closer eye on my livestock," Dean said.

He monitors ewe lambs for weight gains and any animal health concerns.

"If you're not joining ewe lambs, you might not be watching them as closely," he said.

From strategic planning and ongoing monitoring, Dean has made several changes to his management in response to joining ewe lambs and broader seasonal conditions.

"I've invested in improved pastures and adjusted the timing of my fodder crop sowing to better fill feed gaps throughout the year," Dean said.

With the ongoing dry period, feeding programs have become more structured, working backwards from the desired joining weight to where they currently are, and establishing how much weight they need to be gaining each day.

"I'm also setting specific paddocks aside to ensure younger stock are well supported."

Being part of a PDS

During the PDS, Dean has been able to focus on making small improvements to his ewe lamb management that add up over time.

"Being part of the project has reinforced the need to not only develop a plan, but to follow through with an action," he said.

"This mindset has helped me to sharpen my approach to decision making and long-term planning within my operation.

"There is a lot of value in learning from others in the project and sharing our experiences."

Southern NSW producer Dean Bourlet.

SNAPSHOT

DEAN BOURLET –
Harden, NSW

AREA
480ha

ENTERPRISE
950 mature-age ewes, 430 ewe lambs and 200 trading cattle

PASTURES
Improved pastures back to native hills

SOILS
Granite

RAINFALL
640mm

First steps to joining ewe lambs

Here are Dean's top tips to get started with joining ewe lambs

Lower risk entry point: For producers in a commercial system, start by joining ewe lambs to a small, crossbred ram and using the progeny as trade lambs.

Map out a plan: Successful ewe lamb joining starts before joining time. Start planning at birth, considering nutrition and management from day one.

Feeding is non-negotiable: Regardless of the season, good condition is essential. While targets would ideally be achieved on pasture, feeding may be required in dry conditions.

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Genetic breakthrough opens gate to select for lower emissions

Northern beef producers have faced the challenge of how to reduce the methane emissions of their extensive herd – but that's set to change through new research into a genetic solution.

Australia's northern beef producers are renowned for producing nutritious beef from modest quality pasture. While their southern counterparts have greater access to their herds and so can take advantage of options such as methane-reducing feed additives, northern producers have had to look elsewhere.

University of Queensland researcher Ben Hayes and his team are developing a genetic solution with sufficient impact and scalability to make meaningful and lasting reduction to methane emissions in the northern cattle industry.

New breeding values

The five-year MLA-supported project, 'Reducing methane emissions and improving profitability in Northern Australian beef', is nearing its goal to develop genomic estimated breeding values (GEBVs) specifically for methane production. Producers will soon be able to select for lower methane cattle alongside productivity traits, using these tools as part of their breeding program.

This research has the potential to overcome two key barriers to reduced methane emissions in the north – the sheer numbers of grazing cows and the very extensive conditions in which they graze.

"Current projections are that we will be able to reduce methane by up to 1% per year – if you add that up over 20 years it's potentially a 20% reduction," Ben said.

Progress so far

Northern beef producers already recognise the value of genetics, with many using selection for fertility as a tool to improve their herd efficiency. It turns out this also reduces methane/kg of beef produced.

"By increasing how many calves a cow has in her lifetime, you are diluting the cow's emissions over more kilograms of beef. In addition, fast-growing animals mean you achieve turn-off rates earlier, which also decreases emissions," Ben said.

"By being able to directly select for methane alongside productivity, this new tool will give producers an extra lever to pull."

Working out how various traits interact and influence production is important to consider when using genetic tools.

"Research suggests you can select for lower emissions without impacting fertility. What is linked, however, is the size of the animal and their methane emissions. If you select purely for methane, you'll end up with smaller animals – this has been shown in research out of New Zealand.

"To avoid this, we want to select for lower emissions but also select for animals that grow well and produce good liveweights," Ben said.

Ben emphasises the importance of selecting using an Index – or a collection of traits working in combination together – rather than for distinct traits in isolation.

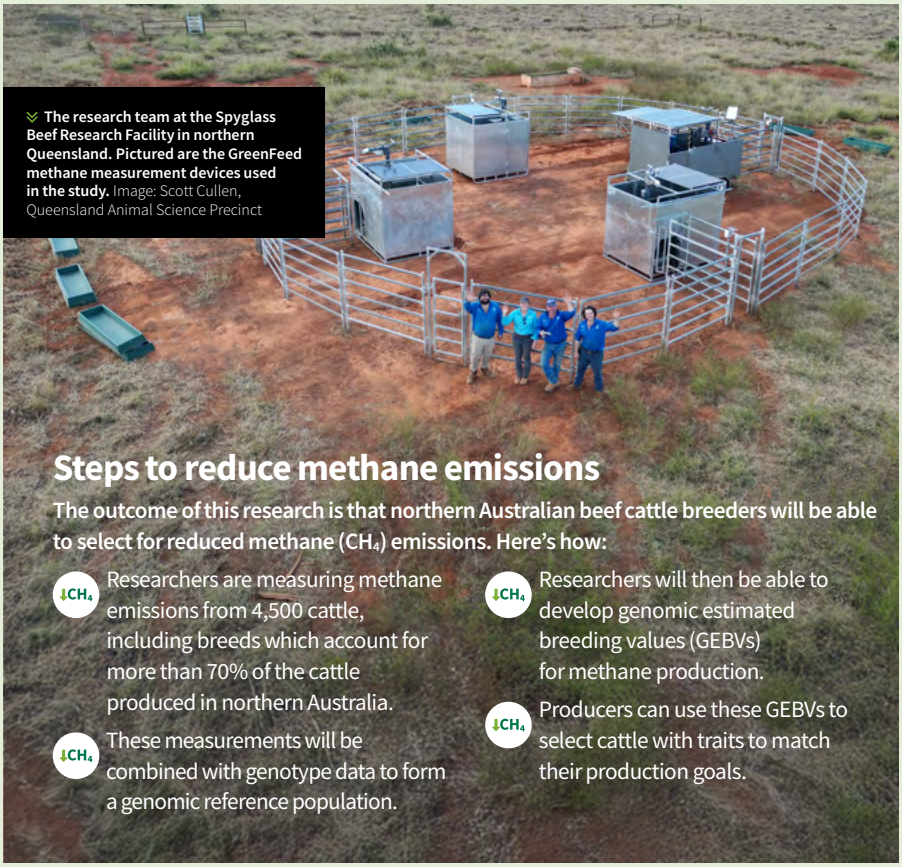
Taking out the guesswork

A prototype of the tool resulting from this research is due in mid-2026 when it will be tested with project collaborators. It should be available to producers more widely in three years.

"Breakthroughs in this area of science are accelerating now because we are very aware of how to develop these DNA genotype-based tools to support new breeding values for methane," Ben said.

"We've developed genomic breeding values for multiple traits now, so have a good idea of what is required to develop a GEBV for a new trait like methane."

The project runs through to the end of 2026 with the aim to release new breeding values for methane to include in genetic evaluations and products and services.



The research team at the Spyglass Beef Research Facility in northern Queensland. Pictured are the GreenFeed methane measurement devices used in the study. Image: Scott Cullen, Queensland Animal Science Precinct

Steps to reduce methane emissions

The outcome of this research is that northern Australian beef cattle breeders will be able to select for reduced methane (CH_4) emissions. Here's how:

- $\downarrow CH_4$ Researchers are measuring methane emissions from 4,500 cattle, including breeds which account for more than 70% of the cattle produced in northern Australia.
- $\downarrow CH_4$ These measurements will be combined with genotype data to form a genomic reference population.
- $\downarrow CH_4$ Researchers will then be able to develop genomic estimated breeding values (GEBVs) for methane production.
- $\downarrow CH_4$ Producers can use these GEBVs to select cattle with traits to match their production goals.

Turn to page 28 to read about new genomic breeding values for Merino producers.

genetics.mla.com.au Ben Hayes **b.hayes@uq.edu.au** Clara Bradford **cbradford@mla.com.au**

How to select a feedbase for resilience

MLA-funded research is arming producers with strategies to de-risk their enterprise while filling livestock feed gaps – a challenge which is becoming increasingly important as climatic conditions become less predictable.

CSIRO is leading the 'Transformational and integrated feedbase for mixed farming zones of southern Australia' project, which is:

- comparing emerging and existing forage options
- finding innovative ways to incorporate newer legume species with feedbase systems producers currently use.

Two years into the five-year project, researcher Dr Belinda Hackney said they are focusing on how integrating hard-seeded legumes into the feedbase can increase feed availability and quality throughout the year.

Producers participating in the project have established legumes, selected for their capacity to de-risk their livestock and crop production systems while offering increases in feed availability and quality (see case study on page 14).

"Most producers involved are looking for another management strategy they can put in their toolbox," Belinda said.

» Gland clover (*Trifolium glanduliferum*)

"They wanted to see how legumes – in combination with what pastures and cropping they already have – can benefit their feedbase system."

Here's a look at two of the many feedbase options which producers are exploring through the project:

Crop–pasture rotations

WHY To establish a self-sustaining crop–pasture rotation, where the legume can regenerate between crop phases without the need for resowing.

HOW Summer sowing of unprocessed seed or conventional sowing of scarified seed.

WHAT SPECIES ARE SUITABLE
(varies with rainfall and soil type, always obtain local advice):

- NSW summer sowing: arrowleaf clover, bladder clover, biserrula, gland clover, hard-seeded French serradella cultivars, some cultivars of yellow serradella.
- WA summer sowing: bladder clover, hard-seeded French serradella, some cultivars of yellow serradella.
- Conventional autumn sowing with scarified seed: as above, plus some additional.

STEPS TO SUCCESS

Consider the length of cropping phase when choosing an appropriate species, as they vary in their residual hard seed levels. For example, hard-seed French serradella cultivars are better suited to a one-year pasture, whereas biserrula can withstand more than three years of cropping.

Set your legume up for future seed-set. It's important to manage seed-set in the first year to establish a large seedbank, as this will support future pasture regeneration after a cropping phase.

» Arrowleaf clover (*Trifolium vesiculosum*).

Legumes for fodder conservation

WHY To tackle ryegrass and other weeds. Silage and hay production is a useful tool to control problematic weeds in cropping systems as the crop is cut short before weed seed production. The hay/silage produced can be used to fill feed gaps, maintain breeding stock in droughts and provide opportunities for livestock trading.

HOW These legumes can either be summer sown using unprocessed seed or conventionally sown in autumn using scarified seed.

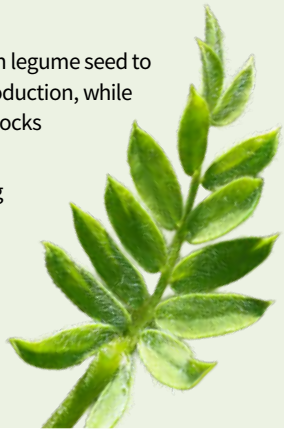
WHAT SPECIES ARE SUITABLE
(varies with rainfall and soil type, always obtain local advice):

- A wide range of newer legumes including arrowleaf clover, bladder clover, biserrula, and French and yellow serradella can be used for fodder conservation.
- Consider soil type and rainfall when selecting appropriate species and cultivars within species. The addition of cereal increases bulk and can help prevent legumes lodging.

STEPS TO SUCCESS

Some producers harvest their own legume seed to sow each year for silage or hay production, while others opportunistically use paddocks containing regenerating legumes.

Producers are increasingly sowing a winter cereal such as wheat or oats into regenerating paddocks before the autumn break.



» French serradella (*Ornithopus sativus*).

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continued from previous page

Three tips for legume success

1 Ensure total weed control prior to sowing

Control for two to three years to reduce the risk of weed invasion – the main reason for pasture establishment failure.

2 Use the correct inoculant for your legume

Most annual clovers require inoculation with Group C inoculant, serradella with Group S or Group G, and biserrula with biserrula special inoculant.

3 Check for residual herbicides

Keep thorough records of herbicides used in the years preceding pasture sowing and make sure that all plant back requirements have been met prior to sowing.

» A crop and pasture mix.

TOOLBOX

- Take a look at MLA's Legumes hub: **mla.com.au/legumes**
- Scan or click the QR code to read GRDC's guide to selecting and establishing new annual pasture legumes:

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Joe Gebbels **jgebbels@mla.com.au**

Renovator's dream: flexible approach to filling feed gap

NSW producers Craig and Kath Rodham traditionally run a winter cropping program of wheat, canola and barley alongside their crossbred flock of 4,800 ewes, but changes are underway to develop a more flexible farming system better suited to climatic challenges.

The Rodhams have begun introducing hard-seeded pasture legumes – including arrowleaf, bladder and balansa clovers – to reduce risk, utilise weed and pest control options, and take advantage of livestock trading opportunities.

The seed crops are grown and harvested (using a conventional header) as part of a pasture renovation program to reduce pasture establishment costs and increase stocking rates and feed ability.

» Harvesting arrowleaf clover at the Rodhams' NSW property. Image: Craig Rodham

Here's a closer look at how they incorporate cropping into their enterprise.

Arrowleaf clover

The Rodhams generally sow arrowleaf clover as unprocessed seed (seed that has been header harvested and remains unscarified) in late summer with ALOSCA granules.

Sowing in late summer means temperature fluctuations can break down a proportion of the hard seed, allowing the pasture to emerge on opening season rainfall and produce a large bulk of feed before temperatures drop in winter.

In winter, the arrowleaf is grazed strategically and then locked up for hay production, where rapid recovery from grazing results in hay yield averaging 6t DM/ha.

Fodder conservation assists in controlling herbicide-resistant ryegrass – which can be problematic in following crops – by cutting and removing it before the seed is formed.

The combination of higher feed availability early in the season and capacity to undertake fodder conservation significantly reduces supplementary feed costs.

Bladder clover

Like arrowleaf, bladder clover is being incorporated into the Rodhams' cropping rotation.

The bladder clover is summer sown, grazed strategically and allowed to set seed.

In the following year it's cropped with the previous year's legume, significantly reducing nitrogen fertiliser input requirements for the crop.

The legume then regenerates in the third year.

"The rotation appears to have good potential in our farming system, providing high quality feed for the sheep and reducing our crop input costs," Craig said.

Both bladder and arrowleaf clover are also used in combination with lucerne for longer term pasture phases.

The annual legumes significantly increase winter feed availability compared to lucerne-only stands and contribute to higher ground cover in summer.

Vetch

Vetch plays a key role in the Rodhams' farming system. They grow it strategically in combination with oats for silage and hay production, especially in paddocks where there is a need to reduce weed burdens before going back into crop.

"The vetch–oat mix is a very useful tool, especially when there is a late autumn break or there hasn't been an opportunity to get a number of weed knockdowns on a paddock prior to sowing," Craig said.

Seeing their pastures with new eyes, ryegrass – which was once viewed as a weed in their crops – is now recognised as a quality feed source.

"This mix is competitive against weeds – any ryegrass that does come through contributes to the production of a high quality silage or hay product that we can then use to fill seasonal feed gaps or sell," Craig said.

"It also does a great job of reducing the weed burden going into the next crop."

On-farm results

After introducing legumes into their farming system, the Rodhams reduced the area of canola in their cropping program from around 300ha to 75ha.

"Canola was a riskier crop for us with the prevalence of frost damage we experience," Craig said.

In scaling back canola and introducing legumes, the Rodhams concurrently lifted their ewe numbers from 3,000 to 4,800.

"We've achieved a long-term marking average of 125% and with the higher quality pastures, silage and hay, we can finish all our lambs and in dry time retain our ewe numbers."

