MEAT & LIVESTOCK AUSTRALIA

meatup FORUM

For the latest in red meat R&D

CUNNAMULLA

6 September 2023

Hear about locally relevant on-farm R&D

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Hear from and network with leading producers

•

Gain insights into tools and programs to improve your business

•

Increase your productivity and profitability

Program – Cunnamulla, 6 September 2023

Time	Session
8:00am	**Registration desk opens**
Session 1: Welcome	
9:00am	**Welcome and housekeeping** Natasha Searle, MeatUp Forum Project Manager, Pinion Advisory
9:10am	**MLA Welcome, market update and adoption program insights** Sally Leigo, Meat & Livestock Australia
Session 2: Setting the scene: improving business performance	
9:40am	**Profitable rangeland enterprises** Ian McLean, Bush Agribusiness
10:10am	**Morning tea**
10:40am	**Managing your goat system in a variable environment** Dr Gordon Refshauge, NSW Department of Primary Industries
11:10am	**Understanding the markets and influencing your enterprise** Panel Q&A – Sally Leigo (MLA), Ian McLean (Bush AgriBusiness), Dr Gordon Refshauge (NSW DPI)
Session 3: Feedbase updates	
11:30am	**Improving tactical decision making to manage rangeland pastures** Tanisha Shields, Agrista
12:00pm	**Managing and monitoring your feed: Australian Feedbase Monitor** Jess Paton, Cibo Labs
12:25pm	**Lunch**
Session 4: Livestock management, health and wellbeing updates	
1:25pm	**Pain relief for husbandry procedures in cattle, sheep and goats** Dr Matt Playford, Dawbuts
1:55pm	**Making technologies practical in rangelands sheep programs** Anthony Shepherd, Sheepmatters
2:25pm	**Parasite management for cattle, sheep and goats, and Paraboss update** Dr Matt Playford, Dawbuts
2:55pm	**Afternoon tea**
Session 5: Looking ahead	
3:20pm	**Containment feeding: applications and learnings from north-west NSW** Dr Jillian Kelly, Animal Health and Nutrition Consulting
Session 6: Virtual farm tour	
4:00pm	**Virtual farm tour** Ben and Andrea McKenzie, BAM Pastoral, Cunnamulla
Session 7: Wrap-up	
4:30pm	**Wrap-up, including evaluation** Natasha Searle, MeatUp Forum Project Manager, Pinion Advisory and MeatUp Forum Working Group member, Talmai Skews
5:00pm	**Networking and drinks**
6:30pm	Close

Poll Everywhere

For audience participation, including submission of questions during MeatUp Forums, we will use Poll Everywhere.

Join via the QR code below. You may choose to download the app 'Poll Everywhere' when prompted.

PollEv.com/pinion

1. To join a presentation, type the username: **pinion** (or via a web browser, type PollEv.com/pinion)
2. Click join
3. Insert your screen name that you would like to appear alongside your question/response
4. Throughout the event, you can return to your app, the site PollEv.com/pinion or the QR code to participate.

Contents

Sessions

Welcome

Meat & Livestock Australia's (MLA) purpose is to foster the long-term prosperity of the Australian red meat and livestock industry by investing in research and marketing activities. MLA has over 50,000 members with membership of MLA being voluntary and free to all levy-paying grassfed cattle, grainfed cattle, sheep, lamb and goat producers. MLA's MeatUp Forums are held throughout southern Australia to give you the latest in red meat research, development and adoption (RD&A). They are developed by Regional Producer Working Groups that include members from the Southern Australian and Western Australia Livestock Research Councils, in collaboration with the MeatUp Coordinator, Pinion Advisory and MLA staff.

MLA's MeatUp Forums have been developed to keep you informed about:

- what MLA can offer your red meat business
- new and completed R&D that is relevant to your region and enterprise
- the role and responsibilities of the livestock research councils
- opportunities to get involved in regional R&D and priority-setting
- practical tools and programs available to you
- opportunities to enhance your productivity and profitability.

Today you will be presented with clear and practical ideas, information, and tools that you can take home and put into practice on-property. We thank all presenters for their involvement in MeatUp and encourage you to make the most of your time with them today.

Regional producer working group

We thank rangelands MeatUp Forum regional producer working group for their contribution to MeatUp and supporting the development of the program for MeatUp at Cunnamulla. The current working group includes:

- David Counsell, Barcaldine, Queensland
- Talmai Skews, Cunnamulla, Queensland
- Brett Smith, Tamworth, New South Wales
- Felicity McLeod, Wentworth, New South Wales
- Gillian Fennell, Marla, South Australia.

In addition, we would like to thank:

- Andrew Morelli, Southern Beef and Sheep Adoption Project Manager, MLA
- Natasha Searle, MeatUp Forum Project Manager and project team, Dee Heinjus and Lauren Rowlands, Pinion Advisory.

If you are interested in being involved in planning future MeatUp Forums, please contact the project manager.

Contact

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Visit: mla.com.au/meatup

meatup FORUM

MEAT & LIVESTOCK AUSTRALIA

MeatUp forums were launched in 2021 and provide beef, sheep and goat producers with the opportunity to learn something new, stay up-to-date with the latest on-farm research and technologies and meet others in the red meat industry.

Held predominantly throughout southern Australia, these forums introduce producers to the outcomes of MLA R&D projects and the next steps to drive profitability and productivity on-farm.

Designed by producer working groups from local regions to ensure content delivered is regionally relevant, MeatUp forums demonstrate the value of implementing new practices or technologies on farm. They also create awareness around MLA activities, programs and projects which producers can get involved in to enable them to further build knowledge and skills.

Naracoorte MeatUp

2021–2023 at a glance

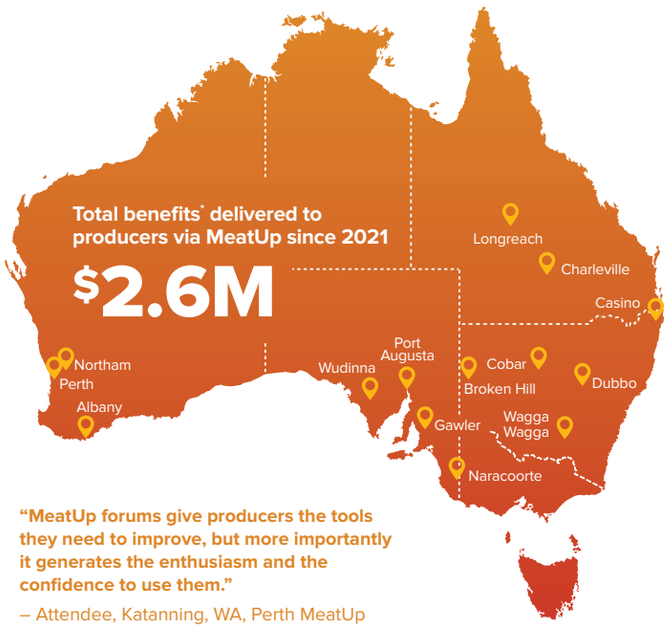
766
producers engaged

14
EVENTS

299,943
cattle impacted by MeatUp

1,995,214
sheep impacted by MeatUp

51,592
goats impacted by MeatUp



"MeatUp forums give producers the tools they need to improve, but more importantly it generates the enthusiasm and the confidence to use them."