CRAIG AND KATH RODHAM –
Uranquinty, NSW

ENTERPRISE
4,800 ewes, 200 cattle, cropping

PASTURES
Arrowleaf and bladder clover, lucerne, vetch

SOILS
Red chromosols, kurosols

RAINFALL
550–600mm

The Rodhams also now trade about 200 head of cattle per year.

"We buy them in at around 250–300kg liveweight and feed them for 90 days. This was something we couldn't do reliably before having increased our legume component in our farming system," Craig said.

This year, the Rodhams are continuing their pasture renovation journey, trialling Carn2ac Trigonella, and have planted 12ha as a seed block.

"We're interested to see how trigonella performs in our area. It appears to establish quickly and we're keen to see how hardy it is, how easy it is to harvest seed and what it yields," Craig said.

"Ultimately, we're looking to see how we can use it in our system either as a standalone pasture or in combination with lucerne."

The annual legumes significantly increase winter feed availability compared to lucerne-only stands and contribute to higher ground cover in summer.

Joe Gebbels **jgebbels@mla.com.au**

A blow to flies but a jump ahead for sheep welfare, productivity

Researchers in SA are trialling a new sheep blowfly control method aimed at reducing flystrike.

Based on Kangaroo Island, the sterile insect technique (SIT) is a chemical-free approach with potential applications on the Australian mainland.

Flystrike, caused by the sheep blowfly *Lucilia cuprina*, costs the Australian sheep industry an estimated $350 million each year. Current management options – including chemical treatments, mulesing and crutching – can be costly, labour-intensive and face potential issues around insecticide resistance, welfare and negative community perceptions.

SA Research and Development Institute (SARDI) Senior Entomologist Dr Maarten van Helden is leading the SIT research project, which is trialling the approach in a geographically isolated region before evaluating its broader potential.

"In other fly species, SIT has been a very effective control method," he said.

"We're testing whether it can be scaled up and economically sustained to manage or even eradicate *Lucilia cuprina* in areas where reinfestation is minimal."

How SIT works

The principle behind SIT is to release sterile male blowflies into the environment so they mate with wild females and prevent reproduction. Because female blowflies only mate once, these sterile pairings prevent the next generation of flies and, over time, the population declines.

With initial funding through the Local Economic Recovery program following bushfires on Kangaroo Island in 2020, SARDI and the University of Adelaide established a modular insect-rearing facility on the island. This facility – which is built from shipping containers – can produce 50 million sterile blowfly pupae each week, enough for large-scale aerial release across the 4,400km^2 island.

Now in its second phase, the project is supported by MLA, Australian Wool Innovation, Animal Health Australia, the South Australian Sheep Industry Fund, the University of Adelaide and SARDI, and will continue scaling up production and release as it works toward the goal of island-wide eradication.

Island conditions

"Kangaroo Island provides an ideal environment to test this technique because of its isolation and relatively stable sheep population – around 500,000 to 600,000 depending on seasonal conditions," Maarten said.

The team has already trialled pupae-based releases – a different approach to the traditional adult fly releases used in other SIT programs. The pupae are dropped by plane, allowing the flies to emerge in the environment, ready to mate.

"One of the key advantages of this approach is that it's environmentally friendly," Maarten said. "It avoids the use of chemicals entirely and has no risk of residues or resistance developing over time."

If successful, the facility can be relocated for targeted deployment in other high-risk areas. While eradication on the mainland is unlikely, SIT could be used for area-wide management during peak flystrike periods or in regions with higher sheep densities.

"We estimate the cost at around $6–$10/ha/year. If you've got more than two sheep per hectare, it becomes economically viable," Maarten said.

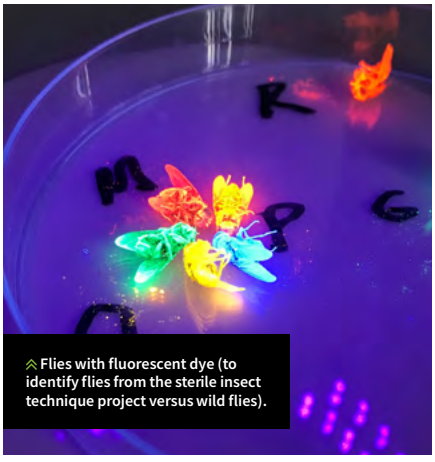
The project will also deliver insights into blowfly ecology, recolonisation rates and the feasibility of different release strategies, key considerations for any proposed future roll out on the Australian mainland.

"We're building the foundation for SIT to be added to the toolbox of blowfly management options," he said.

"It's about providing producers with more effective and welfare-conscious solutions."

SARDI Senior Entomologist Dr Maarten van Helden and Blowfly SIT facility manager Helen Brodie examine flies after an initial experimental release.

SARDI Senior Entomologist Dr Maarten van Helden releasing flies in 2022.



Flies with fluorescent dye (to identify flies from the sterile insect technique project versus wild flies).

TOOLBOX

Scan or click the QR codes to:

- watch a video about the PIRSA sterile insect technique (SIT) on Kangaroo Island:
- learn more about the sterile insect technique project:

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Lachie Bell runs one of Kangaroo Island's largest sheep operations, with 18,000 head.

Sterile flies strike back on economic loss

Kangaroo Island sheep producer Lachie Bell is one of the first producers to participate in a field trial of the sterile insect technique (SIT), a novel approach aiming to eradicate the blowfly species responsible for most cases of flystrike in sheep (see story opposite).

Lachie runs one of the island's largest sheep operations with 18,000 head. His proximity to the SIT mobile rearing facility made his property an ideal site for early-stage release trials designed to track how far sterile male flies disperse and how long they survive.

"It made things easier for the research team and it's good to be involved in something that could change how we deal with flystrike long-term," he said.

Flystrike is currently a costly and time-consuming issue for Lachie's enterprise. Despite a proactive management regime that includes crutching and preventative jetting with a liquid sprayed onto the breech or the whole animal, he estimates he sees 50–100 cases each year which can lead to mortalities.

"If you don't get on top of it, it gets away from you," he said.

"Even when you catch it early, you might lose half the fleece. That can pretty quickly add up to thousands of dollars in lost wool."

Prevention is key

Prevention takes precedence over cure on an operation of this scale, and logistics are critical.

"If I had 3,000 or 4,000 ewes, I could jet them all in a day. But with our numbers, it takes a week and a half. By the time you finish treating the last mob, they might already be in trouble. You've got to be thinking ahead."

Lachie said while the project is still in its trial phase and results are not yet available, he's optimistic about what SIT could deliver, particularly if it can eliminate *Lucilia cuprina*, the most aggressive and damaging of the blowfly species, from the island.

"I don't think we'll ever eliminate flystrike completely – other species can still cause it – but if we get rid of the worst offender, that would be huge," he said.

It could also change the economics of animal health and welfare. Reducing flystrike pressure might assist producers to phase out mulesing while maintaining or improving flock wellbeing.

"There's definitely a premium on unmulesed wool," Lachie said.

Reduced chemical reliance

Chemical use is another area where SIT could deliver long-term savings. Reducing reliance on fly treatments would ease management costs, limit resistance issues and reduce chemical residues.

"Even just being able to take a more relaxed approach to our fly program would be a win – less stress for us and for the sheep," Lachie said.

With Kangaroo Island's sheep production spread across 250 farms, Lachie said the success of the SIT trial could deliver productivity and welfare gains on an island-scale.

"If all of us can save on deaths, wool loss and chemicals, it'll be a really good result, not just for individual producers, but for the whole industry on the island."

Kangaroo Island producer Lachie Bell is one of the first farmers to participate in a field trial of the blowfly sterile insect technique.

SNAPSHOT

LACHIE BELL –
Kangaroo Island, SA

AREA
4,200ha (14 properties)

ENTERPRISE
Prime lamb, wool and cropping

PASTURES
50% grasses, 50% clover

SOILS
Sandy to loam over clay

RAINFALL
450mm

SEASONAL ACTION PLAN

- **Jet early:** Complete preventative jetting before peak fly periods in spring.
- **Crutch on time:** Crutching prior to high-risk periods reduces fleece soiling and fly attraction.
- **Monitor weather:** Stay alert for warm, humid conditions from mid-September that trigger fly activity.

Lachie Bell **lachietiff@gmail.com** Michael Laurence **mlaurence@mla.com.au**

Graham Pearson and Naomi Diplock stand in a regenerated paddock of Rhodes grass and glycine. Image: Naomi Diplock

Tips to minimise impact of mealybugs

MLA-funded research led by Applied Horticultural Research (AHR) is exploring ways to increase productivity in dieback-affected pastures.

Lead researcher Naomi Diplock is working with Queensland cattle producers across four trial sites, to test the effectiveness of pasture management practices in maintaining stock on affected pastures and assessing mealybug resilience in 15 grass and legume species.

"In recent years, Queensland producers have seen an outbreak of pasture dieback caused by mealybugs, resulting in millions of dollars in lost production for the cattle industry," she said.

"With no viable way of eradicating mealybugs, our goal is to identify achievable, cost-effective management strategies and solutions to minimise the impacts of dieback so affected pastures remain productive."

One technique tested was to sow pastures using a stick rake with seeds dropped on top and left uncovered to wait for rain – a simple approach which suits most land types and requires comparatively little investment of time and money.

The results

The trial showed how sowing legumes and dieback-tolerant grasses is the most effective approach in minimising dieback.

"Stick raking and replanting with a mix of tolerant pasture grasses (with or without legumes or fertiliser) delivered a better outcome than doing nothing or stick raking alone," Naomi said.

"However, the best results were in pastures planted with a mix of dieback-tolerant grasses, legumes and fertiliser. These consistently delivered higher dry weights and tons per hectare of useful feed despite the ongoing presence of pasture dieback."

In three of the four trial sites, the pastures sown with dieback-tolerant grasses had fewer mealybugs.

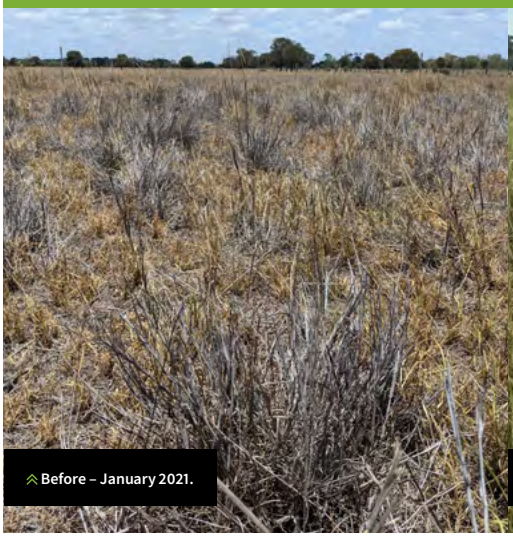
"The fourth site had a high level of naturally occurring legumes, so simply managing for recovery and resilience while keeping on top of the weeds gave a good result," Naomi said.

"It shows there's no one-size-fits-all answer to managing pasture dieback – the best approach will always depend on individual factors like soil types, the available seedbank and the climatic conditions of the site."

> **"With no viable way of eradicating mealybugs, our goal is to identify achievable, cost-effective management strategies and solutions to minimise the impacts of dieback so affected pastures remain productive."**

Spot the difference

A trial site on the Pearsons' Kianga property (see story opposite) run by Applied Horticultural Research (AHR) comparing a paddock before and after planting dieback-tolerant pasture species.



Before – January 2021.

After – March 2023.

mla.com.au/pasturedieback Naomi Diplock **naomi.diplock@ahr.com.au** Allan Peake **apeake@mla.com.au**

From pasture dieback to pasture comeback

New management strategies for pasture dieback are delivering promising results for participants.

Here, one cattle producer involved in the MLA-funded Applied Horticultural Research (AHR) trial – see story opposite – shares how he rejuvenated his dieback-affected pastures by adopting new management strategies and introducing species diversity to his paddocks.

Graham Pearson had owned his Central Queensland cattle enterprise 'Kalcaway' for more than two decades when he first noticed yellowing patches of pasture dieback.

"That was seven years ago, and I'd say we lost around 60% of our grass in that first season. It went pretty wild pretty quickly and we had no idea how to deal with it," Graham said.

"At the time, we were lucky to just be trading cattle without any breeders, so it was easier to manage our feed. But once you've got breeders it's on your mind all the time, because if dieback hits hard then you've got a real problem unless you've got other feed to keep them going in the later part of the year."

Graham tried several strategies in those early years to control the pasture dieback and the mealybugs causing it.

"Initially, we tried burning and the grass came back well, but you can't burn every year," he said.

"Burning also won't get rid of the mealybugs. They just burrow into the soil, then you'll find them 10 inches below the surface ready to come back in the spring."

Simple and cost-effective approach

Graham joined the AHR trial when it commenced in 2021 and has been pleased with the results.

Using a stick rake and leaving the seeds uncovered, he planted a mix of grass and legumes in some paddocks and a mix of grasses in others.

"We had a dry season after our initial planting in 2021, but we still saw good results with our grasses getting away right from the start," Graham said.

"Some of the susceptible trial grasses still get dieback (e.g. bambatsi and the Gayndah and American buffel grasses), but they'll come back again next season as long you haven't flogged your paddocks and there's enough seed in there, and you get the rain."

Controlling mealybugs

While there's no way to eradicate mealybugs at present, they don't attack legumes and by introducing varieties such as glycine, siratro and desmanthus to dieback-affected pastures Graham has managed to control its impact.

"We haven't got rid of the dieback altogether – you can see still the yellowing and purpling on many of the grasses," he said.

"But every paddock is filled with grass even though every paddock also has some dieback, so we've been able to manage it well even if we can't get rid of it."

With legumes now appearing to enable his dieback-affected grasses to survive, they're likely to become an increasingly significant feed source on Kalcaway.

As a result, Graham wants future research to look at the nutritional value of these dieback-affected grasses and what impact they may have on the performance of his cattle.

Managing mixed pastures

Moving from a monoculture to a grass and legume mix delivers many benefits but requires careful management of stock rotations.

Graham planted one paddock with a mix of Toro Rhodes grass, glycine and desmanthus which had thrived. However, he warns other producers to keep a close eye on those paddocks.

"Once you have rain, the grass will shoot away and be a foot tall in no time, while the legumes will take longer to grow. So, if you leave it like that and don't manage it, the cows will eat the legumes and rip out the grass at the same time," Graham said.

Smaller pastures for improved control

To better manage his grazing, Graham divided up his pastures into smaller paddocks so cattle will graze the grass more evenly.

"I think this makes a difference because grazing the dieback patches definitely helps control it," he said.

"You just need to be careful coming into winter that you aren't letting the cows chew it down too much. That'll destroy your seedbank and the pasture won't come back in the spring." ■

Central Queensland producer, Graham Pearson.

SNAPSHOT

GRAHAM AND ERIN PEARSON – 'Kalcaway', Kianga, Queensland

AREA
1,200ha

ENTERPRISE
Braford cattle – 300 breeders

PASTURES
Variable

SOILS
Rich black soil

RAINFALL
710mm

SEASONAL ACTION PLAN

- Learn to identify mealybugs and how to differentiate dieback from other pasture issues – scan or click the QR code to read MLA's *Pasture dieback: A management guide for producers and agronomists*:
- During summer and autumn, be on the lookout for dieback symptoms and consider your feed supply options if it were to occur.
- When recovering from dieback, ensure weeds are well controlled.
- Consider sowing legumes and dieback-tolerant grasses to prevent dieback from occurring in the future – check out varieties suitable for your location at **mla.com.au/sgvfs**

mla.com.au/pasturedieback Graham Pearson **kalcaway1@bigpond.com** Allan Peake **apeake@mla.com.au**

Preparation ensures smooth sailing for Tassie lamb

Overcoming the complexities of transporting prime lambs across Bass Strait requires planning, clear communication, good relationships and a flexible approach.

A trio operating in northern Tasmania have mastered shipping to the mainland, ensuring lambs are consistently delivered to their destination clean, healthy and strong.

Cressy producers Lauchie and Sarah Cole send 420–500 finished lambs to Melbourne every second week, year-round, through Coles supermarket's Graze Program.

Their livestock agent, Mark Webb of Webb and Woodiwiss Livestock Marketing, coordinates the process, while Melbourne-based livestock transporter Rob Hodge organises the trucks and liaises with the ship.

Lambs are collected from the Coles' Cressy property and delivered in trailers to the wharf where they stay on the same trailer on the ship and onto the mainland, in a roll-on/roll-off system.

This system reduces stress and maximises safety, with minimal handling needed. The secure, purpose-built trailers protect the animals for the journey.

Good relationships and a flexible approach

Unpredictable weather, ocean swell and shipping authorities contribute to the complexity of transporting across Bass Strait.

"There's no point being uptight and holding everyone to the nearest minute because things can change," Mark said.

"There are guidelines in place – at times ships can only take livestock south and not north, it's all because of the wave direction."

Rob said the welfare of the lambs is always front of mind, with decisions made early and journeys cancelled if weather isn't favourable.

"If at 6am we find out the ship isn't taking livestock today, then I get on the front foot to Coles and let them know I haven't got 3,000 lambs coming tomorrow," he said.

"I'm on the phone to Webby (Mark) and he is communicating with Lauchie and Sarah to work out the best place for the lambs."

Preparation is key

The preparation of lambs before travel is critical for a successful journey.

"They need to be yarded before lunch and ideally shedded overnight," Rob said.

"Pushing them into a shearing shed means they can be dry loaded in the morning rather than having dew or a frost on them.

"They empty out better standing on wooden or plastic batons in a raised shearing shed because they stand up and walk around more with the noise.

"If they don't get up and move, they're emptying out on the truck."

A couple of hours difference in yarding sheep can have major impacts for the transporter, making trailers dirtier and taking longer to clean out.

"They need to be yarded before lunch. Otherwise, it's getting darker earlier, the lambs are laying down and not moving and emptying as well," Rob said.

"Once I've unloaded the lambs, if they haven't been prepared properly it takes me three hours to then get the trailer washed out and back on the boat. It ruins the whole cycle for the week."

The Coles are improving their on-farm infrastructure – their yards are now covered and they have installed an adjustable ramp, which has improved the preparation for transport.

"The Coles' preparation is A1," Rob said.

"They shed lambs overnight, they have them weighed and counted, and they are there to help load."

Regular communication

As their agent, Mark catches up with the Coles at least three times a year.

"I like to give Sarah and Lauchie an update on the markets, where we think they

» The Coles have invested in an adjustable ramp to streamline the loading process.

» Sarah and Lauchie Cole, pictured on their Cressy property.

SNAPSHOT

SARAH AND LAUCHIE COLE –
Cressy, Tasmania

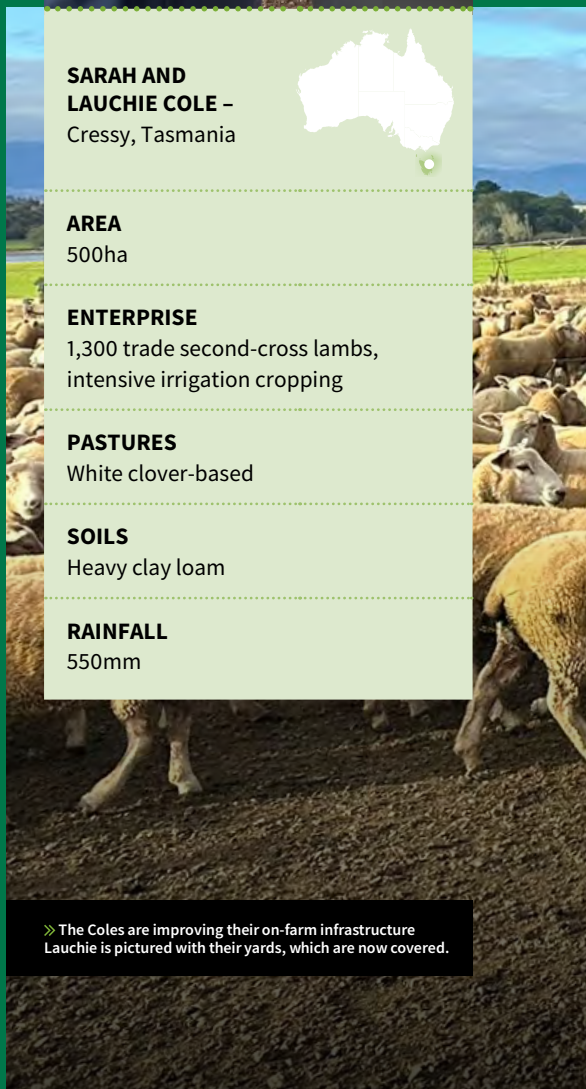
AREA
500ha

ENTERPRISE
1,300 trade second-cross lambs, intensive irrigation cropping

PASTURES
White clover-based

SOILS
Heavy clay loam

RAINFALL
550mm



» The Coles are improving their on-farm infrastructure Lauchie is pictured with their yards, which are now covered.

might be heading, what they were previously, what works and what doesn't," he said.

"We can talk about what classes of lambs and sheep may suit them going forward.

"It's good if producers can continually talk to their agent and livestock transporter as well, to ensure everyone is on the same page."

Transport critical to success

Lauchie said running an integrated business means every part of the operation must be successful.

"Transport is a really important part of our business," he said.

"It's the success or non-success of Tassie lamb going to the mainland into the future.

"We have a really good relationship with our freight teams and our agent, Webby.

"He gives us good advice on preparing them.

"He will say on a Thursday night, 'they're going Tuesday next week, make sure they are crutched and fit for travel'.

"We have a large facility built for this process. It's undercover, well ventilated, has fresh water and a four-deck loading ramp to make it easier for everyone involved."

This collaborative approach has ensured the Coles have successfully transported 13,000–15,000 lambs a year for the past six years from Tasmania to the mainland without one incident.

"We do it bloody well. The lambs come off just as well as if they were travelling 5km away.

"They come off clean, they're fit – that's a good effort when they've been on a boat for 12 hours."

Mutual respect

Mutual respect with a team of drivers and recognising each other's needs contributes to the success of the operation, Lauchie said.

"It's like any part of our business – you've got to make sure everyone understands what you're trying to achieve.

"Treat drivers with the respect they deserve. They are driving massive hours, sometimes loading difficult sheep in challenging yards.

"Give them respect, give them your time to help. Let them know if you're running late. Give them good facilities to work in.

"It might be as simple as giving them a coffee if they've been driving all night. The little stuff makes a big difference."

Lauchie Cole prepares lambs for transport to the mainland – this includes shedding lambs overnight and weighing and counting them before loading.

TOOLBOX

For best practice guidelines on transporting livestock and more case studies, visit MLA's Transport Hub: **mla.com.au/transport-hub**

"It's good if producers can continually talk to their agent and livestock transporter as well, to ensure everyone is on the same page."

Sarah and Lauchie Cole **colels@bigpond.com**
Sharon Dundon **sdundon@mla.com.au**

Red light for pasture pests

Redlegged earth mites (RLEM) are increasingly resistant to insecticides and hard to detect early – but producers in Victoria's high rainfall zones are tackling this major pest to reduce its impact on feedbase productivity.

Members of the northern Victoria RLEM PDS group inspect pastures at the Strathallan site.

A new approach being tested through MLA's 'Less mites, more feed' Producer Demonstration Site (PDS) is helping producers time spray applications more precisely, reduce unnecessary chemical use and improve pasture performance.

The PDS, which is led by Agridome Consultancy with support from research partner Cesar Australia, has demonstration sites in northern and western Victoria. The aim is to showcase best practice mite management strategies using three free online tools: TIMERITE®, the RLEM hatch timing tool and the RLEM severity risk calculator, developed by MLA, Grains Research and Development Corproation and Cesar Australia.

"These tools take the guesswork out of mite management," project lead Matt Mahoney, Agridome, said.

"They let producers act with confidence by identifying the best spray dates and helping avoid unnecessary applications."

The right time

The revised TIMERITE® tool, originally developed by CSIRO, has been updated to reflect changing climate conditions. The new version uses postcode rather than GPS data to generate a recommended spray window in spring, typically a month earlier than the old model, to reduce diapause eggs and autumn mite pressure.

Aston Arthur, entomologist with Cesar Australia, conducts research on insecticide resistance. She said the new model can shift a producer's spray date forward by up to four weeks.

"This is critical – spraying too early or too late compromises effectiveness, wastes product and effort, encourages resistance and harms beneficial insect populations."

With resistance to pyrethroids and organophosphates already detected in parts of Victoria, timing is increasingly important.

On-farm trials showed the updated TIMERITE® dates significantly reduced mite numbers. At the Strathallan trial, RLEM numbers dropped by 90.3% using the revised timing, compared to 84.5% for the original timing. At the Mount Cole Creek trial, the updated timing achieved 100% control, while the original timing achieved 36%.

Pasture management

Pasture growth and species composition were monitored using MLA's pasture ruler and Pasture Paramedic tools. By autumn 2025, dry matter yield at Strathallan was 1,867kg/ha under the revised TIMERITE® spray date, compared to 1,237kg/ha in the non-sprayed control, a gain of more than 600kg/ha.

"We saw strong mite suppression when the spray date aligned with the tool's recommendation," Aston said.

"In some untreated areas, numbers climbed to more than 3,000 mites/m^2, enough to cause real feed losses."

Monitor hatching

Beyond TIMERITE®, the RLEM hatch timing tool helps producers monitor when mites are likely to emerge in autumn, while the RLEM severity risk calculator estimates seasonal pest pressure based on prior crop and management history.

"These are simple but powerful tools," Matt said. "We've had strong producer engagement when they see the pasture response and realise the potential cost savings."

The project's final year includes three new field trial sites – Strathallan, Mount Dryden and Mount Cole Creek – comparing the revised TIMERITE® spray window with the original recommended timing.

Results to date show the updated TIMERITE® spray window consistently outperformed the original timing, delivering stronger mite control and improved pasture production, even under dry seasonal conditions.

"We're not just reducing mite numbers, we're giving producers practical tools to take control of their feedbase and protect it for the seasons ahead," Aston said.

These images show the impact of RLEM, with whitening of the foliage indicating damage to the plant on (from left) plantain, clover and grass.

TOOLBOX

- Scan or click the QR code to read more about this PDS:
- MLA Pasture Paramedic: **mla.com.au/pasture-paramedic**
- PDS program: **mla.com.au/pds**
- Search tool: **mla.com.au/pds-search**
- Subscribe to PDS updates: **mla.com.au/pds-updates**

Matt Mahoney **matt.agridome@gmail.com** Alana McEwan **amcewan@mla.com.au**

PDS participant Murray Arnel runs stock on a mix of ryegrass, balansa and white clover.

Proactive timing aids mite control

Victorian producer Murray Arnel has found that being proactive against RLEM has made autumn grazing more successful.

After retiring, rural journalist Murray Arnel bought a run-down dairy farm near Echuca. Rather than slowing down, he said he planned to "stay curious".

"I've spent a lifetime reporting on top farmers across southern Australia. This was my chance to have a go myself," he said.

Six years on, Murray has renovated his pastures as part of a broader farm improvement program and is actively testing new management approaches.

Through MLA's 'Less mites, more feed' Producer Demonstration Site (PDS), Murray provided a paddock to test revised redlegged earth mite (RLEM) control strategies.

The PDS, which was coordinated by Matt Mahoney of Agridome Consultancy and run by the Ky (Kyabram) Farmers group, focused on using decision-support tools such as TIMERITE® to optimise spray timing and reduce mite populations before they affect autumn feed. Read more about the PDS on previous page.

Real-world research

MLA's PDS program supports producers to design and lead on-farm demonstrations that tackle regionally relevant challenges. The initiative helps fast-track adoption of best practice by showing producers how these approaches perform under real commercial conditions.

"When we crawled over the paddocks in 2023, we couldn't find any mites," Murray said.

"The previous year's flood may have reduced their numbers – but in 2024, they came back strongly."

Three irrigation bays were used to compare TIMERITE® spray dates:

- one unsprayed control
- one treated on the 'old' TIMERITE® date (19 September)
- one treated on the 'new' updated TIMERITE® date (around 1 September).

Pre-spray assessments by Aston Arthur from Cesar Australia found mite numbers as high as 3,846m^2 in one of the trial bays, well above what was considered the threshold for economic impact, especially in newly sown pastures.

Spray results

Both treated bays recorded zero mites four weeks after spraying. In contrast, the unsprayed control jumped to 4,635 mites/m^2.

"We saw a clear result," Murray said. "The sprays worked, and the earlier timing was just as effective. Even though we sprayed 10 days after the tool's suggested date, we were still within the window."

Follow-up assessments in May 2025 showed the impact of spring spraying carried through to autumn. Compared to the untreated control, RLEM numbers had dropped by 84% in the 'old TIMERITE® date' bay and by more than 90% in the 'new TIMERITE® date' bay.

While Murray didn't notice visible mite damage in his pastures in the spring prior, he's convinced of the strategy's value.

He said the common approach is to only think to spray when mites are observed in autumn – but by then, the damage has often already been done. By controlling RLEM in the spring at the new TIMERITE® date before they enter diapause, fewer mites hatch the following autumn, meaning a stronger feedbase can be established for the following season.

Pasture utilisation

Spray timing also matters for pasture utilisation.

"Autumn is when we need every bit of grazing we can get. If I'm spraying then, I'm taking paddocks out of rotation at the worst possible time," he said.

Murray believes MLA's PDS program reinforces the value of group-based learning and producer-led trials.

"It's been a great experience, sharing results with neighbours and bouncing ideas around. I'd absolutely do it again.

"These tools help you to be proactive rather than reactive. And the difference that makes – to your pastures, your inputs, your planning – can be huge." ■

SNAPSHOT

MURRAY ARNEL –
Echuca, Victoria

AREA
70ha

ENTERPRISE
250 crossbred ewes

PASTURES
Ryegrass, balansa clover, white clover

SOILS
Sandy loams through to heavy loamy clays

RAINFALL
420mm

SEASONAL ACTION PLAN

Know your spray window: Use the updated TIMERITE® tool to determine the best spray timing for your region: **wool.com/timerite**

Check hatch date: Scan or click the QR code to use the hatch timing tool (Cesar Australia) in early autumn to track mite emergence and avoid premature action:

Assess your risk: Scan or click the QR code to use the RLEM risk calculator to help estimate how severe RLEM pressure may be based on previous paddock history:

Murray Arnel **murray.arnel@gmail.com** Alana McEwan **amcewan@mla.com.au**

Well-timed flukicide pays off

Cattle being monitored for liver fluke as part of the MLA Producer Demonstration Site. Image: Leah Tyrell

Liver fluke infection is prevalent in cattle and sheep across high rainfall areas (>600 mm) of south-east Australia, but producers have tools to target its complex life cycle – delivering cost-savings and tackling drench resistance along the way.