– Attendee, Katanning, WA, Perth MeatUp

10,949,236
hectares of Australian agricultural land influenced by MeatUp

88%
value rating

82%
of producers said their knowledge and skills increased

87%
satisfaction rating

2 OUT OF 3 ATTENDEES PLANNED TO MAKE CHANGES FOLLOWING MEATUP

To find out more about Meatup:
getinvolved@mla.com.au | mla.com.au/meatup

Pinion Advisory:
1300 746 466 | meatup@pinionadvisory.com

MLA welcome and update

Sally Leigo

Program Manager – Producer Adoption

Meat & Livestock Australia

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About Sally

Prior to joining MLA, Sally had spent 16 years delivering beef research and extension projects in the Northern Territory and across northern Australia. Sally holds a Bachelor of Science in Agriculture from the University of Sydney and a Masters in Rangeland Management from the University of Queensland. Sally is also a graduate of the Australian Rural Leadership Program (course 26).

At MLA, Sally oversees the delivery of MLA's adoption program to red meat producers across Australia. During her time at MLA, Sally has been responsible for guiding research teams and staff in how to embed adoption activities into research to allow producers to rapidly take up the latest research findings. With the *Red Meat 2030* plan calling out the need to double investment in extension services, Sally is committed to growing the number of red meat producers engaged in extension and adoption activities.

Sally's family runs a goat, cattle, and sheep property south of Hungerford on the Paroo River. Being more office bound these days, Sally's pregnancy testing, pasture identification and feed budgeting skills are underutilised.

Session abstract

Meat & Livestock Australia's (MLA) purpose is to foster the long-term prosperity of the Australian red meat and livestock industry by investing in research and marketing activities. MLA's *Strategic Plan 2025* sets out the priorities, strategic focus areas and guiding principles to:

- help double the value of the Australian red meat sales
- become the trusted source of the highest quality protein.

In Sally's presentation, you will learn about the latest market insights, the current research initiatives being undertaken, and opportunities for local producers to get involved in MLA activities to lift their productivity and profitability.

Take home messages

- Australia exports 52% of the sheep meat it produces, representing 6% of global production but 34% of global sheep meat exports, competing with countries like New Zealand and the United Kingdom.
- 92% of Australian goatmeat is exported. Import demand from the USA decreased in the second half of 2022, while demand from Korea and China has increased in 2023.
- Global retailers are driving sustainability requirements, with international consumers associating sustainability more with Australian red meat than with New Zealand or the USA.

- International and domestic consumers are looking for a sustainable and affordable red meat product.
- MLA offers several adoption programs producers can get involved in to increase their production and profitability (e.g. BredWell FedWell, EDGE Network and Profitable Grazing Systems packages).
- Register for your next MLA adoption event or activity via MLA's News and Events page: mla.com.au/news-and-events/

Relevant tools and resources

- **MLA membership application**

  MLA membership is free to levy-paying producers of grass or grainfed cattle, sheep, lambs and/or goats.

  Benefits of membership include:

  - participation and voting rights at the MLA Annual General Meeting (AGM)
  - discounts for a range of MLA products and services, ordered via the myMLA catalogue
  - free access to the Australian Feedbase Monitor tool to help producers improve grazing management
  - invitations to local MLA events
  - free subscriptions to MLA's regular member magazine *Feedback*
  - free subscriptions to MLA suite of e-newsletters
  - free access to up-to-date publications and information tools
  - eligibility to apply for funding via MLA's CoMarketing Program.

- **MLA market trends and analysis**

  MLA's market information analysts examine and interpret developments in, and prospects for, the Australian domestic market, key export markets and major competitors, producing a wide range of publications.

- **MLA *2021–22 Producer Adoption Outcomes Report***

  The *2021–22 Producer Adoption Outcomes Report* outlines the depth and breadth of adoption projects and programs that MLA delivered for the 2021–22 financial year and how red meat producers benefited from their involvement in them.

- **Subscribe to MLA e-newsletters**

  MLA e-newsletters delivered direct to your inbox.

- **MLA Producer Demonstration Sites**

  MLA Producer Demonstration Sites (PDS) are on-farm projects run by producer groups who want to validate the benefits of incorporating research findings into their businesses.

- **MLA Profitable Grazing Systems program**

  Profitable Grazing Systems is a group-based delivery program designed to deliver training and coaching over several months and up to a year to improve producer skills and knowledge. The aim is to achieve practice change on-farm in the areas of people, business, reproduction and genetics, value chain and feedbase.

- **MLA EDGE Network**

  EDGE Network workshops offer practical knowledge and skills on topics such as breeding and genetics, business management, nutrition, grazing and land management. Workshops range from one to three days.

- **MLA BredWell FedWell**

  BredWell FedWell is a practical, one-day workshop highlighting the key production benefits of superior genetics, plus feed management for improved reproductive performance and livestock productivity.

- **MLA news and events**

  Register for your next MLA adoption event or activity.

Notes

Setting the scene

Profitable rangeland enterprises

Ian McLean

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About Ian

Ian is Managing Director of Bush AgriBusiness. The Bush AgriBusiness team work with large and small pastoral businesses, helping them understand and improve business performance. Ian enjoys working with top performing pastoral businesses and learns a lot from them.

Bush AgriBusiness publishes the Australian Beef Report and delivers the Business EDGE workshop across the rangelands and northern Australia.

Session abstract

Enterprise choice is a major decision for those producers in the rangelands who have more than one enterprise option available to them.

There are many considerations, and these considerations will be somewhat unique for each business. The primary considerations are outlined below.

Available scale

Scale is a critical consideration at an enterprise and business level. Scale is expressed in the number of animal units (Adult Equivalent (AE) or Dry Sheep Equivalent (DSE)) a property can run. Many rangeland businesses are under scale, in that lack of scale is a constraint on their business. This is due to not having the economies of scale to spread the fixed cost of the management team and business overheads. If your business is less than 3,000AE or 25,000DSE, then scale may be a limiting factor. This does not mean you cannot have a good business; it just means that you need to be aware of the scale constraint and have strategies in place to address it.

If the business is constrained by scale, then it may not have the option of running more than one enterprise, as each enterprise will suffer from being under scale. The business may be better focusing on just one enterprise.

Knowing your long-term carrying capacity and current land condition is very useful information in understanding scale, and opportunities to increase it.

Smaller scale businesses can lend themselves to small ruminants as they are, generally, more labour intensive and generate more income per animal unit in comparison to cattle.

Which enterprises your country is best suited to?

You will have an understanding of your country, land types and if there are any enterprises it is more or less suited to. Be careful to separate fact from gut feel here.

What infrastructure do you currently have and what investment may be needed for each enterprise choice?

Your current infrastructure is a major consideration in enterprise choice, as it will determine the capital investment required for each alternative.