A group of cattle producers in south-east NSW and north-east Victoria have been working together to optimise liver fluke management through an MLA-funded Producer Demonstration Site (PDS). The aim of the project was to improve understanding of the life cycle and risk periods for liver fluke pick-up and, by using drench more wisely, slow the development of drench resistance.

Here, PDS coordinator Leah Tyrell, from the University of Melbourne's Mackinnon Project, shares insights from the project and how producers can lean on monitoring tools, grazing management and the strategic use of flukicide to control and prevent disease.

What is liver fluke?

Liver fluke (*Fasciola hepatica*) is a parasitic flatworm that affects livestock grazing in paddocks with slow-moving waterways such as springs, seepages, creeks or irrigation channels.

Liver fluke larvae develop in a freshwater snail host found in these environments before passing from the snail and forming cysts that attach to pastures, which are then consumed by livestock.

Once ingested, the immature fluke migrates through the body to the liver, then through the liver tissue before settling in the bile ducts where it then matures.

What signs to look out for

Symptoms in infected cattle can appear as:

- weight loss or reduced weight gain
- anaemia (pale gums and membranes around the eyes)
- jaundice
- bottle jaw (swelling below jaw).

"Liver fluke infection not only reduces productivity on-farm, it reduces carcase value as damaged livers are condemned," Leah said.

"Good on-farm control is not only critical for livestock health and productivity, but also to ensure the profitability of your business."

Putting flukicide to the test

The project team conducted fluke egg counts (FEC) and drench efficacy tests on properties involved in the PDS, primarily targeting the most commonly used flukicide in the region: triclabendazole.

"The most striking finding was that every single property we tested showed some degree of resistance of triclabendazole," Leah said.

"That was a huge wake-up call for many producers as they thought their drench was working just fine.

"For one participant, severe triclabendazole resistance meant they had to pull out of the trial within the first year due to risk of death on stock.

"However, if they didn't get involved in the PDS in the first place, they may not have identified drench resistance as being the cause and may have had some significant hits to their herd and production as a result."

Another participating producer had planned to move stock to another property on the day the project team told them they had drench resistance – preventing them from unknowingly transferring triclabendazole-resistant liver fluke to that property.

However, another producer who consistently had very low FEC found the difference in performance between treated and untreated mobs was minimal. This suggested their cattle may not require annual treatment every year and monitoring for fluke infection at strategic times could potentially save the cost of a drench.

"This was where the importance of monitoring FEC came into play, not just in terms of controlling the disease, but also in terms of managing finances," Leah said.

Timing the early winter strategic treatment was also crucial – weaners on one property which were treated late April were 13kg lighter than those treated in late May. This farm had high FEC, indicating the weaners continued to pick up liver fluke following the treatment in late April, whereas environmental conditions by late May meant liver fluke pick-up was minimal.

"Controlling liver fluke is not about throwing more chemical at the problem," Leah said.

"It's about being smarter with the tools we have.

"The producers who switched to a new flukicide during the project had significant success, and the ones who could see from FECs that they needn't drench as often were able to save time and funds which could be better directed elsewhere." ■

Three steps to manage liver fluke

When it comes to ensuring strong control and management of liver fluke, there were three key takeaways from this PDS.

1. **Routine monitoring:** conduct FEC before a planned early winter and early spring flukicide treatment to determine drench requirement.
2. **Check flukicide efficacy:** consider a drench resistance trial on your property to understand the efficacy of flukicides.
3. **Incorporate liver fluke into grazing land management strategies:** identify snail-prone paddocks and limit access for weaners and other vulnerable stock.

TOOLBOX

- To learn more about how you can manage liver fluke on-farm, visit **mla.com.au/liver-fluke** and **paraboss.com.au**
- Scan or click the QR code to read more about the project:

Leah Tyrell **ldtyrell@unimelb.edu.au** Alana McEwan **amcewan@mla.com.au**

Smarter drenching is no fluke

The Connors family has a proactive approach to managing liver fluke in their beef herd in the high rainfall country near Running Creek, Victoria. Now, equipped with information from an MLA-supported Producer Demonstration Site (PDS), they have their sights set on being fluke-free.

For property manager Charlie Connors, who works alongside his wife and parents, getting involved in the optimising liver fluke management PDS wasn't just an opportunity to improve treatment options. It was about staying ahead by keeping informed.

The Connors are cognisant of liver fluke, as they operate in an environment that's very attractive to the snails that carry the fluke, thanks to the creek running through their property and an average annual rainfall of 1,000mm.

So, when PDS facilitator, University of Melbourne – Mackinnon Project researcher Leah Tyrell (see story opposite) offered to test their heifers for free, after discussing the disease with them at an industry event, Charlie was keen to learn more.

Prior to participating in the PDS, Charlie said his herd had a slightly lower average weight gain than what they were aiming for.

He credits the PDS with information which, moving forward, should contribute to greater improvements on average weight gains as a result of better managed liver fluke.

"While we're not yet fluke-free, we are fluke smart, so I think we are on the right track to getting where we want to be."

Getting informed

Before joining the PDS, the Connors' approach to liver fluke was similar to that of other participants: a standard annual drench with triclabendazole, plus the occasional follow-up treatment if snail numbers were high.

"We relied visually on snail numbers to determine drench timing," Charlie said.

"Testing wasn't part of our routine, but there was nothing to indicate it was necessary – we thought the drench was working."

When fluke egg count (FEC) testing results showed liver fluke was still present on the property, Charlie jumped at the opportunity to join the Mackinnon Project and the PDS in hopes to refine his fluke management strategies.

Over a two-year demonstration period, he and Leah conducted regular FECs to monitor the impact of different flukicides. One mob of heifers received strategically timed treatments, while a second control group received a treatment when the Connors normally would.

"We found out pretty quickly that the fluke on our property was resistant to triclabendazole," Charlie said.

"That was a big shock – we were spending money on drench that was not benefiting the health and productivity of our herd."

From routine to strategic

Due to fluke resistance, Charlie had to transition to Nitromec injectable treatment for more effective control.

"It was clear the old drench wasn't working," he said.

"Nitromec cleared the fluke properly and gave us a clean slate to maintain.

"It's not cheap, but the idea is that it will save us money in the longer term as there will be ability to only use it when FECs tell us it is required."

Based on the demonstration findings, Charlie also made the decision to shift the timing of his fluke treatments.

"We got the best results treating in May – previously, we drenched in spring when the snails are most active," he said.

"During the trials, the heifers that were treated in May picked up a lot during the winter and maintained great condition – which is especially great considering the tough winters we've had in recent years.

» Doug and Charlie Connors.

SNAPSHOT

CONNORS FAMILY –
Running Creek Herefords,
Running Creek, Victoria

AREA
270ha

ENTERPRISE
Self-replacing Hereford herd (180 breeders)

PASTURES
Predominately ryegrass-based

SOILS
Clay loam

RAINFALL
1,000mm

"Overall, I think if we can be strategic about when we drench, we will ensure the best results and a better bang for our buck."

Looking beyond the fluke

Charlie's advice to other producers is simple: don't guess – test.

"You don't need to test every animal," he said.

"We are now testing a few – usually the ones who have been in our wetter paddocks.

"We are also testing beyond liver fluke and starting to look at worm egg counts as well, to keep us better informed on our herd's status and needs when it comes to effective disease management."

» The Connors run a self-replacing Hereford herd.

Charlie Connors **charlieconnors@outlook.com** Alana McEwan **amcewan@mla.com.au**

UU2 larvae feeding on Parkinsonia leaves.

Turning to moth-er nature to solve Parkinsonia problem

Northern producers are set to have a new tool to tackle Parkinsonia, with the latest research trialling moths as a control solution.

Trials across Queensland, the NT and WA are building on an MLA-funded project with CSIRO, which began in 2018 with the goal of providing producers with biological control tools to improve the management of the invasive weed, *Parkinsonia aculeata*.

The project aimed to deliver tools which:

- are better for the environment than chemical treatments
- remove the need for producers to repeat mechanical and chemical control applications
- have long-term cost benefits.

Costly problem

CSIRO Principal Research Scientist and Weed Management Systems Team Leader, Dr Michelle Rafter, said Parkinsonia is a widespread and costly problem. The weed has invaded approximately 8,000km^2 of northern Australia's rangelands and carries a $200–300/ha/year cost for impacted producers.

"Parkinsonia is especially problematic for northern grazing businesses as the woody weed forms thickets along flood plains and grasslands, limiting pasture growth, restricting stock access to water and impeding mustering," she said.

Older UU2 larvae in action.

"Its seeds spread through the dung of cattle that have grazed on the species and through waterways, especially during wet seasons that experience high rainfall levels and flooding."

Looking 'Bak'

Moths aren't the first biological control trialled for Parkinsonia.

Producers already have a biological control option in the form of Di-Bak™ Parkinsonia, a fungal herbicide formulation that contains naturally occurring native fungal pathogens. It was developed by a team of researchers from The University of Queensland, headed by Professor Vic Galea.

Di-Bak™ comes in capsule form and is administered with specially developed technology that enables targeted implantation into the stem from where it can spread to kill the weed.

"It has shown great success in being both safe for the environment and effective in not requiring repeat administration from producers," Michelle said.

"However, landscape constraints mean this is something that is not always possible for producers to administer – which is where two particular species of moths can step in to assist."

So, the researchers turned to another biological control option: leaf-eating moths.

Biological control takes flight

In partnership with the Queensland Department of Primary Industries (DPI), Department of Agriculture and Food WA, Pilbara Mesquite Management

CSIRO officer Andrew White uses a 'beat sheet' to check for larval establishment of the moths at a UU2 release site.

One of the goals of a release of UU2 at Barkly Downs (located west of Mount Isa on the Queensland/NT border) is to improve cattle's ability to access water by removing the barrier created by a Parkinsonia infestation.

Dr Michelle Rafter with weevil candidates undergoing host-specificity testing in quarantine. Image: CSIRO

Committee, Rangelands NRM WA and the NT Department of Land Resources Management, CSIRO conducted mass rearing and widespread releases of two closely related leaf-feeding moths.

Known as *Eueupithecia cisplatensis* and *Eueupithecia vollonoides* (nicknamed UU1 and UU2 respectively), these moths were found to feed only on Parkinsonia after stringent scientific host specificity testing – making them safe for native vegetation and planted pastures.

Michelle said more than 200,000 UU1 (16 releases across 76 sites) and 75,000 UU2 (37 releases, 24 sites) were released through the project. These were in addition to 850,000 UUI (112 sites, 324 releases) and more than 210,000 UU2 (19 sites, 56 releases) which were released as part of an earlier MLA-funded project.

"The Charters Towers DPI played a crucial role throughout this project," Michelle said.

"They contributed heavily to both the mass rearing and release of UU1 and UU2 moths – helping us get the release numbers for both species to where they're at."

To date, Michelle said 65% of the 54 sites where UU1 has been surveyed post-release and 39% of the 18 sites where UU2 was monitored post-release have resulted in the establishment of self-sustaining populations.

"At some sites the natural spread of these agents has been impressive – we've recorded spread of up to 15km and 32km from the nearest release sites for UU1 and UU2 respectively."

Michelle said as some of the release sites have only recently received agent moths, it was premature to determine establishment – which is formally defined as persistence (detection of populations) through one wet season and one dry season.

"However, based on what has established, we can see that UU1 seems to be better suited for the relatively cooler and wetter parts of Parkinsonia's Australian distribution, while UU2 seems to be better suited to the hotter and drier parts," she said.

"We can also determine – in terms of economic benefits to the industry – that if the defoliation capable by Di-Bak™ and UU1 and UU2 are replicated across 50% of the total Parkinsonia infestation over the next decade, the current recurring annual weed management costs could be reduced by up to $15/ha/year and improve pasture productivity by $1–2/ha/year."

Learning on the fly

Moving forward, Michelle said the next phase in the fight against Parkinsonia with biocontrol agents for CSIRO is the stem-galling fly from Argentina.

"While it is known that the fly has the capacity to reduce the growth and reproduction of Parkinsonia by creating nutrient sinks with the formulations of galls in the stem, their host specificity is yet to be comprehensively evaluated.

"Biosecurity is a key part of this project so the next step for us is conducting an appropriate risk assessment on the fly before we consider trialling its release."

How insects can wage war on weeds

Invasive weeds impact our environment by altering ecosystems and threatening native plants and animals. Fortunately, weeds have enemies and biocontrol harnesses the power of these natural adversaries – limiting the otherwise unchecked growth and spread of weeds.

Biocontrol methods offer safe, cost-effective, landscape-scale weed control.

To make sure these biocontrol agents are safe for release and ready to work as weed-busting warriors, these potential agents go through multiple rounds of host-specificity testing.

As an entomologist, CSIRO's Michelle Rafter researches plant–insect interactions.

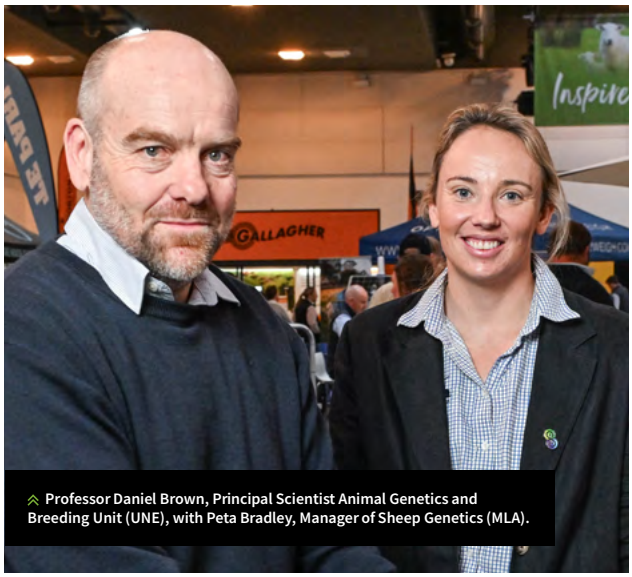
To learn more from Michelle about the process – including the rigorous host testing to ensure biocontrol agents are safe, targeted and effective before being approved for release under Australia's stringent biosecurity regulations – scan or click the QR code:

Learn more about Di-Bak™ in the winter 2022 edition of *Feedback* magazine (pages 36–37): **mla.com.au/feedback**

Dr Michelle Rafter **michelle.rafter@csiro.au** Joe Gebbels **jgebbels@mla.com.au**

Merinos gain new breeding values

Commercial Merino producers can now better select for productivity efficiency both within and across their flocks with new Genomic Breeding Values (GBVs) developed by MLA and the University of New England (UNE).



Professor Daniel Brown, Principal Scientist Animal Genetics and Breeding Unit (UNE), with Peta Bradley, Manager of Sheep Genetics (MLA).

GBVs enable producers to genotype animals and utilise this information in combination with other on-farm data to make more accurate breeding decisions.

Designed to build on existing genetic tools such as flock profiling, GBVs aim to accelerate widespread adoption of Australian Sheep Breeding Values (ASBVs) and underpin genetic gain for key production, welfare and sustainability traits.

Tried and tested

Daniel Brown, Principal Scientist at the Animal Genetics and Breeding Unit (AGBU) at UNE in Armidale, NSW, said his team undertook in-depth testing and technical validation during the tool's development.

"We performed some special analyses using the Sheep Genetics data for validation. We took out some flocks and pretended they didn't exist and then we used their genotypes to make GBV predictions without their actual data," he said.