What skills do you currently have in the business, or available to the business and which enterprises are they best suited to?

Whatever enterprise or enterprises you choose, your objective should be to be one of the best businesses in that enterprise. You cannot afford to be average in agriculture. Being one of the best in any endeavour requires considerable skills, expertise, discipline and planning. What exists within your business at the moment and what is available to it? Which enterprise(s) is this best suited to? What are the gaps, including your own, that will need to be filled through recruitment, professional development or sourcing external expertise for each enterprise under consideration?

What enterprise(s) are the people in the business passionate about?

What are you and others in the business passionate about? If growing quality wool in a profitable sheep enterprise excites you, then you are much more likely to be a high performing wool business than if you cannot stand the sight of sheep.

The relative economics of the enterprises available to you

The relative economics, are important and will differ between enterprises. However, the economics of different enterprises are arguably influenced by the manager of the enterprise as much as they are by enterprise type. Richard Rumelt, Professor of Strategy in the US, put it well I think when he said *'being in the right industry does matter, but being good at what you do matters more'.*

Having a very good understanding of the profit drivers for the enterprise(s) you run and having an unrelenting focus on them is essential. As important is ignoring the distractions, which can be many.

The risk profile of your business and the enterprises available to you

The risk of different enterprises, particularly in terms of price and market risk are a major consideration. A long-term view is necessary; every venture has risks, and there are risks in jumping from one enterprise to another. There is a chance you risk missing the good periods of both.

The existing risk profile of the business is also important, particularly financial risk and human resource risk.

Take home messages

- There are many considerations regarding enterprise choice for a business, and what is the best enterprise for one business may not be the best for another.
- It is important for businesses to objectively weigh up the considerations that are relevant to them, make an informed decision and then focus on being a leading performer within that enterprise.
- A primary consideration is understanding business performance and relative economic performance of your enterprises. Business EDGE can develop skills in financial analysis.

Relevant tools and resources

- **Business EDGE**

  Business EDGE is a comprehensive two-day workshop for owners and managers of grazing enterprises. It is specifically designed to improve financial literacy and business skills.

- **Australian Beef Report**

  The triennial Australian Beef report is published by Bush AgriBusiness, with the 2023 version recently released. The 2023 Australian Beef Report contains three important components: 'Pastoral Panel' chapter, 'Managing for Herd Fertility and Profitability' chapter, and the 'Industry performance' section. The 2023 report can be purchased via the Bush AgriBusiness website.

- **MLA Cost of Production tool**

  A tool to help you determine your cost of production for sheep, beef and goats and compare performance annually.

Notes

Managing your goat system in a variable environment

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About Gordon

Gordon is a researcher in the field of animal production, focusing on the reproduction of sheep and goats. This also involves studies of nutrition, management, thermal environment and technologies with the aim to improve reproduction outcomes. Gordon has worked as a researcher for 15 years with NSW DPI after completing his PhD.

In 2020, his working dog was the star in a short film called Dust Cloud.

Session abstract

For all livestock businesses, stocking rate is the major determinant of profitability. However, because stocking rate is not the same as carrying capacity, timely and regular decisions need to be made about the current feedbase, the number of animals currently on hand, and some sense of the future demands. Cost of production is also a major factor affecting profit, where labour and infrastructure are major costs. One is about selling units and the other is about getting the job done – both affect profit.

In wild harvest operations, different decisions are being made about managing the feedbase than those made in managed systems. Under difficult pricing conditions, the wild harvest operation needs to weigh up total grazing pressure (TGP) management. Can you wait out the low prices or will the goats eat you out of house and home?

In a managed operation, the objective is higher animal production and greater control over the controllable, which comes at a cost. Under difficult pricing conditions, the question for managed operations is which activities need to increase, maintain or cease?

In both systems, the reproductive performance of the breeders is underpinned by nutrition and genetics. A great example of this is thanks to the recent La Niña years, where some doe herd weaning rates have been approaching 300% per doe over the year (two matings). However, as the rain stops, the season dries out, and the feedbase declines, drought-like conditions materialise rapidly under high stocking rate scenarios. This is when reproduction rates come under pressure. All managers would prefer to avoid the swings from one extreme to the other and the best way to manage such climatic and feedbase variation is through evidence and forecasting future feed demands. Forecasting future feed requirements can be undertaken using pregnancy scanning, which is far better suited for managed herds with controlled mating programs than it is for breeding herds with continuous exposure to bucks. Can you afford to pregnancy scan the does? I think you can't afford not to, but producers tend to tap in and out of management activities and perhaps right now (financial year 2023-24) is the time to consider this for pregnancy scanning. If there is no feed however, you will need the scanner to better manage pregnant does.

I strongly advocate for the classing of does for their ability to rear live young. Without pregnancy scanning, selection pressure on reproduction can only be undertaken by assessing the udder of the doe. The best time to do this is at marking but requires good control of mating dates and a cessation of mating when the bucks are removed. For me, 'wetting and drying' is a non-negotiable management activity.

There must always be inspection – the teats and udder are so heavily relied upon by the neonatal kid. There are good recent findings on the value of udder assessment for sheep. For example, lambs born to ewes with udder faults are 1.5 times more likely to die than lambs born to ewes without udder faults, and starvation is 4.6 times more likely the cause of death. Lamb marking is a busy time to undertake udder inspections but is the best time to do this. Leaving the inspection until weaning risks 'false negatives', which are udders drying up naturally because the kid has weaned itself – a more likely scenario under lower quality dry feed conditions, especially in maidens which are the class of nanny most likely to fail to rear. If you delay udder assessments to weaning, you are also likely to lose key information such as the number of does that are dry (not pregnant) versus kidded and lost (KL) – the difference is important as dry does either lost a pregnancy during gestation to abortion or didn't get pregnant (in herds not pregnancy scanning). You want your nannies to get pregnant and rear at least one kid, thus you do not want dry does and do want to know how many fall into the dry, KL and wet categories. It doesn't take long to improve the udders in a flock or herd, as there are favourable genetic heritabilities.

The rangeland goat is one of, or the most, genetically diverse domesticated production animal on earth. This means there is enormous potential for great genetic gain. To improve the genetic performance of your herd requires identification of a breeding objective and the selection of nannies and bucks towards that objective. KIDPLAN is the industry's genetics database and in the absence of data to class does against, such as udder inspection results, the industry will rely heavily on KIDPLAN. If the source of the bucks in your herd has KIDPLAN breeding values, you can discern between the genetic potential of different sires. Three reproduction traits are available to the industry in KIDPLAN; number of kids born (NKB), number of kids weaned (NKW) and scrotal circumference (SC). High reproduction rates in your herd require high pregnancy rates, high NKB, and high kid survival – each of these lead to a high NKW. A recently contracted research project led and undertaken by NSW DPI is the 'Measured Goats' project. This project will be run at Condobolin for six drops of kids, up to 8,000 kids weaned and measured, which will continue to the last measures in 2029. Measured Goats will substantially increase the number of records in KIDPLAN and introduce genomics for the industry. The breeding does setting up the herd will be rangeland, Boer and Kalahari Red.