"We then compared our results to when data was included. This allowed us to see that GBVs were accurately predicting performance."

Building on existing tools

So, how do GBVs fit with existing tools such as the flock profile tool?

Flock profiling, which has been available since 2018, provides a measure of the average genetic merit of a particular flock. GBVs go a step further by allowing producers to rank animals within their flock.

"Flocks often contain mixed-age ram teams or ewes, so GBVs enable producers to select their top-performing animals from this mixed age set," Daniel said.

"Our validation of GBVs gives us a lot of confidence to say producers can now accurately select across different age groups of animals."

GBVs complement the use of ASBVs for ram selection and purchase. They can be used by producers who are selecting ewes and rams bred within their own flock.

GBVs have many benefits, but one of the main ones is that producers can select animals for traits that are difficult to measure or see physically, such as worm resistance and reproduction.

How to use the tool

All producers need to do to access the benefits of GBVs is collect a sheep's DNA with a simple ear punch and send it off to a genomics provider for analysis – check out the link in the toolbox (below right) for a list of genomic labs that work with Sheep Genetics.

The genomic provider will extract DNA information from the samples provided. This DNA data is sent to Sheep Genetics which harnesses the power and data of the MERINOSELECT analysis to produce GBVs, with results sent back in about a month via the genomics provider.

Breeders are then able to use this data in combination with physical and structural assessment to make selection decisions within their flock. These results will also provide a flock profile which gives a flock-level benchmark from which ram selection decisions using ASBVs can be made.

Looking forward, more work is underway to develop similar products for maternal and terminal breeds, as well as new tools to help sheep producers realise greater productivity and prosperity. ■

Turn to page 12 to learn about new GBVs for cattle.

Get involved in a PDS

MLA Producer Demonstration Sites (PDS) will be available to encourage widespread adoption of this cutting-edge genetic technology.

They will demonstrate and identify clear pathways for commercial Merino producers to use current and emerging genetic and genomic tools in their ewe and ram selections to successfully improve genetic gain.

This is a national PDS project so producers from around Australia can be involved.

For more information on this PDS, contact Sally Martin at **sally@sheepmetrix.com.au**

TOOLBOX

- Learn more about MERINOSELECT – Australia's genetic evaluation system for Merino producers: **sheepgenetics.org.au/resources/merinoselect**
- Learn more about the new GBVs: **sheepgenetics.org.au/resources/genomics**
- Sheep Genetics works with these genomics labs: **sheepgenetics.org.au/service-providers**
- Attend a BredWell FedWell one-day workshop: **mla.com.au/bwfw**
- Access MLA's Genetics hub: **genetics.mla.com.au**

Daniel Brown **dbrown2@une.edu.au** Peta Bradley **pbradley@mla.com.au**

Genomic tools lift the hood for better breeding decisions

Charlie and Max Hood's management of NSW-based Tintagel Pastoral Company's ram breeding nucleus and the commercial ewe operation it feeds into has long been informed by the latest available genetic research and tools.

Most recently, the wool, beef and lamb producers have been involved in an MLA-supported University of New England project to develop genomic prediction tools for commercial Merino sheep (see previous page). This has added another layer to their approach.

Established genetics

With a strong understanding of Australian Sheep Breeding Values (ASBVs) and Estimated Breeding Values (EBVs) through their lamb and beef enterprises, the Hoods recognised the value similar tools could offer in advancing their Merino flock's genetics.

Since 2005, Charlie and Max have used within-flock breeding values and measured phenotypes such as fleece traits. The project's new Genomic Breeding Values (GBVs) provided them with the opportunity to test the value of these new tools and opened up the option of moving to submit data into Sheep Genetics to generate ASBVs.

GBVs are calculated using an animal's DNA information. They can be combined with traditional performance data to enable producers to make more accurate selection decisions across age groups within a flock, and for traits with limited performance data.

Solid investment

Charlie and Max fundamentally believe using genetics increases production and are worth investing in – and that genomic prediction tools can help guide these investments more effectively.

"We primarily wanted to improve the efficiency of how we measured genetic gain within our flock," Charlie said.

This knowledge has helped them shift from an open ram breeding nucleus to a closed breeding program. This strategic approach to genetic selection includes incorporating genomic-only breeding values when selecting rams and using the information to guide more informed and targeted decisions aligned with their breeding objectives.

Enabling change

This shift wasn't without its challenges, but has paid off through a more tightly controlled, genetics-driven breeding program.

"It was a bit of a leap of faith to be closing the open nucleus progeny base evaluation," Max said.

Their involvement in the project helped the Hoods learn the system and how to get the most out of the new insights it provided.

"We sought external support for the technical side of implementing genomic breeding values – we relied on SheepMetriX to help us interpret and apply our data," Max said.

Despite still being in an early stage of development, Charlie and Max say their initial progress using the tool is promising – with more time and experience key to increasing their confidence.

Meaningful data key

Charlie and Max found the data generated by the tool relatively straightforward to interpret, particularly with support from SheepMetriX to identify which information was most relevant to their operation.

While the process of understanding the results has been manageable, they note that the true value of the data – its meaningfulness – will become clearer over time.

Future goals

In the next 12–18 months, Charlie and Max aim to generate more meaningful data and build greater confidence in its accuracy. They also plan to evaluate the cost-effectiveness of using the tool and establish clear benchmarks and goals to guide their breeding decisions.

The Hoods are committed to enhancing both the genetic quality and productivity of their flock for sustained success.

Specific targets in their sights include:

- reducing fibre diameter
- maintaining or slightly improving fleece weight
- lowering wrinkle scores
- lifting weaning rates.

Potential to grow

The Hoods are tentatively confident that at this early stage the tool will deliver significantly faster genetic gain at an attractive price point, however they see considerable potential as the data pool expands and more results become available. ■

Charlie (left) and Max Hood of Tintagel Pastoral Company. Image: Hood family

SNAPSHOT

CHARLIE AND MAX HOOD –
Tintagel Pastoral Company, Bombala, NSW

AREA
6,600ha

ENTERPRISE
Wool (10,000 Merino ewes), beef (1,000 breeders) and lamb (9,000 first and second-cross ewes)

PASTURES
Improved with a phalaris, cocksfoot and clover base

SOILS
Granite and shale base

RAINFALL
630mm

Max Hood **max@tintagel.net.au** Charlie Hood **1maharatta@gmail.com**
Sally Martin **sally@sheepmetrix.com.au** Peta Bradley **pbradley@mla.com.au**

From online to on-ground: paving the way to pasture success

Distance is no longer a barrier for Queensland producers when it comes to improving their pastures, thanks to a flexible, online forum which paired peer learning and practical advice.

Delivered through a partnership between the Queensland Department of Primary Industries (DPI), MLA and the Australian Government through the MLA Donor Company, the Queensland Pasture Resilience Program (QPRP) provides beef producers with tools and support to improve their pastures.

Producers can also access new resources and information services about pasture development and grazing management through the FutureBeef online platform. FutureBeef is a partnership between MLA, DPI, Northern Territory Department of Agriculture and Fisheries and Western Australia Department of Primary Industries and Regional Development.

Here, Kylie Hopkins (DPI Senior Beef Extension Officer with QPRP) and Melissah Dayman (DPI Technical Officer with FutureBeef) share the benefits, challenges and on-farm results they witnessed while delivering an online learning package for beef producers wanting to incorporate legumes into their pastures.

Getting things started

The QPRP delivers in-person workshops and field days on pasture development to assist beef producers in managing issues such as pasture rundown and pasture dieback.

"These events are well attended but a lot of information is covered in one day so some producers don't know where to start when they get home," Kylie said.

"When Melissah proposed using an online peer group supported by FutureBeef as a way to work with beef producers on their pastures, our team jumped on the opportunity."

To engage producers and encourage them to participate, Kylie introduced the idea at a field day held at Brian Pastures Research Facility, Gayndah, in May 2024.

"I was asked to deliver a presentation on the value of adding legumes to your pastures, so it was the best time to ask people if they wanted to join an online group to get help in doing that," Kylie said.

"We received many expressions of interest which resulted in 14 beef producers being involved from the central and coastal Burnett areas of south-east Queensland."

Benefits outweigh cons

Despite initial concerns around connectivity and platform limitations, the group built a strong sense of community – with early relationship building a crucial element.

"We spent most of the first session getting to know each other," Melissah said.

The producers involved in the online group shared their experiences – for example, a producer at Goomeri showed other participants how their reversible plough works up country.

"That foundation helped us overcome any tech issues — even when someone's camera or mic didn't work, we found a way to include them.

"People who had never met became incredibly supportive of each other and interested in each other's updates. They were sharing advice, offering to loan their equipment and checking in on each other's progress.

"People ultimately helped each other plant pastures without ever setting foot on each other's properties – it was really amazing to see."

Turning theory into practice

The group followed a seasonal calendar that aligned technical content with key pasture preparation and sowing windows. The first session was held in September 2024, to equip producers with the information they needed to plant in January–February 2025.

Participants created tailored action plans with facilitator support and were held accountable through regular check-ins.

Content was delivered via Microsoft Teams monthly by Kylie and project team leader and pasture specialist Stuart Buck. The digestible sessions included plenty of time for peer-to-peer sharing. As online facilitator, Melissah coordinated the sharing and discussion and helped people with any tech issues that arose.

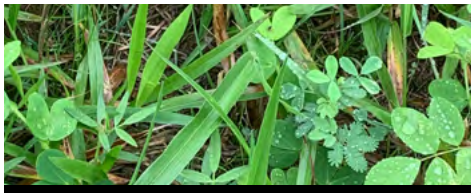
"We quickly realised we needed three hours per session, not two," Kylie said.

"Producers needed more time than anticipated to share their updates and challenges. Stuart, in turn, then needed time to provide each producer with personalised advice that linked theory back to practical outcomes."

Melissah said a surprise was how willing the group was to share their challenges and help each other out.

"Some of the participating producers had trialled legumes with mixed success, some had done a lot of research but never tried and some were just considering it for the first time," she said.

"That mixed bag of people and their willingness to engage with each other is what made the group learning really rich."



A producer involved in the online group sowed Wynn cassia, desmanthus, butterfly pea and Verano stylo into a paddock in the Bells Bridge district.

End results and next steps

While it's too early to measure productivity gains, Kylie said participants are already seeing the value translated on-farm.

"Everyone has seen some progress," she said.

"For some people it is as simple as getting more prepared to start their activities this coming summer.

"Others have done initial clearing or fencing, some have planted legumes in strips and others have grown annual forage crops to prepare country for perennial pastures next year – it's very diverse.

"That diversity is important – we didn't expect everyone to have new paddocks of pasture at the end of this process. The aim was to give them the information and support they needed to make the right decision for their business. Sometimes that meant choosing a different paddock or changing the plan. It's still progress.

"The group has been very active in documenting and sharing photographs of their progress with each other, so we're now at a point where everyone is excited to complete some on-farm visits to see these results in person."

Moving forward, Kylie said they are remaining in contact with the group and will continue to provide any further support they need.

"We had such fun working with this group, we are planning another one soon."

TOOLBOX

- Learn more about the Queensland Pasture Resilience Program: **futurebeef.com.au/qprp**
- Keep up to date on pasture improvement and management in Queensland – scan or click the QR code to subscribe to DPI's quarterly *Queensland Pastures* newsletter:
- Access more legume resources: **mla.com.au/legumes-hub**

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Cross family gives tick to online pasture support

For South Burnett producers Jenny and Jim Cross, improving land condition, pastures and herd productivity in an environment that experiences both flooding and drought has been a constant challenge.

Since taking over the property in 2010, the pair have engaged in numerous programs and workshops offered by MLA, the Queensland Department of Primary Industries (DPI), their local council and other industry service providers.

In 2014, they expanded their grazing land by purchasing the neighbouring property, before their daughter, Rebecca, joined the business in 2017. Rebecca runs the family's Bunya Beef paddock-to-plate business, which was recently featured on the menu at a producers dinner hosted by Morrison Hotel, Brisbane.

According to the Crosses, the online legume group delivered by the DPI's FutureBeef and Queensland Pasture Resilience Program team (see story opposite) came at the right time for the family.

"Prior to our purchase, open grazing was the norm across both properties – with one dam and a non-permanent creek," Jenny said.

"This grazing land management strategy was not going to align with our production goals, so we've spent the past decade focusing on resting paddocks, investing in fencing infrastructure, increasing water supply, using regenerative grazing to improve native pastures and mitigating weeds.

"Improving pasture resilience felt like the appropriate next step to ensuring better long-term productivity gains."

Talking the talk and walking the walk

The online producer support group was delivered by a team of DPI staff and this set-up suited Jenny and Jim just fine.

"An online project meant we didn't need to travel – saving us time and money," Jim said.

The Cross family run a breeder enterprise, as well as a paddock-to-plate business.

SNAPSHOT

CROSS FAMILY – 'Sapling Springs', South Burnett, Queensland

AREA
860ha

ENTERPRISE
South Devon and Belmont Red cattle – 250 breeders plus progeny, 20 head grain-assisted steers

PASTURES
Blue grasses, native glycines, prairie grass and clovers

SOILS
Cracking clays over basalt and alluvial creek flats

RAINFALL
700mm

"We also knew, based on our previous experiences, that DPI staff were very good at facilitating positive change and best management practices by walking the walk and talking the talk."

According to Jenny, the DPI team had the foresight to run sessions

continued next page

continued from previous page

at times that suited most participants and recorded the meetings for those unable to attend or those who wished to review session learnings.

"The program itself was well prepared, and the sessions were delivered in a way that didn't overwhelm us – the DPI staff clearly knew their stuff," she said.

"During sessions, they offered sound advice that increased our confidence while also facilitating the sharing of producer expertise and, in between, they made themselves available to provide further support by phone or email."

Theory into practice

The project's focus on testing and demonstrating sown legume systems in commercial production paddocks was not new to the Cross family.

In fact, before joining the project, they had planted and grown legumes with great success.

However, this all occurred on their previously owned farmland, which was located in a very different environment.

"The soils, altitude and previous land use was vastly different between properties," Rebecca said.

"Our goal was to utilise the project support group to help us develop a pasture establishment plan that could be used for any environment."

To begin developing and actioning their plan, the project team first encouraged group members to take account of:

- land use history
- ground cover
- current pasture species
- land and soil types
- historical grazing land management strategies used
- erosion.

Noting this, the first practical step the Crosses undertook was to test their soils.

"Good soil condition is the foundation of successful pasture establishment," Jim said.

"A soil test will tell you if you need to invest in fertiliser or if you can save your money to use elsewhere – fortunately for us, we received the latter result."

For the Cross family, fallowing was a key part of their seed bed preparation.

"Since we'd already planned to renew our pastures, we already had a few paddocks we had let rest," she said.

"We spoke about this with the DPI team and other participating producers during our sessions, and a key takeaway was the benefit two years of rest had on soil condition by encouraging deep moisture retention across the soil profile.

"Our next step was considering whether to use a plough or chemical spray to kill the existing grasses, and whether to prepare the whole area or just strips – which is again where the group sessions came in handy.

"After having a discussion with the others during an online session, we decided our best option was to chemical spray strips of soil to retain some of the land's native pastures – using rainfall predictions from BOM and FORAGE to guide planting times."

The DPI team recommended spraying out strips at least 4m wide to keep grass from 'stealing' the moisture profile in the soil. The Crosses also sprayed out the strips 10m apart to ensure cattle had access to at least 70% pasture while grazing leucaena.

"After a very good plant strike, we found that the native macropods enjoyed eating our establishing pastures, which we are hoping for a resurgence of this spring if the implementation of electric exclusion fencing can keep it from being grazed."

Future focus

Moving forward, the Cross family plans to establish a multi-species pasture across their property's river flats.

This will include a combination of annual pastures, perennials and supplemented native species.

"This seed list was built for us not only by a senior DPI officer, but by our peer producers," Jim said.

"It's been a really positive experience, getting insights and advice from both those who do the research and those who put it into practice.

"We see this project as a long-term and continuous investment.

"This new planting will help further the carbon and nitrogen levels in the soil and, in the longer run, support the success of our production goals, which are to improve pregnancy rates, increase herd profitability and reduce carbon emissions."

bunyabeef.com.au Jenny and Jim Cross **jjcross@bigpond.com**
Allan Peake **apeake@mla.com.au**

Billie-Jaye sets sights on more lambs

South Australian PhD student Billie-Jaye Brougham has spent the past five years investigating how maternal nutrition affects lamb survival.

Her research journey, supported by MLA, the SA Drought Hub and the Sheep Industry Fund, has delivered new insights into how supplements such as betaine and melatonin influence lamb viability, ewe fertility and the broader productivity of sheep flocks.

Billie-Jaye always knew she wanted to work with animals, an interest cultivated while helping her father with sheep work on her family's Streaky Bay property.

After school, she applied to study veterinary bioscience but didn't get in, instead accepting a place in animal science at the University of Adelaide. Billie-Jay now views this as a great outcome.

"I feel like this was meant to happen, I'm very happy with how it all worked out," she said.

Supplementing for survival

A subject in animal reproduction sparked her interest in maternal supplementation and lamb survival, topics she would go on to explore in both her Honours and PhD projects.

Her Honours research formed part of a MLA-funded project into weaning rates, and focused on supplementing twin-bearing ewes with betaine in an intensive indoor setting. Betaine is a compound known to enhance energy metabolism and offer neuroprotective effects.

"The key outcomes from my Honours project demonstrated increased survival rates to day seven in twin lambs. It also improved some measures of vigour at birth, mainly looking at behavioural latencies from video recordings of parturition and post-birthing behaviours."

This work, the first of Billie-Jaye's three published papers so far, laid the foundation for her PhD.

Benefits of betaine

Stage two of the betaine research, which formed her PhD, involved large-scale field experiments in the south-east of SA to test if betaine could deliver benefits under commercial conditions.

The trials revealed that betaine increased creatine levels in pregnant ewes and improved lamb thermoregulation at birth, but survival rates in these real-world conditions matched, rather than exceeded, current industry figures.

"It was a valuable finding in itself," Billie-Jaye said. "We showed some physiological benefits, but without a clear lift in lamb survival, it wasn't enough to recommend commercial uptake of betaine just yet."

Melatonin for fertility

Billie-Jaye then shifted her focus to melatonin supplementation, specifically its impact on ewe and ram fertility.

"We looked at other supplements for the MLA project and found melatonin was a superior supplement for improving multiple areas of lamb viability and survival," she said.

"It increases pregnancy rates and the proportion of twin-bearing ewes, and ultimately increases the number of foetuses per ewe joined at scanning.

"We've done a couple of trials implanting rams with melatonin prior to semen collections and studying how that impacts their semen quality.

"We found that the ejaculate volume, semen concentration and sperm motility improve with melatonin supplementation, which is another interesting benefit."

A melatonin capsule, Regulin®, is already available for producers to use, so the research team aims to build the evidence base for why investing in such supplements can improve flock productivity.

Career heats up

Billie-Jaye has now completed her PhD and is working full-time as a Research Officer with the Davies Livestock Research Centre at the University of Adelaide's Roseworthy Campus.

Alongside the supplement research and managing the university's sheep flock, she's also part of a new five-year project examining heat mitigation strategies. They are trialling native legumes and shrubs, exploring sheep behaviour and investigating adaptive traits that improve the capacity of sheep to tolerate heat and drought, and remain productive when conditions are harsh.

"We're focused on developing feedbase options that stabilise soil, provide year-round forage under extreme climatic conditions and improve ecosystem services," she said.

"We're also trying to improve flock productivity by identifying and selecting for traits that improve their ability to withstand drought and climate extremes."

Billie-Jaye with Merinos at the University of Adelaide's Roseworthy Campus.

For students considering a career in agricultural research, Billie-Jaye encourages them to stay open-minded and take opportunities as they arise.

"Don't be afraid to give new things a go that may not have been your first preference," she said.

"I didn't think I'd end up in research, but I've enjoyed every moment of it. An Honours or a Master's year can open the door to something you never expected."

Despite a full research schedule, Billie-Jaye still finds time to head home when she can, to help her father with sheep work and keep a finger on the pulse of industry's needs. ■

The mixed flock of Merino and hair sheep breeds that will be used in the new five-year research project at University of Adelaide's Roseworthy Campus.

Making More From Sheep: **makingmorefromsheep.com.au** Industry careers hub: **mla.com.au/career-hub**
Billie-Jaye Brougham **billie-jaye.brougham@adelaide.edu.au** Daniel Forwood **dforwood@mla.com.au**

Unlocking soil potential pays off

A group examines a soil pit on Gippsland Research farm at the recent Soil Symposium.

A Producer Demonstration Site (PDS) project in Victoria's Gippsland region is showing early promise in turning underperforming soils into a productive feedbase.

Led by Gippsland Agricultural Group, the MLA-supported PDS is demonstrating different amelioration strategies to address key soil constraints across the red gum plains, including compaction, acidity and poor nutrient retention, to improve pasture resilience and productivity.

The red gum plains of east and central Gippsland are known for their compacted, acidic soils with poor structure and low fertility. The PDS, now at its midpoint, is demonstrating a range of practical treatments including:

- strategic ripping and cultivation
- applying poultry litter (10t/ha) – incorporated and surface-spread
- testing soil – baseline sampling to 60cm, with follow-up testing on soil biology and nitrogen availability.

"We've always known this country had potential, but the economics of improving what we have is now stacking up," Jen Smith, General Manager of Gippsland Agricultural Group, said.

"With land prices rising, there's a shift in mindset. Producers are more interested in unlocking what's beneath their feet."

Across four sites at Bengworden and Perry Bridge, initial signs point to improvements in soil friability, deeper root systems and faster recovery from waterlogging, despite a severely wet year.

Rick Blackshaw, Project Officer with Gippsland Agricultural Group, said it comes down to selecting the right tool for the right zone.

"Even modest amendments in the right place can shift the dial, especially where feedbase quality is the bottleneck to livestock performance," Rick said.

Investment confidence

The project will ultimately deliver a cost–benefit analysis of different soil interventions, giving producers confidence to invest based on their own soil conditions.

Rick said that even in paddocks where the feedbase had not yet lifted, changes in soil structure were clearly evident.

"We're seeing signs of structural improvement well below the traditional working depth, which gives us confidence we're setting up a better root zone for future seasons. This kind of shift doesn't always deliver immediate yield – it's about building a more resilient system."

Jen said they're also seeing a change in how producers engage with the results.

"The interest we're getting isn't just about what mix or rate worked best – it's more strategic," she said.

"People are asking: 'Where do I start on my farm? How do I identify zones with the best return on investment?'

"That's a big leap forward."

The team is also backing technical research with strong producer engagement. In June, the Gippsland Soils Symposium attracted more than 100 attendees (predominately red meat producers) to the Gippsland Research Farm. Soil scientists, local agronomists and producers shared practical insights on structure, carbon, pH, nutrient cycling and climate-ready soil management. The event also marked the launch of the Gippsland Soil School, an initiative aimed at lifting regional soil literacy and embedding change on-farm.

Jen said the level of engagement reflected a shift in the region.

"This project gives producers access to practical data, peer learning and the tools to make informed decisions." ■

TOOLBOX

- Scan or click the QR code read more about this PDS:
- MLA Pasture improvement calculator: **mla.com.au/pic**
- Gippsland Agricultural Group soil amelioration project:**gippslandag.com.au/research/projects**
- MLA's Healthy soils hub: **mla.com.au/healthy-soils**
- PDS program: **mla.com.au/pds**
- Search tool: **mla.com.au/pds-search**
- Subscribe to PDS updates: **mla.com.au/pds-updates**

facebook.com/GippyAgGroup Jen Smith **jen.smith@gippslandag.com.au** Alana McEwan **amcewan@mla.com.au**

Waking the sleeping giant of soil health

Victorian beef producer Trevor Caithness describes soil health as the red meat industry's sleeping giant – one he's tackling through an on-farm trial.

"It's slow work, but the returns are exponential," he said.

Trevor has always seen soil health as the foundation for consistent livestock performance. As part of an MLA Producer Demonstration Site (PDS), he's opening the gates to his east Gippsland property to share how focusing on soil amelioration can maximise red meat production.

Hosting one of four demonstration sites as part of the Gippsland Agricultural Group's five-year PDS (see story previous page) was a natural extension of what Trevor was already doing on-farm.

The family-run Caithness Pastoral incorporates 1,600ha of variable soils, ranging from red gum flats with drainage issues to sandy loams with low fertility. The enterprise includes a self-replacing herd and a dryland cropping program.

In the face of increasingly unpredictable weather patterns, Trevor has made proactive soil management the foundation of his decision making.

PDS builds knowledge

Trevor sees the PDS as a practical way to contribute to regional knowledge while testing his own approach.

"The soils on the red gum plains have always been a challenge – but if you don't invest in your soils, you're just managing symptoms," Trevor said.

"The real productivity – the long-term resilience – comes from what's happening below the surface."

Trevor's experience has shown him there's little benefit in delaying action on soil improvement.

For newly acquired blocks, he applies a full amendment program upfront of 3.5t/ha lime, 1.5t/ha gypsum, 2t/ha poultry litter and trace elements (copper, zinc, selenium, cobalt).

"Waiting five years for a paddock to come good isn't an option. The interest bill doesn't wait," he said.

Trevor draws on the Albrecht–Kinsey soil fertility system and his experience as a 2002 Nuffield Scholar. He believes reading and understanding soil tests is a critical skill for producers.

"A well-balanced soil doesn't just feed plants, it protects them. We see stronger pasture resilience, better livestock performance and minimal animal health issues. We also have more water-holding capacity in extreme dry events," he said.

Infrastructure investment

Gippsland's increasingly variable climate has informed Trevor's infrastructure investments. He's installed a reticulated bore water system and built a large silage pit to conserve fodder during favourable years.

Containment feeding is a core strategy, with stubble paddocks used to hold cows early in the season while preserving pasture and annual crops for silage.

"It's about maximising kilograms of red meat per hectare, profit per breeder and leveraging the synergies between livestock and grain," he said.

Two-way value

Hosting the PDS has deepened Trevor's understanding of his own system and opened the door to exchanging ideas with other producers.

"You get value when you give value. We're not just doing this for our farm, we're helping build a more resilient industry," he said.

Trevor relishes the field walks and discussions with other PDS hosts and observers.

"After 30 years of farming, I still learn something every time I get in the ute with other producers." ■

PDS participant Trevor Caithness.

SNAPSHOT

TREVOR AND CARRYN CAITHNESS – Bairnsdale, Victoria

AREA
1,600ha

ENTERPRISE
850 breeding cows,
200ha of cereals and canola

SOILS
Red gum flats to sandy loams

RAINFALL
600mm

SEASONAL ACTION PLAN

- **Test before you invest:** Identify limiting factors such as pH, sulphur or compaction with zone-specific testing.
- **Target high-return areas:** Don't blanket-treat the farm. Focus on zones where feedbase improvement will have the most impact.
- **Feed the biology:** Apply organic matter to stimulate microbial life and improve nutrient cycling.

Improved soil productivity supports Trevor and Carryn's self-replacing breeder herd.

Trevor Caithness **caithness@wideband.net.au** Alana McEwan **amcewan@mla.com.au**

What will the future WA mixed farm look like?

WA producers are getting ahead of the game by identifying opportunities to overcome future climatic challenges facing mixed farms in low and medium rainfall zones.

They are no strangers to climate variability, with current rainfall and temperature trends expected to continue (and potentially intensify). As they look ahead, innovations and efficiencies in agronomic and livestock management will be the key to thriving businesses.

To keep innovation ahead of an increasingly challenging environment, an MLA-supported project looked at future opportunities and risks facing the low and medium rainfall mixed farming zones of WA.

The project applied four future farming system scenarios, to identify where improvements can be made to ensure producers can continue to succeed in years to come.

While the project focused on insights from WA producers and research, the outcomes have potential to be used nationally.

These times, they are a-changin'

CSIRO Senior Principal Research Scientist Hayley Norman said producer and consultant insights offered a realistic sense of what is happening on the ground, and how producers are responding.

"Before any investments into new research are made, we needed to see what is challenging those production systems at the moment," Hayley said.

"Following that, we can understand how future climate scenarios, combined with other issues with soils, water and markets might impact different components of a system."

While some expected shifts in production had already begun, others weren't occurring.

"Producers have already had to adapt to having less rainfall in their growing season, and they've done so without having to dramatically change their operation.

"We thought future climate scenarios may encourage producers in north-eastern WA to bring more diversity (including livestock) into their system to mitigate seasonal variability. We found that producers are very efficient at growing wheat and are very good at managing risk through input decisions.

"As you move further south into the low rainfall wheatbelt, risks such as frost lead to less wheat, more barley and greater diversity in the production system, encouraging greater livestock production," Hayley said.

What producers can do now

While the review found opportunities for further research, producers can begin considering what options exist, and how they might implement those within their own operation.

"Research can take five to 10-plus years before there is on-ground impact. It's important to consider how farming systems may evolve as climate and operating environments change to ensure our science is supporting development of the right technologies," Hayley said.

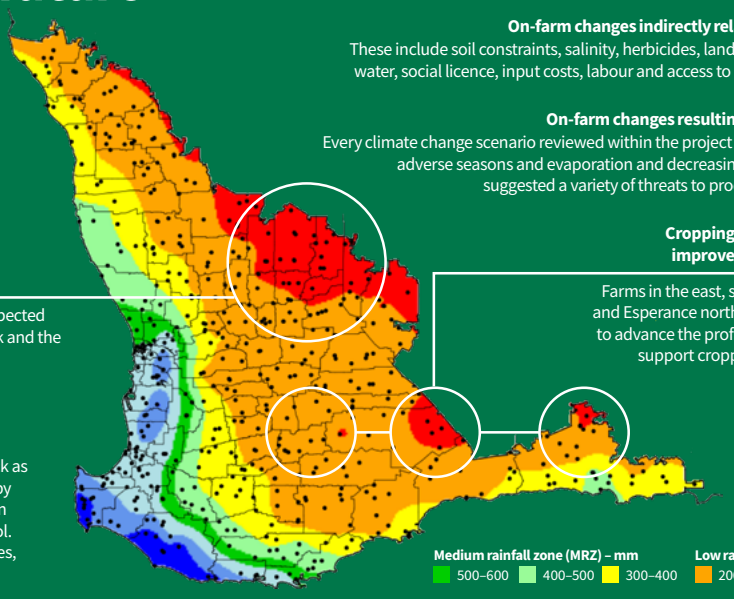
To help counter the impact of climate change, opportunities specific to red meat include:

- **Virtual fencing:** The GPS-based technology can be used to optimise utilisation and management of large cropping paddocks. MLA has recently completed research into the viability of using virtual fencing in the WA rangelands (turn to page 6 to see how a WA producer is using virtual fencing).
- **Desalination:** A long-term solution for securing livestock water, small-scale irrigation and feed gap management. For many producers, cost remains a barrier.
- **Opportunistic livestock systems:** Implement systems around trading, breeding and feedlotting, which are suited for uncertain seasons.