Another NSW initiative supporting goats is the 'Going Ahead with Goats in the Western Division' project (GAWD), which is funded and administered by the NSW Local Land Services. This project aims to increase the extension of skills and knowledge and increase research into some easy-to-adopt management practices. The mandatory implementation of RFID tags has created some angst, but it is an opportunity to create data for classing toward the breeding objective, while removing performers that fail to contribute to profit. The GAWD project will include RFID tags in all their does and help to demonstrate the value the tag can create for goat producers.

Notwithstanding the El Niño outlook and the current price depression, breeders of goats should keep focused on the key profit drivers and reproduction is key to your success. Use the opportunity to trim the herd into a shape more suited to bouncing back productively.

Take home messages

- Assess the udders of your nannies at marking, this will always pay dividends.
- Measured Goats – be aware that a large-scale genetics resource flock is about to start breeding at NSW DPI's Condobolin Agricultural Research and Advisory Station, continuing to 2029.
- The Going Ahead with Goats in the Western Division (GAWD) project will increase knowledge, skills and some easily adoptable research.

Relevant tools and resources

- **Measured Goats Project**

  The Measured Goats Project is a new five-year research project that will help goatmeat producers achieve productivity gains through informed genetic selection decisions in the same way beef and sheep producers can.

- **Going Ahead with Goats Project**

  The NSW Going Ahead with Goats project aims to accelerate the adoption of goat research and development and to grow market share (domestic and export) for Western NW goat producers.

- **Reducing Kid Loss**

  The 'Reducing Kid Loss: select and protect – phase 1' two-year project funded by MLA and led by NSW DPI established a baseline understanding of the prevalence, cause and cost of kid loss in the Australian goatmeat industry.

- **MLA Goats Hub**

  MLA's goat productivity program provides services and best practice information to help Australian producers secure a future as innovative, profitable and resilient world leaders in goat production.

- **MLA e-newsletters: Goats on the Move**

  Sign up for the *Goats on the Move* quarterly newsletter.

- **KIDPLAN**

  KIDPLAN is delivered by Sheep Genetics and is the national genetic evaluation for goats. KIDPLAN provides simple, practical information on the value of an animal's genes for production in the form of estimated breeding values (EBVs) and specialised indexes.

- **MLA Cost of Production tool**

  A tool to help you determine your cost of production for sheep, beef and goats and compare performance annually.

Notes

Feedbase updates

Grazing decision making in variable rangeland environments

Tanisha Shields

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About Tanisha

Tanisha is a local to the Western NSW region, with over six years' experience working with rangeland producers and industry bodies to deliver Research, Development and Extension programs and developing tools and resources. Tanisha has worked with MLA and the NSW Department of Primary Industries to scope, develop and resource a Profitable Grazing Systems program specifically for livestock producers in the rangelands. This was in response to a business opportunity or 'gap' in program delivery identified by communicating with stakeholders. The program is achieving great success, with uptake across 1,060,474 hectares from Balranald to Packsaddle in NSW. Tanisha is also an accredited deliverer of the Business Essentials PGS package, and a Lifetime Ewe accredited deliverer, with three Lifetime Ewe groups currently running in Western NSW. Tanisha is training to become a Southern Business EDGE, Rangelands EDGE and Carbon EDGE deliverer. In her role with Agrista, Tanisha is developing skills in understanding the key profit drivers in agricultural businesses, using farm performance assessment and comparative analysis. Tanisha is passionate about developing and delivering projects that are relevant and specific to different agricultural production systems.

Session abstract

Pasture productivity and the complexity of management decisions surrounding native pastures influences all producers in the rangelands. Each day a rangelands producer is making a decision relating to managing pastures, be that to graze, rest, control unmanaged grazing pressure, or install a new watering point or fence line.

Grazing management decisions are influenced by a range of factors, including pasture quantity, quality, livestock type and the stage of production of those livestock. The aim of grazing management and decision making in the rangelands is to enhance how well pastures can respond to rainfall or withstand a dry time, and to effectively manage livestock to meet production targets.

In the rangelands, management decisions are complicated by variability, as most of the region has no distinct pattern for rainfall and pasture growth. The challenge for producers in this region is to build a business to fit this variability. Pasture growth profiles for regions can be developed using the Aussie GRASS website. These profiles can be useful for producers to identify the times of the year where pasture growth potential is high or low, guiding the decision-making process. Times of the year where the growth potential is highest should correlate with the times of year where livestock demand is highest.

Productive southern rangeland pastures have a diverse mix of species present. It is this diversity which allows pastures to respond to rainfall at different times of the year.

Managing diversity requires an understanding of the diet selectivity of the different species grazing rangelands pastures. Often, the most palatable and productive species in a pasture are subject to high levels of grazing pressure, leading to a decline in their presence in the pasture. It is important for producers to understand which pasture species their livestock are grazing and set utilisation thresholds accordingly.

Monitoring, and using the results of monitoring to guide decision making, is a key component of management in the pastoral zone. Monitoring allows producers to track the response of their pasture to management, which guides tactical and strategic decision making.

It is important for producers to understand if the pasture available at a given time of year can meet the demands of the livestock grazing the pasture. The quality of rangeland pastures is determined by the digestibility of the pasture, which changes as the plant grows and matures. Local species lists or pasture testing can be used by producers to understand the quality of pastures and can be used to predict livestock performance on these pastures.

Tying it all together, grazing management of southern rangelands pastures often involves a series of short-term trade-offs between pasture and livestock production. Producers need to ensure they are managing their livestock to avoid overgrazing the more palatable species, whilst also meeting their livestock production targets.

To assist with the decision-making process, a Profitable Grazing Systems program *Improving Tactical Decision Making* was developed by Western Local Land Services and NSW Department of Primary Industries to assist producers to increase their skills in identifying key species and managing their pastures to promote increased quality and quantity on their property. The course uses tactical grazing management (TGM) principles. Tactical grazing management is an approach to grazing management in the semi-arid and arid rangelands developed by the NSW Department of Primary Industries.

Tactical grazing management involves four key steps (Glove Box Guide to Tactical Grazing Management for the semi-arid woodlands Compiled by 'Tac' Campbell and Ron Hacker):

- Set an objective – the objective of a grazing management program could be to either maintain the current state of the pasture or to improve the pasture in a specific way. This will change as seasonal variation provides opportunities and challenges.
- Determine strategies – management strategies are used to ensure pastures are conditioned to respond well to favourable climatic events and to survive through dry times.
- Implementing the strategy on a day-to-day basis as seasonal opportunities allow or dictate – this includes making decisions such as adjusting stocking rate, in response to monitoring important factors to ensure a timely response can be achieved.
- Monitor – assess the variables that guide tactical decision making, compare current position with target and history, assess whether the system is working.