> **"It's important to consider how farming systems may evolve as climate and operating environments change."**

Features of the future mixed farm

The project revealed the strategies WA mixed farms of the future will need to thrive.



On-farm changes indirectly related to climate change
These include soil constraints, salinity, herbicides, land tenure and prices, farm water, social licence, input costs, labour and access to research and extension.

On-farm changes resulting from climate change
Every climate change scenario reviewed within the project – including increasingly adverse seasons and evaporation and decreasing growing season rain – suggested a variety of threats to productivity in each region.

Cropping systems supported by improved livestock integration
Farms in the east, south-eastern wheatbelt and Esperance north regions are more likely to advance the profitable use of livestock to support cropping and natural capital.

Cropping dominant in northern systems
Mixed farms in the north-eastern wheatbelt are expected to remain cropping dominant, with fewer livestock and the possible retirement of less productive soils.

More opportunity to use livestock for increased cropping productivity
According to survey results, producers see livestock as an opportunity to increase cropping productivity by providing pasture-related services such as nitrogen fixation, a disease break for crops and weed control. Livestock offer opportunities to utilise crop residues, split grain and compromised crops.

Top mixed farming research priorities

Here's a look at research and development priorities identified through this project – some are already underway to set WA producers up for future challenges.

Forage strategies for failed crops
Science and tools to enable compromised crops to be used for forage. Timely decision making, accounting for the crop growth, reproductive stage and within-season climate predictions will optimise feeding value to livestock and system profitability. ***This is now the subject of a current MLA Tender.***

Utilisation of vegetative crops
Using crop grazing to fill the winter feed gap for livestock without compromising crop yield. ***This is now the subject of a current MLA Tender.***

Improved legume pastures
Identify legume pastures for profitable livestock and crop production, soil health and biological diversity. These legumes should regenerate after a cropping phase, fix nitrogen and have herbicide requirements to complement cropping systems.

Improved tools/models
To develop a greater understanding of crop–livestock integration and understand risk and volatility at both paddock and whole-farm scales. This should be combined with advancement of AI tools to assist in complex decisions regarding management of mixed farming systems.

TOOLBOX

Scan or click the QR code to read about WA producers who are getting ahead of the climate curve:

Learn more about future-proofing research in WA at **mla.com.au/sheeplinks-climate**

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Joe Gebbels
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Goat data just a click away

Australian goatmeat producers now have a go-to hub for the latest information on industry trends, including production, supply, processing, export trends and outcomes from the National Goatmeat Supply Forecasting Committee meetings.

The new webpage, launched by MLA in partnership with the NSW Department of Primary Industries and Regional Development, offers quarterly reports from the Goat Data Collation and Tracking project.

Scan or click the QR code for the GDCT project or contact Trudie Atkinson for more information: **trudie.atkinson@dpi.nsw.gov.au**

Meet your new GIRDAC members

The Goat Industry Research, Development and Adoption Committee (GIRDAC) plays a vital role in shaping the future of Australia's goat industry.

The eight-member committee of producers and industry experts from across the value chain advises on levy research and development (R&D) priorities, project review, service provider appointments and terms of reference.

GIRDAC recently welcomed two new members who bring valuable experience and fresh perspectives to the table.

Kieran Smith is an Agriculture Advisor with Western Local Land Services working on the 'Going ahead with goats' project. He supports producers to improve productivity and profitability through advisory work, workshops and stakeholder engagement.

With a Rural Science degree focused on livestock production systems as well as a background in both intensive and extensive livestock enterprises, combined with experience in livestock extension, he brings a strong mix of technical expertise and hands-on knowledge.

Kieran joined GIRDAC to deepen his understanding of how R&D priorities are set and to contribute practical insights to guide the industry's direction, shaping future R&D activities in the goat industry.

Anita Dennis is the Goat Director on the AgForce Sheep, Wool and Goat Board. She runs a goat enterprise, Taylor Dennis Pastoral, with her family in central western Queensland.

Over the past decade, Anita has focused on advancing rangeland genetics through strategic breeding programs. Anita is a founding member of QGoat and the Kalahari Goat Association of Australia as well as a member of Boer Goat Australia – she is deeply involved in industry development, knowledge sharing and advocacy.

Anita's appointment reflects her long standing commitment to the sector. She believes clear growth pathways through strategic research, development and adoption, improved market access, sustainable expansion and enhanced producer education are essential to unlocking the industry's full potential.

She also sees big opportunity in strengthening the domestic market and making premium goat meat more accessible to Australian consumers.

mla.com.au/goats-hub Daniel Forwood **dforwood@mla.com.au**

Andy Graham with his children Phoebe, Patrick and Edward.

Finding a premium market for Merino sheepmeat

Tapping into a processor's value-based marketing program has given NSW sheep producers an increase of up to $1.50/head for their lambs.

Fifth-generation sheep producer, Andy Graham, operates a mixed livestock enterprise near Gundagai in NSW with his father David and brothers Tim and Charlie.

The family enterprise has an Angus herd and a Merino flock (equally split between Merino and terminal joining). As sheep producers, the Grahams focus on supplying high quality lambs to the value-based marketing (VBM) program at Gundagai Meat Processors (GMP).

A profitable market for Merino meat

During their first year with the VBM program, the Grahams supplied Gundagai Lamb with 2,500 Merino lambs. However, seasonal conditions mean that number could rise in 2025, with the business likely to sell more ewe lambs.

"We are paid premium dollar for Merino lambs with Gundagai Lamb while other processors might discount them because they prefer the traditionally desirable second-cross or first-cross Merino–Dorset or terminal Suffolk lambs," Andy said.

That has resulted in real returns, with Andy estimating he receives around $1 to $1.50/kg more by supplying the Gundagai Lamb program.

Useful feedback

Andy said open and transparent communication was a hallmark of the program – through informal conversations with Gundagai Lamb and via the feedback provided in his producer portal.

"I think most producers like receiving constructive feedback about their lambs and the advanced feedback we get from the Gundagai Lamb portal gives us another level of monitoring for animal performance and quality control," he said.

SNAPSHOT

ANDREW GRAHAM – 'Redhill', Adjungbilly, NSW

AREA
3,000ha

ENTERPRISE
Self-replacing Angus cattle, Merino ewes (50% joined to Merino rams, 50% joined to terminal)

PASTURES
Native and improved pastures

SOILS
Sandy and clay loams plus granite

RAINFALL
800mm

"I think most producers like receiving constructive feedback about their lambs and the advanced feedback we get from the Gundagai Lamb portal gives us another level of monitoring for animal performance and quality control."

"While our flock management practices haven't changed significantly, the feedback shows we're chasing the right breeding criteria – such as lean meat yield (LMY) and intramuscular fat (IMF) – because our lambs have been a good fit with the Gundagai Lamb specifications from the start.

"Importantly, I think the feedback has helped us better understand the target market for our lambs, as well as setting and executing plans to meet these expectations."

Animal health

One area where the Gundagai Lamb feedback has assisted Andy's on-farm management was its identification of immature liver fluke in a consignment of lambs. (Read more about liver fluke on page 24).

"Our monthly worm testing had shown no liver fluke in our lambs but when we compared two consignments using the feedback, we could see our immature liver fluke rejections had doubled and our IMF scores for those lambs had also dropped significantly."

Andy was then able to treat the problem and not only did his lambs' IMF rise, their daily weight gain was also significantly boosted.

Effecting long-term practice change

Gundagai Lamb is undertaking a project with MLA, to encourage on-farm practice change with long-term benefits.

"We're an outcomes-focused brand, so we don't prescribe how our producers breed or feed their animals," Dr Michelle Henry, Supply Chain Manager at GMP, said.

"However, we want our producers to fully understand and utilise the dashboard feedback in their producer portal, so we're delivering a series of group workshops with resources and expert advice about on-farm activities that can help influence carcase results."

The workshops are delivered in stages, reflecting the producers' progress through the program.

How GMP's value-based marketing works

GMP's VBM program is enabled by objective measurement (OM) technology which was installed around six years ago (following early support from MLA).

Dr Michelle Henry, Supply Chain Manager at GMP, said this OM technology includes:

- **a hot Dual-Energy X-ray Absorptiometry (DEXA) which measures lean meat yield (LMY)**
- **an MEQ Probe which measures intramuscular fat (IMF) in the loin muscle of the carcase.**

Individual feedback is enabled by RFID chips in each hook which are scanned at specific data collection points throughout processing.

This information is then plugged into the Gundagai Lamb Quality score (GLQ score) – a proprietary algorithm that calculates a score for each carcase based on IMF and LMY (as well as any animal health issues).

"Using that data, we pay producers based on the quality of the animals produced, with a bonus for any carcase that meets or exceeds the highest GLQ score," Michelle said.

Producers then have access to an interactive portal with dashboards providing a suite of feedback based on individual carcases. They can use this performance data to assess whether on-farm changes are required to improve performance in line with the GLQ score.

> **"Importantly, I think the feedback has helped us better understand the target market for our lambs, as well as setting and executing plans to meet these expectations."**

The first workshop, which Andy completed last year, covered objective carcase measurement, what the feedback means and why it's important from the consumer perspective.

This year, Andy will join his peers in the second workshop where they'll learn more about the impact of nutrition. In the third workshop, the group will look at genetics and breeding in the lead-up to ram-buying season.

As the program matures, Michelle said the group will have more flexibility in choosing the areas of most interest to them.

"Eventually, we'd like to see peer-to-peer learning being prioritised, with Gundagai Lamb producers sharing data and benchmarking their performance against each other," Michelle said.

"Once that's combined with their feedback from the interactive portal, our producers should have the tools they need to make the well-informed decisions needed that continuously improves their product and delivers the consistently high quality eating experience we want our consumers to enjoy."

The Grahams focus on supplying high quality lambs to the value-based marketing program at Gundagai Meat Processors.

gundagailamb.com.au/about **mla.com.au/om** Andrew Graham **andrew_graham795@hotmail.com**
Dr Michelle Henry **mhenry@gmpgundagai.com.au** Alicia Waddington **awaddington@mla.com.au**

How factory innovation brings benefits to the farm

Coles Retail Ready Operations Australia (Coles RROA) and MLA recently partnered in a collaborative innovation (co-innovation) project to create supply chain efficiencies through a range of innovative products, packaging and operating processes.

MLA's Co-innovation program aims to enable leading Australian red meat value chains to fast-track innovation and growth strategies.

Coles RROA explored 89 initiatives through the program – all aiming to deliver benefits across operational excellence, product innovation, digital solutions and sustainability.

Coles RROA Senior Project Manager Suvir Salins said the program allowed the business to focus on improvements they would not have normally explored.

"We did many proof-of-concepts to develop an idea which we could then sell to the business as a viable investment once progress had been made," Suvir said.

"Several of those proof-of-concepts ended up as major projects which have come to total fruition and delivered a lot of benefits to the business."

During the co-innovation program period, Coles saw an uplift of 180 tonnes of red meat sales.

Efficiencies bring more sales

A range of innovations were developed through the project that could be adopted by other retailers or further along the supply chain. They included packaging improvements, AI-operated vision systems, digital dashboards and export labels.

"Our industry partners had similar challenges when it came to improving shelf life, reducing product transport and increasing product efficiency," Suvir said.

"Where we found improvements, we were able to share them with industry partners and detail how they could access these improvements for themselves."

Coles RROA Enterprise Planning Manager Jordan McIntyre said efficiencies built within the program should translate to producers through better systems and increased red meat sales.

"A large amount of what we're trying to innovate will reduce costs and improve quality and freshness. With all the work going into producing red meat, we need to make sure we have an efficient value chain to deliver fresh products in a consumer-ready form," Jordan said.

"With efficiencies gained and money saved, this has enabled investment in price or in marketing those products."

Coles saw a 180-tonne increase of red meat sales over the three-year program (2021–2024) – an impressive 26% rise.

Learning through networks

The results were clearly successful, but Suvir said many unintended additional benefits were discovered throughout the program.

"Having such a wide industry network has offered more benefits than we anticipated, allowing us to identify solutions to problems we hadn't considered before and find other ways to leverage existing technology," Suvir said.

"We have the capability to run these projects, and this program has allowed us to dedicate real efforts towards innovation and capability building.

"Now, Coles is in a unique position to translate those benefits from our plant all the way through the supply chain."

> **"Where we found improvements, we were able to share them with industry partners and detail how they could access these improvements for themselves."**

TOOLBOX

Read about MLA's Co-innovation program: **mla.com.au/innovation-capability-building**

Scan or click the QR code to learn more about the Coles RROA project:

Alicia Waddington **awaddington@mla.com.au**

Paddock-to-port snapshot of live export emissions

New research offers producers a clear picture of the carbon footprint of their cattle and sheep once they leave the farm, providing valuable insights into where emissions occur along the livestock export supply chain.

Australia's agricultural sectors are under pressure to demonstrate their sustainability and meet increasing expectations regarding environmental accountability.

The livestock export industry has responded by updating its life-cycle assessment to better understand and communicate the greenhouse gas emissions, energy use and water consumption involved in moving livestock from Australian farms to overseas markets.

Funded by the Livestock Export Program, a collaboration between MLA and LiveCorp, the assessment has revealed that the live export stage of the supply chain has relatively low environmental impacts while contributing to a more efficient northern cattle industry and WA sheep industry, and providing vital nutrition to communities overseas.

The updated carbon assessment, which was conducted by Integrity Ag, builds on a 2011 study and includes the full export journey, from livestock production through to shipping and arrival in-market. For the first time, it also includes air freight and included a downstream case study of an Indonesian feedlot.

Emissions improvements

Dr Stephen Wiedemann, Managing Director of Integrity Ag, said there have been measurable improvements in emissions for cattle exports, particularly due to better methane estimation methods, improved herd performance in the grazing herds supplying feeder cattle and more efficient fuel use, predominantly on ships. There have also been significant productivity improvements in northern cattle herds over the past decade.

"This study compared the environmental impact of sending feeder cattle from Katherine to Indonesia by sea, versus trucking them to southern Queensland," Stephen said.

"Sea freight added around 4% to total emissions, while road transport increased emissions by just over 2%.

"When we included feedlot finishing in Indonesia, the overall emissions were reasonably comparable to the Australian slaughter cattle from similar production systems, which confirms the environmental efficiency of this supply chain for production areas without local processing infrastructure."

He said per head emissions for sheep have increased, but this is largely due to changes in stocking density on ships, as well as increased impacts during primary production.

"Fewer sheep on each voyage reflects an important progression in animal welfare, and the result highlights the important trade-offs which exist between animal welfare and environmental impacts."

Water use was assessed using a new method that excluded seawater and desalinated water used on ships, resulting in lower reported consumption during the live export process.

Air freight is inherently a high-emissions transport option, and this was found to be true for livestock exports. Air exports represent a small portion of total volume and are important for delivering high-value animals, such as breeders, as well as small consignments into land-locked countries.

Opportunities for industry

Overall, the live export process itself contributed only 4% of total emissions for cattle and 25% for sheep supply chains, with the majority of life-cycle emissions occurring on-farm.

The livestock export industry has options to reduce emissions through feed supplements and ongoing energy efficiency to contribute to lower impacts in the future.