Key practices which are being implemented by participants in the 'Improving Tactical Decision-Making' program include:

- Routine feed testing and identifying quality of key pasture species at different times of year.
- Grazing to target key species at specific times in the production cycle.
- Testing methods to identify pasture quantity in rangeland pastures.
- Identifying and targeting rest and recovery of pastures based on species biology.
- Understanding how grazing influences plants at different stages of growth.
- Linking remote sensing technology with ground measurements to inform decision making.

Take home messages

- Understanding trends in pasture growth provides rangelands producers with a guide for making decisions.
- A diverse mix of palatable, productive species increases the ability of pasture to respond to rainfall, which is highly variable.
- Local species lists or pasture testing can be used by producers to understand the quality of pastures and can be used to predict livestock performance on these pastures.

Relevant tools and resources

- **MLA Profitable Grazing Systems (PGS)**

  MLA Profitable Grazing Systems (PGS) takes small groups of like-minded producers who want to improve their whole-farm performance and matches them with a deliverer who builds their knowledge, skills and experiences through hands-on training.

- **Glove Box Guide to Tactical Grazing Management for the semi-arid woodlands**

  Compiled by 'Tac' Campbell and Ron Hacker, this guide is designed for producers with properties in semi-arid woodlands who want to practice tactical grazing management. The guide includes the four key steps for tactical grazing: setting a management objective; determining a strategy; implementing a strategy on a day-to-day basis as seasonal opportunities allow or dictate; monitoring results.

- **Making More from Sheep – Module 12: Efficient pastoral production**

  Efficient Pastoral Production is designed to help pastoral sheep producers increase the productivity and profitability of their enterprise, as well as contribute to the personal satisfaction of operating a successful pastoral business.

- **AussieGRASS**

  AussieGrass is the ‘Australian grassland and rangeland assessment by spatial simulation’ model. At a regional scale, the AussieGRASS model monitors biophysical processes associated with pasture growth. It provides rainfall and pasture growth information (long-term) plus projections for the upcoming season. This can be useful for assessing drought impacts, forage budgeting, and bushfire risk.

Notes

Managing and monitoring your feed: Australian Feedbase Monitor

Jess Paton

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About Jess

Jess started her role as the Cibo Labs customer support manager in April 2022 and is based in Roma, Queensland. Jess has a Bachelor Agriculture/Bachelor of Business from the University of New England. Cibo Labs was established in early 2018 with the mission to bring new approaches to monitoring Australia's grazing lands, aimed at underpinning more profitable farms and more sustainable landscapes. In four years, Cibo Labs have established fully commercial services delivering estimates of pasture biomass and ground cover to over 60 million hectares on a weekly basis.

Session abstract

Effective grazing management decisions ensure livestock remain on predicted growth targets to meet production or market targets. Ideally, decisions around feed availability (both quality and quantity) help achieve this aim and avoid, or at least minimise the likelihood of, producers being forced into unplanned feeding programs or sales.

Most producers readily identify total standing dry matter assessments as an undertaking to be regularly conducted within their management framework. Responses to industry surveys conducted in 2022 highlighted over 80% of producers were undertaking regular assessments, with half of these producers making assessments a weekly process.

Assessments are primarily conducted via visual assessment and rely on the experience and previous observations of the managers and business operators.

Despite the high level of assessment activity, responses indicate accuracy and reliability of these assessments is variable and often unreliable. Almost 30% (29.3%) of producers engaged in the survey had been placed in a position of making unplanned destocking decisions at least twice in five years. Within this group of respondents, 63% had to make unplanned sales, with 48% reporting lost income as a result.

While total standing dry matter assessment may not prevent a situation where destocking or unplanned sales may occur, accurate total standing dry matter assessment increases the flexibility for managers and business operators to respond earlier to changing circumstances and potentially avoid income loss through loss of options as seasons and markets tighten.

The Australian Feedbase Monitor is a joint project between Cibo Labs and MLA, funded through the MLA Donor Company. The project is the first to offer red meat producers across Australia with accurate and regular updates of ground cover (%) and total standing dry matter (TSDM/kg) for every hectare of a property engaged in red meat production.

Producers who are members of MLA can access the Australian Feedbase Monitor (AFM) through their MyMLA accounts. To initiate their account, users will need to link their existing LPA account – which are attached to a PIC within their MyMLA account. This linking allows the AFM to be set up for a specific set of land parcels associated with a PIC.

Within the AFM dashboard, users can select their location and property parcels associated with their individual PIC. Once this has been done, the AFM can be used to generate both images of the TSDM and ground cover percentage for the current month, as well as being able to review on a sliding timescale, conditions over the previous month or months going back to 2017.

This view offers managers and business operators the value of an accurate assessment of current feed levels for all parts of a property, not just those that are the most assessed due to access or convenience. The monthly comparison shows trends in the season, and the variation across a location, offering the chance for early and flexible decision making.

In addition to the map views, producers can select a particular land parcel to view comparison graphs for the high, low and medium levels of TSDM. These monthly ranges can be valuable for producers managing to a benchmark or for other strategic decisions. A second graph shows the monthly comparison of the TSDM of the current year against the previous years back to 2017.

These graphs allow producers to see their local situation and to make decisions on their own trends, and not on the more generalised information that may be generated for a region or broader district. Local individual predictions can then be more help in making strategic on-farm decisions in a timelier manner.

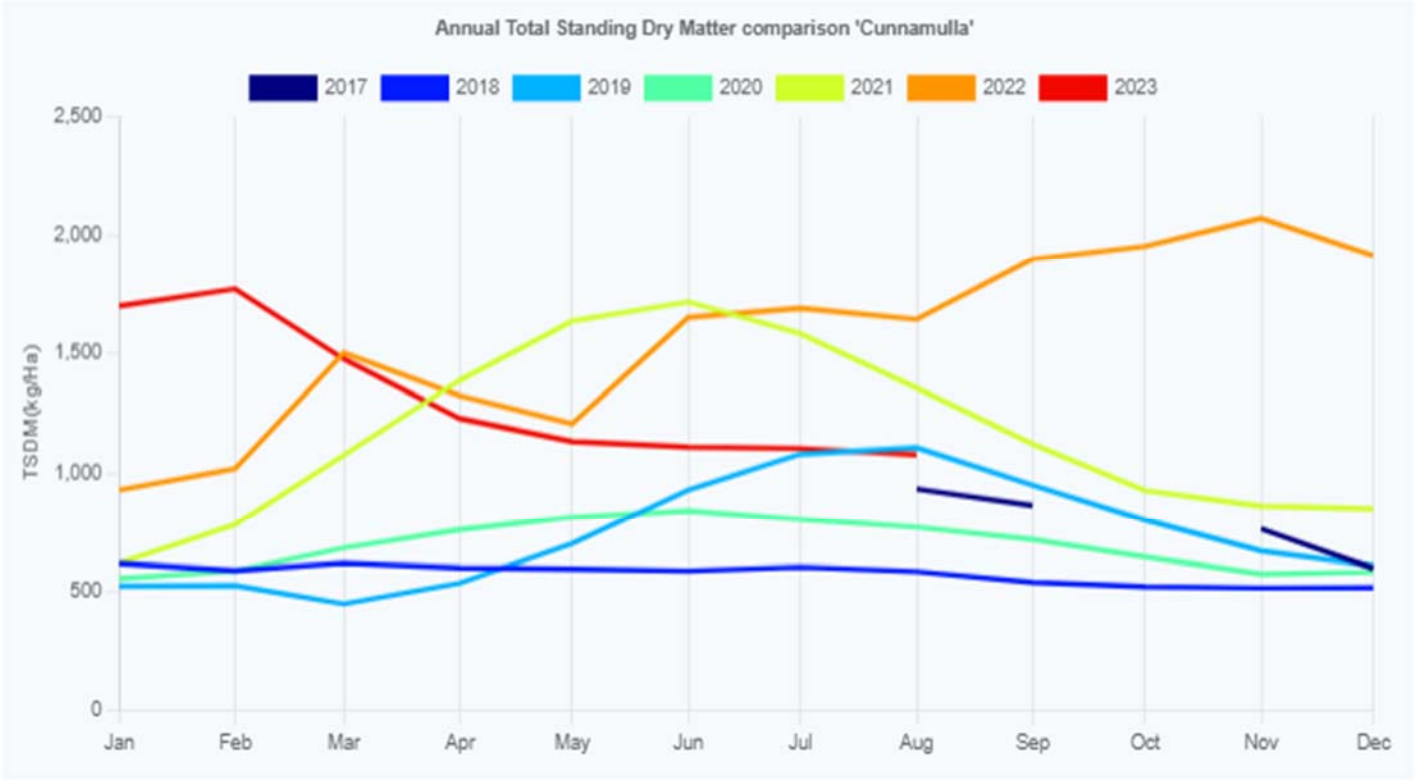

Figure 1: Annual TSDM comparison for a local Cunnamulla property

Figure 1 demonstrates the annual total standing dry matter (TDSM) comparison for a property south-east of Cunnamulla. The 2023 TSDM levels at the beginning of the year were significantly higher than previous years, however due to the minimal follow up rainfall since early summer combined with grazing pressure, the TSDM levels have now dropped to an estimated average of ~1000kg DM/Ha for July (similar to the July 2019 TSDM levels). The feed quality is likely to be very poor due to lack of new growth, therefore it would be critical for producers to be providing some sort of protein supplement and/or reducing stocking rates in order to maintain the performance of their livestock.

Most users have incorporated the trends and graphs to realign major production events such as joining and turn-off time to meet localised seasonal conditions or to reflect changing conditions over the past five years.

Take home messages

- The Australian Feedbase Monitor provides every livestock producer with access to new levels of objective information on trends in total standing dry matter over their entire farm.
- Combining traditional total standing dry matter assessment methods and satellite imagery can help producers better understand paddock variability in plant growth, utilisation and ground cover throughout the season to inform business and grazing management decisions.
- The new tools can help producers to get on the front foot by providing objective and transparent data to support emerging regulatory, supply chain, finance and consumer expectations.
- Producers will be able to see their property (or properties) linked to their LPA account.
- They will receive an image for their farm, based on a 1ha resolution total standing dry matter and ground cover. This image will be updated every five days (on a 30-day rolling median).
- Access is free to MLA members through their MyMLA account. However, it is important to ensure their MyMLA details and MLA membership details are aligned and correct.

Relevant tools and resources

- **Australian Feedbase Monitor tool**

  The Australian Feedbase Monitor is a joint project between Cibo Labs and MLA, funded through the MLA Donor Company. The project is the first to offer red meat producers across Australia with accurate and regular updates of ground cover (%) and Total Standing Dry Matter (TSDM/kg) for every hectare of a property engaged in red meat production.

- **Australian Feedbase Monitor webinar**

  This webinar was recorded to help producers get started with the Australian Feedbase Monitor, and provides an extensive ‘how to’ for all aspects of the tool.

MLA membership

MLA membership is free to levy-paying producers of grass or grainfed cattle, sheep, lambs and/or goats. Benefits of membership include:

- participation and voting rights at the MLA Annual General Meeting (AGM)
- discounts for a range of MLA products and services, ordered via the myMLA catalogue
- invitations to local MLA events
- free subscription to MLA's regular member magazine *Feedback*
- free subscriptions to MLA suite of e-newsletters
- free access to up-to-date publications and information tools
- eligibility to apply for funding via MLA's CoMarketing Program.

MyMLA homepage login

A single login portal for your myMLA account including access to MLA’s range of products and services.

MLA Feedbase Planning and Budgeting tool

This tool is designed to help producers plan their rotational grazing systems, determine appropriate stocking rates, calculate pasture growth rates, determine how long paddocks will last, and calculate the most economical ration for stock.

Notes

Livestock management, health and wellbeing updates

Pain relief for husbandry procedures in cattle, sheep and goats

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About Matt

Matt is a veterinarian who grew up in regional New South Wales and developed a love for livestock management and medicine working on mixed properties. He was an exchange student in Japan and after graduating from the University of Sydney he worked in cattle and sheep reproduction and clinical practice before doing his PhD in parasitology at Hokkaido University. He then worked at the Australian embassy in Tokyo before returning to Australia to be manager of the University of Queensland livestock teaching practice in Kenilworth, Queensland. Later he was the research and technical manager at the pharmaceutical company Intervet. Matt has been a veterinary consultant for 19 years and is the director of Dawbuts Pty Ltd, a company which runs a parasitology laboratory and conducts research on behalf of the livestock industries. Matt has published a range of papers on livestock parasitology, has been a presenter at the World Association for the Advancement of Veterinary Parasitology and World Buiatrics conferences, has served on the executive of the Cattle Chapter of the Australian and New Zealand College of Veterinary Scientists, and is the technical lead for ParaBoss.

Session abstract

Pain relief and its benefits

Pain relief products are fast, easy to apply and are cost-effective. They are delivered by injection, spray-on or as an oral dose into the mouth. Using two different types of pain relief e.g. local anaesthetic as well as an oral or injectable product, provides the best level of animal comfort and welfare.

In the Australian Animal Welfare Standards and Guidelines, the term ‘pain relief’ is used to mean ‘the reduction of behavioural and physiological responses by an animal to a painful stimulus to a level judged to be reasonable’. They further state that ‘surgical procedures should be done with pain relief’.

Customers in other parts of the world may see a ‘reasonable’ response quite differently to that of Australian livestock producers. For this reason, we need to match the expectations of both the community and our trade partners. This will result in adoption of practices that are appropriate for each property and their management systems.

An important method of relieving pain in livestock is to avoid the surgical procedure altogether. For example, keeping polled cattle avoids having to do de-horning, and moving to plainer-bodied sheep avoids having to do the mules operation.

Surgical procedures that require pain relief:

1. Castration of older animals (sheep, cattle and goats)
2. Tail-docking and mulesing of lambs
3. De-horning of cattle and goats
4. Any painful procedure at any age.

The benefits of pain relief accrue through improved animal welfare and production.

After any type of surgery, animals show pain-related behaviours such as lying down for extended periods, standing with arched back and avoiding eating. Trials have shown that animals treated with pain relief resume normal behaviours sooner.