The updated assessment provides a stronger evidence base for the industry to respond to national targets, community expectations and sustainability certification requirements.

For producers, it reinforces the role of on-farm decisions in shaping environmental outcomes, while showing that livestock export continues to offer an efficient and responsible pathway to market. With continued improvements, the industry is well placed to contribute to Australia's emissions targets.

A life-cycle assessment has revealed the live export stage of the supply chain has relatively low environmental impacts.

LIVEXchange 2025

MLA's Live Export team will be in Perth for this year's LIVEXchange conference on 26–27 November. Come along and join around 400 delegates from across the supply chain for two days of informative and inspiring sessions, trade stands and social events.

For more information and to register visit **livexchange.com.au**

mla.com.au/livestock-export **livecorp.com.au/researchanddevelopment** Rashelle Levonian **rlevonian@mla.com.au**

Aussie Beef Mate Hiroki 'Hulk' Kato shares his insights on why people should be cooking and consuming Australian beef with expo visitors.

One of a kind: sustainable status for Aussie beef on world stage

The sustainability credentials of Australian beef have been recognised on the global stage as the only sustainable protein available at Expo 2025 Osaka, Kansai, Japan.

This major global event, which began in April and runs until 13 October, is expected to attract an estimated 28 million visitors over 184 days, with more than 20 million having visited by the time *Feedback* went to print.

How it was achieved

Australian beef secured the sustainable supplier status by meeting the Expo's 'Code of Sustainable Procurement'. The code includes:

- **Environmental responsibility:** Minimisation of environmental impact by adopting practices such as reducing carbon emissions, promoting energy efficiency and supporting a circular economy.
- **Social responsibility:** Ethical labour practices, fair treatment of workers, and contributions to local communities.
- **Economic sustainability:** Demonstrating long-term economic viability while supporting local economies and fostering innovation.
- **Transparency and compliance:** Complying with traceability guidelines and participating with reviews to ensure adherence to the sustainability standards.

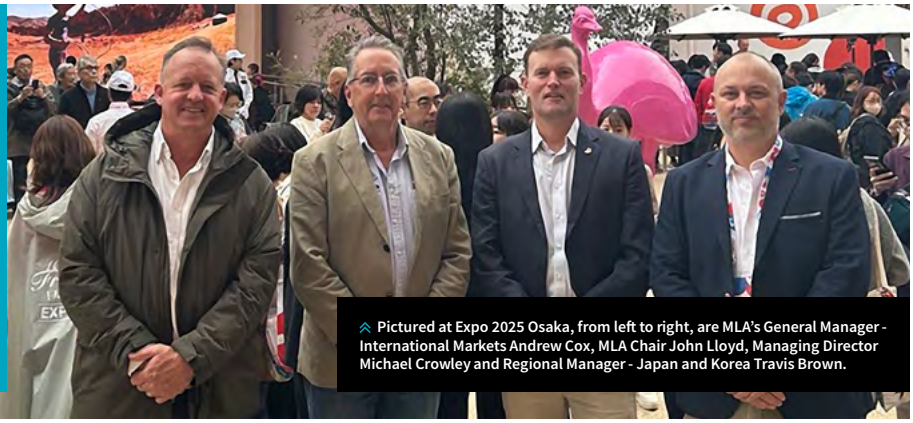
According to MLA's Regional Manager for Japan and Korea, Travis Brown, this certification was achieved following a rigorous and demanding process.

"After working with Expo officials, Australian beef has met all the criteria to be recognised as a sustainable supplier – the only protein and industry to receive this certification globally," he said.

"Having the industry certified allows all of us to promote and share this point in our discussions, negotiations and promotions where sustainability is an ever-increasing factor in buying and purchasing decisions."

>5t
Australian beef
sold at Expo 2025 Osaka so far

The Australian Pavilion has attracted (at time of printing)
>2.4M visitors



Pictured at Expo 2025 Osaka, from left to right, are MLA's General Manager - International Markets Andrew Cox, MLA Chair John Lloyd, Managing Director Michael Crowley and Regional Manager - Japan and Korea Travis Brown.

MLA Managing Director, Michael Crowley, said this recognition underscores Australia's commitment to world-leading sustainability practices and the unparalleled quality of its beef products.

"This recognition is a testament to the hard work and dedication of Australian cattle producers and the supply chain, who all work in care of natural resources and the health and welfare of their animals," he said.

On the world stage

MLA's Aussie Beef and Aussie Lamb international brands feature prominently at the Australian Pavilion, which is a major feature of the Expo. There are daily interactive demonstrations, sampling activities and engaging storytelling.

"The Expo is an incredible opportunity to showcase the very best of Aussie beef and lamb to more than 12,000 daily visitors to the Australian pavilion," Michael said.

"This recognition at the Expo and the work of the MLA team highlighting the product strengthens the bond between Australia and Japan. It highlights Australia's credentials in sustainable food production.

"In Japan, and around the world, MLA is committed to promoting the quality and diversity of Aussie beef, lamb and goatmeat, as well as the world-leading sustainability practices and systems that underpin our industry,"

Japan was the second largest beef export market for Australia in 2024, importing 247,605 tonnes of beef worth A$2.07 billion.

Japan is also the third largest importer of beef globally and is one of Australia's most trusted and long-running trading partners.

"Australia has the opportunity to enhance Japan's beef demand into the future by continuously reinforcing the sustainability of beef, and leveraging Australia's reputation as a safe, natural and trusted supplier," Michael said.

Continuing to open doors

Australian lamb is also gaining a foothold in Japan.

"While relatively small compared to the beef category, we remain very optimistic about the future of lamb in Japan. Japan's largest recipe website, Cookpad, which attracts 60 million unique visitors each month, named lamb as one of their 2025 food trends," Travis said.

"MLA, together with our team of Lambassadors, will continue to work with trade, end users and consumers to highlight the quality and diversity of Australian lamb and showcase how it can be easily added into a Japanese context for new and innovative experiences."

TOOLBOX

- For more information on Australia's participation at the Osaka Expo, visit **expoaustralia.gov.au**
- Scan or click the QR code to learn more about Japan market opportunities:
- Keep up to date on MLA's international market activities: **aussiebeefandlamb.com.au**

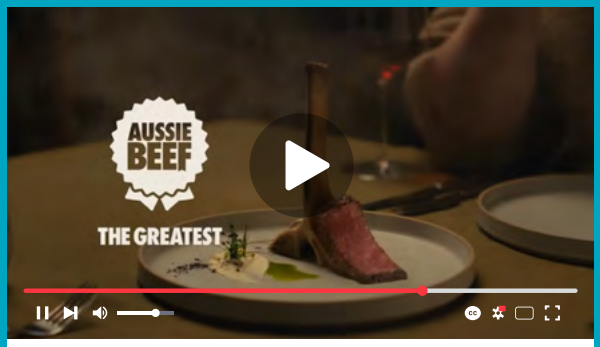
- **foodservice.aussiebeefandlamb.com/beef-mates**
- Lambassadors: **lambassadors.com**
- Travis Brown **tbrown@mla.com.au**

Tempting tastebuds with great Aussie Beef

Aussie Beef's latest version of 'The Greatest' campaign has continued to tempt tastebuds with bold, mouthwatering storytelling that demonstrates beef is the superior choice for mealtime.

After debuting with more than 52 million impressions in October 2024, 'The Greatest' continued to deliver with its latest campaign in March–April 2025 when it received more than 73 million impressions across online video, social media and billboards.

Its two ads (The Kitchen and The Ship) served up humour and drama to illustrate just how far people will go for beef's irresistible flavour, while billboards turned the daily commute into a craving with sizzling close-ups of perfectly seasoned, juicy steaks.



Scan or click the QR code to watch the Australian Beef The Greatest (The Kitchen) 30-second clip:

The campaign included influencer-led content which celebrated top-tier beef venues, dishes and must-try recipes to ensure consumers could replicate the greatest dishes at home.

The reach of this year's March–April campaign extended into the foodservice sector, with 'limited time only' beef menu items offered at Meat & Wine Co and Ribs & Burgers restaurants, reinforcing why beef is truly the best option. Ribs & Burgers' beef sales were up 21.89% on the previous year, as a result.

Australian beef featured on foodservice menus.

- Australian Beef: **australianbeef.com.au**
- Tim Lau **tlau@mla.com.au**

US food professionals earn their stars and stripes

MLA's North American office has been connecting, educating and inspiring foodservice professionals in the US. Here's a look at two recent activities which showcased the versatility and credentials of Australian red meat.

The North America team introduced a special 'Ambassador Edition' of the Aussie Meat Academy event series to boost demand for Australian red meat.

It was held at 1516 Flashpoint Innovation Kitchen, Chicago, and brought together 23 of MLA's Aussie Beef Mates and Lambassadors.

This event was designed to educate and inspire these influential food professionals to promote and work with Australian beef and lamb.

During two days of intensive workshops and educational sessions, the ambassadors were provided with the latest insights and knowledge about the Australian red meat industry, better equipping them to effectively promote the product in North America.

Professional photography sessions captured new recipes developed by the Aussie Beef Mates and Lambassadors. The content will be used across various marketing channels (including the ambassadors' own channels) to showcase the versatility and quality of Australian beef and lamb.

Power of collaboration

As a result of the event, several collaborations are already happening between ambassadors, further amplifying the reach and impact of the Aussie Meat Academy.

Doug McNicholl, MLA Regional Manager – North America, emphasised the importance of this event for boosting demand.

"By bringing together influential food professionals, we've not only strengthened their knowledge and passion for Australian red meat but have also created a powerful network of advocates who are now better equipped to promote it," he said.

"This event has truly showcased the value of education and collaboration and high quality content in driving the success of the Australian red meat industry in the North American market."

Chef's kiss

MLA also partnered with Marriott Hotels to deliver an Aussie Meat Academy as part of a Chef's Excellence workshop at Marriott's headquarters in Maryland, US.

The immersive event brought together 19 executive chefs from across the Marriott network to explore the quality, versatility and provenance of Australian beef.

The workshop was part of MLA's broader plan to develop long-term relationships with influential foodservice partners and drive demand for Australian red meat in premium US hospitality settings.

The event included a presentation on the key 'why Australia?' messages from Sabina Kindler, MLA's Market Development Manager for North America.

This was followed by a rump breakdown by MLA's Corporate Chef, Sam Burke.

The Marriott chefs put their skills to the test in a cooking challenge based on the Meat Standards Australia (MSA) cut-by-cook model for muscles within the rump – a cut the chefs had not previously worked with.

Chefs had the opportunity to work hands-on with the rump, learning how to translate their unique skills into elevated dining experiences for Marriott guests. The event also included a collaborative cooking session where chefs developed new menu concepts using Australian beef.

Feedback from attendees was overwhelmingly positive and two chefs sought Australian beef for their menu just days after the workshop.

Value and market growth

Doug said partnering with Marriott through the Chef's Excellence workshop was a powerful way to connect Australian products with high-impact foodservice channels.

"These chefs are gatekeepers to millions of meals served annually," he said.

"By equipping them with knowledge and inspiration we're creating real commercial opportunities for Aussie red meat."

The Marriott's Senior Director of Culinary for the US and Canada, Diego Fernandez, said the experience was amazing for all participants.

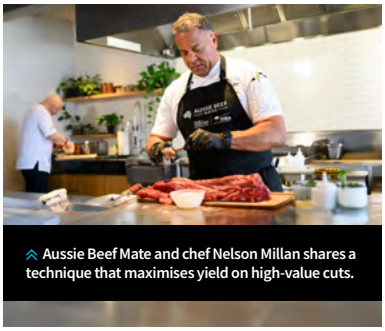
Exporter opportunities

MLA encourages exporters to leverage the momentum from this workshop by engaging with our North America team.

Opportunities exist to co-invest in future foodservice activations, participate in menu development trials, and support chef education initiatives across the foodservice sector and beyond.

Exporters interested in getting involved should contact MLA to explore tailored partnership opportunities that align with their commercial goals. ■

Attendees at the Aussie Meat Academy event were educated and inspired to promote and work with Australian beef and lamb.



Aussie Beef Mate and chef Nelson Millan shares a technique that maximises yield on high-value cuts.

MLA's Corporate Chef Sam Burke takes Marriott chefs through a rump breakdown.

Aussie Beef Mates: **foodservice.aussiebeefandlamb.com/beef-mates** Lambassadors: **lambassadors.com**
Sabina Kindler **skindler@mla.com.au**

The GOAT* pie

Tender chunks of flavoursome goat marry perfectly with red wine, mushrooms and flaky golden pastry in this delicious pie.

For more mouth-watering red meat recipes visit **raremedium.com.au**, **australianlamb.com.au** and **australianbeef.com.au**

Serves **4** Prep time **20 minutes** Cooking time **2.5 hours**

INGREDIENTS

850g goat shoulder, diced
60ml olive oil
2 onions, finely chopped
6 garlic gloves, crushed
1 carrot, finely chopped
2 celery stalks, finely chopped
2 tbsp plain flour
250ml red wine
250ml beef gravy
100g mushrooms, divided into quarters
2 large tomatoes, peeled and chopped
3 tsp rosemary leaves, chopped
Tomato sauce or relish, to serve
Frozen, ready rolled puff pastry, partially thawed

METHOD

1. Heat two tablespoons of olive oil in a large, heavy-based saucepan over medium heat. Add onions and cook, stirring, for five minutes or until quite soft. Add garlic, carrots and celery, and cook for a further four minutes or until softened. Remove the ingredients and reserve the pan.
2. Dust goat meat with the flour. Add remaining oil to the reserved pan over high heat and cook goat, in two batches, for four minutes or until starting to brown on all sides.
3. Return goat and vegetables to the pan with wine and tomatoes and bring to the boil, stirring constantly. Add rosemary, beef gravy and season with salt and pepper.
4. Cover, reduce heat to low and simmer for two hours, adding more water if necessary until the meat is tender.
5. Distribute filling into your preferred pie dishes, cover with puff pastry and bake in oven until golden brown.

*Greatest of all time

Hosted in partnership with Livestock SA

MEAT & LIVESTOCK AUSTRALIA

Adelaide MLA UPDATES

Towards 2030: Driving prosperity through productivity, profitability and sustainability

19–20 November 2025

Adelaide Convention Centre

Join us at MLA Updates 2025 – partnering with Livestock SA for a two-day event to stay informed and connect with people shaping our industry.

Wednesday 19 November

- Field trip to Adelaide University Roseworthy Campus to see major livestock research and development projects.
- MLA-hosted welcome function to connect and catch-up.
- Cricket legend Merv Hughes and ABC *Country Hour* presenter Cassandra Hough hosting Livestock SA's industry dinner, where the Biosecurity Farmer of the Year will be announced.

Thursday 20 November

Emcee, ABC *Landline* host Pip Courtney, will lead an interactive and informative program concluding with the MLA annual general meeting. Program includes:

- MLA Managing Director Michael Crowley, outlining MLA's future vision and its benefits for you and the industry
- red meat peak bodies discussing their priorities to advocate for your business
- how MLA's approach to reducing emissions and productive sustainability is meeting global demand for clean, green Australian red meat
- insights from MLA's marketing team, who are driving domestic and global demand for Australian red meat
- genetics, livestock credentials and technology – and how it is boosting on-farm productivity
- how MLA is showcasing producers' stories to engage with the community
- interactive information and resource hubs to support your business and your wellbeing
- MLA's AGM, delivered as a hybrid in-person/online event.

Want more details or ready to register?
Scan the QR code or visit **updates.mla.com.au**