Production benefits include faster mothering-up of young animals (which helps young stock avoid predators and feed soon after surgery, making them more resilient to cold weather), better weight gains, and reduced complications such as wound infections.

Pain relief options

Pain relief can be in different forms:

- Analgesia – usually administered as an injection, stops the animal from acknowledging the painful sensation. May also have a sedative effect.
- Local anaesthetic – these are applied as spray or injection and stop transmission of painful stimulus through nerve blockage.
- General anaesthetic – where the animal is heavily sedated (asleep) for the duration of the procedure. Favoured for major or prolonged operations.
- Anti-inflammatories e.g. non-steroidal anti-inflammatories or NSAIDS – these drugs reduce the inflammatory response following surgery and the swelling, tissue damage and pain that result.

Best practice management and surgery

- Low-impact stock management and hygienic surgical practices causing minimal tissue trauma are important to achieving successful outcomes. All stock that are undergoing procedures should be rested and in a good state of nutrition and hydration.
- Instruments should be kept sharp, cleaned between each procedure, and be treated with effective disinfectants to ensure no transmission of infection.
- Plan the surgical method (or methods) that best suit your management. For example, doing de-horning and castration of cattle at a young age results in less blood loss and reduced impact compared to older animals.
- Vaccinate all animals (twice) to minimise the risk of post-surgical infections.

Key points when buying and storing products

- All products must only be used according to label directions. Incorrect use can result in side effects, death, or residues in animal products. For this reason, there are tight federal and state regulations on the sale, storage and use of pain relief products.
- Veterinarians can supply all pain relief products, including injectable meloxicam, other anti-inflammatories

for cattle and bottles of local anaesthetic.

- Oral (buccal) meloxicam, Numocaine, the local anaesthetic used in Numnuts, as well as Trisolfen spray-on can be purchased from rural stores.
- Injectable products need to be kept sterile and uncontaminated. Once a stopper is pierced on a bottle it must be used within the period specified on the label.

Key points for product selection and application

- Horses for courses – if your yards are not well set up for injections, consider giving an oral dose of meloxicam instead. For mulesing, Trisolfen is sprayed on the wound, while oral or injectable meloxicam is added to provide longer-term pain relief.
- Injectable or oral? Injectable pain relief is easier to use when animals are lined up e.g. in a race or catching pen, before surgery. Oral products are easier to use when animals are in a marking cradle or restrained for branding/castration. Local anaesthetic injections for de-horning, tail-docking or castration including Numnuts, are only applied when animals are fully restrained e.g. in a cradle.
- Duration of pain relief? Local anaesthetics last for a few hours, while oral or injectable meloxicam can last up to 48 hours.
- Before or after surgery? In principle, using local anaesthetics pre-surgery gives optimal effect, but wound sprays also provide good pain relief.

Take home messages

- Husbandry procedures such as de-horning, marking, branding, removing tails and earmarking are commonly done on-farm to improve long-term animal health and welfare.
- Consult your veterinarian for advice on the best selection for each procedure.
- Good management, hygiene and surgical techniques are required to ensure that procedures are done as efficiently and painlessly as possible.
- Correct selection and application of analgesics, anti-inflammatories and local anesthetics will result in optimum outcomes, both for individual animal comfort and production as well as trade.

Relevant tools and resources

- **Fact sheet: Pain mitigation for castration in beef cattle in southern Australia**

  This fact sheet outlines available products, their costs and when they are suitable to use, as well as best practice recommendations for castration in beef calves.

- **Fact sheet: Pain mitigation in sheep and cattle**

  There are currently three products on the market that have pain relief claims for both cattle and sheep. This fact sheet outlines their costs and when they are suitable to use.

- **Fact sheet: Pain mitigation in sheep**

  This fact sheet outlines best practice recommendations for specific husbandry practices for sheep, and considerations for alternatives of some of these practices.

- **A producer's guide to sheep husbandry practices**

  This guide provides up-to-date information on the best animal health and welfare practices for people working in the sheep industry.

- **Goat diseases – the farmers' guide**

  An easy-to-read guide available as a hard copy or digital version aimed at helping goat producers recognise and manage goat diseases, plus help boost biosecurity systems and surveillance.

- **MLA pain relief use in sheep online training module**

  This free online module outlines available products, their costs and when they are suitable to use, as well as best practice recommendations for specific husbandry practices, and considerations for alternatives to some current husbandry practices.

- **MLA pain relief use in southern cattle online training module**

  This free online module outlines available products, their costs and when they are suitable to use, as well as best practice recommendations for specific husbandry practices, and considerations for alternatives to some current husbandry practices.

- **Veterinary handbook for cattle, sheep and goats**

  Animal health information for veterinarians and stock people in the livestock industries.

Notes

Making technologies practical in rangelands sheep programs

Anthony Shepherd

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About Anthony

As principal director of Sheepmatters, Anthony manages clients' expectations in meeting their sheep business objectives. Sheepmatters was founded in 2005, with a vision for its clients to be profitable in their chosen sheep business. This is achieved through disciplined management, nutrition, health and using eID to drive net income returned per hectare.

Sheepmatters has a client base across Australia and overseas. Clients range from individuals, groups, industry and corporate. Sheepmatters holds an on-farm client field day at the end of February every year.

Since 2007, Anthony has been using eID to capture productivity information on clients' sheep which is then used to help make decisions in conjunction with subjective assessment.

Anthony, with his wife Helen, own and operate a commercial sheep farm near Cootamundra, NSW, running 1100 Merino breeding ewes. Anthony's breeding objective is for all ewes to have weaned at least one lamb every year. Anthony is breeding towards a maternal Merino ewe. Anthony uses eID on his farm and his sheep are indexed on performance that drives $/DSE/ha. Anthony shares updates about his sheep program with all his clients.

Anthony has a Post Graduate Certificate in Rural Science from the University of New England, Armidale. Anthony sits on many clients' boards and has input into decision making in their business priorities.

Anthony coaches and referees rugby union, and enjoys watching his boys (aged 17 and 15 years old) play in a team environment.

Session abstract

The commercial performers in your sheep program can be identified with the help of technologies like eID. Using objective technologies (such as walk-over-weighing, condition scoring) in conjunction with eID in the rangelands environment can be a practical way to collect and use data, to then help make preventive management decisions.

The eID tag is a great tool to collect valuable information on your sheep. Think of the eID tag as a resume in which only important information is put against. Think of the sheep as employees in your business. The resume of the sheep will help tell you which sheep are the employees that are helping drive profitability in your business and those which are not.

What is important individual information to collect?

- Body weight/body weight gain (or loss): Collect this measurement when the sheep are in the yards at shearing, crutching, lamb marking, and weaning. In the paddock you can use walk-over-weighing. Understanding individual weight gain/loss has enormous benefits for understanding sheep productivity.
- Condition score: Map the condition of the sheep to their nutrition requirements (adopting Lifetime Ewe Management Principles) through their breeding cycle. Condition score is a key productivity driver of your breeding ewe. Collect this when sheep are in the yards.
- Reproduction (pregnancy, udder at lamb marking): Collect during pregnancy scanning and lamb marking. Rank your ewes on total pregnant and wet udders at lamb marking. A ewe who is repeatedly recorded with no udder at lamb marking is an enormous cost.
- Wool (greasy fleece weight, micron, yield): Collect this measurement at shearing.
- Animal health/treatments: Maintaining a history of sheep health and treatments helps you with future treatments, so you do not build up resistance to certain chemical groups (drench resistance), and you will have treatment information to inform processors and WHP and ESI requirements to name a few.
- Sale of sheep: Individual information on sheep for sale is a value add to potential investors. Knowing what they are purchasing is powerful.

Understand what traits to capture and how

- Ony collect traits which meet your breeding objectives. The more traits you collect, the longer the journey to get to the sheep you want to breed.

Know your breeding objectives in your sheep program

- What is it that you want to achieve in your sheep program? When using eID, only collect data that meets your objectives in your sheep program.
- List your top three or four priorities that have the biggest influence.
- Don’t invest in rams that don’t align with your breeding objectives.

Only collect data that has productive value, and use it

- Focus on only collecting data that has a commercial value to your sheep operation.
- As an example, if your priority is reproduction with high fleece weight, then the big influence is pregnancy scanning, udders at lamb marking, condition score pre joining and greasy fleece weight.
- eID has the power to enable producers to look at repeatability. For example, across multiple years, is the same ewe measuring pregnant with a single, twins, or is it dry? This allows you to rank your ewes on total conception, which helps you understand which ewes are driving performance (and which are not). As long as that ewe has an udder at lamb marking, then you know she is repeatedly getting pregnant and rearing at least one lamb.
- If you collect data on your sheep, then use it. If you don’t use it, why collect it?

eID doesn't have to be expensive

- You start with the cost of an eID tag and engage with a service provider that will have all the hardware and software to collect the data you need. On average the cost of a service provider is approximately $2.50 – $3.50 head/year on a flock size of 1,200 – 1,500 breeding ewes.
- Down the track you gain an understanding of what initial hardware and software you can purchase with confidence after being exposed to a sample of tools by the service provider.
- Investing in hardware and software that doesn't do what you want is expensive. Make sure that if you invest in the tools used for eID, that it is practical and meets your needs.
- If you do invest in eID hardware, start small and understand what its limitations are.

Use objective with subjective information to make informed decisions

- Objective numbers are important for a sheep's performance; however, it is also important that the sheep conformation (body structure) is correct. A breeding ewe with awesome production figures but with terrible feet or shoulders can be detrimental to your breeding program.

Back up service is vital, so make sure there is that support when or if you invest in eID

- Whatever product you invest in, understand what back-up service is provided with the product.
- Not all resellers of products are experts in what they sell, so get a clear understanding of who you need to contact when you have a question.
- Don't leave a question until the eleventh hour. If you know you have a job coming up, do a test run on how the process will work. If there is an issue, it can be resolved without the time pressure!
- Engage in a service provider that can help you on the journey of implementing eID into your sheep program. They can be extremely valuable to help minimise issues to do with understanding the practical applications of eID.

Running sheep on production, not age

- By collecting objective information on your sheep, you are putting all age sheep in the mix to see which sheep run on the field in the starting side, which ones are on the reserve bench and which ones don't make the team.

Insights from the Lamb Survival Producer Demonstration Site

Image 1. Walk-over-weighing unit, St George, QLD.

The Lamb Survival Program's key objective is for producers in the rangeland environment of SW Queensland to understand how to interpret data that creates confidence in decisions made around preventive (not reactive) management. Information collected using walk-over-weighing, condition scoring and pregnancy scanning will help producers with decision making on management of their sheep.

Key objectives are:

- increase pregnancy by 15% by the end of 2025
- increase lambs weaned to ewes joined by 23% by the end of 2025
- increase ewe survival through lambing to 98.5% by the end of 2025
- ewes with no udders at lamb marking reduced to 3% by the end of 2025.

The program officially started in 2022, but due to severe flooding in the second half of 2022 and the challenges for the producers involved, data collection started again in 2023, and will continue until the end of the program which is expected to be the end of 2025.

Take home messages

- eID can be practical.
- Collect data on sheep that meets your objective in your sheep program.
- Use the data to help make decisions.
- Make sure you have back up service.
- Sheep kept on performance, not age.

Relevant tools and resources

- **Lamb Survival – SE Queensland Rangelands (PDS)**

  The lamb survival project will upskill core and observer producers, and producers nationally, by providing the skills and confidence to use the data collected on their sheep that can be interpreted with reliable confidence to help make informed decisions. With the investment in remote objective weight measurement (WOW) and objective condition scoring, this will have direct influence in increasing reproduction and decreasing mortality in the core and observer producers breeding flocks. This will directly improve their productivity and profitability.

- **SW Queensland Lamb Survival Facebook group**

- **MLA Final Report: Maximising the value of eID technology for sheep producers**

  Results of modelling the cost-benefit of investing in eID to aid management and selection decisions across a range of commercial Merino and maternal production systems. Average cost-benefit of implementing eID was $4.12 return per dollar invested.

- **MLA PDS: Using eID to improve ewe performance**

  In this Producer Demonstration Site (PDS), ewes were monitored through regular weighing and condition scoring, and ewes in low body condition score during the summer were preferentially fed before joining. Individual scanning results of ewes, and mob marking and weaning percentages were recorded on each farm.

- **Making More from Sheep: Module 10 – wean more lambs**

  This module provides the framework and guidelines to set in place the important management steps needed to improve flock reproduction rates and lamb survival through to weaning.

Notes

Parasite management for cattle, sheep and goats, and Paraboss update

Dr Matthew Playford

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About Matt

Matt is a veterinarian who grew up in regional New South Wales and developed a love for livestock management and medicine working on mixed properties. He was an exchange student in Japan and after graduating from the University of Sydney he worked in cattle and sheep reproduction and clinical practice before doing his PhD in parasitology at Hokkaido University. He then worked at the Australian embassy in Tokyo before returning to Australia to be manager of the University of Queensland livestock teaching practice in Kenilworth, Queensland. Later he was the research and technical manager at the pharmaceutical company Intervet. Matt has been a veterinary consultant for 19 years and is the director of Dawbuts Pty Ltd, a company which runs a parasitology laboratory and conducts research on behalf of the livestock industries. Matt has published a range of papers on livestock parasitology, has been a presenter at World Association for the Advancement of Veterinary Parasitology and World Buiatrics conferences, has served on the executive of the Cattle Chapter of the Australian and New Zealand College of Veterinary Scientists and is the technical lead for ParaBoss.

Session abstract

Paraboss – parasite control resource

ParaBoss is the national authority for sheep, goats and cattle parasite control in Australia, providing information on parasites and their control through its suite of products – WormBoss, FlyBoss, LiceBoss and TickBoss. The resources are a source of detailed information and regional programs, developed to improve on-farm management of worms, flies, lice and ticks.

ParaBoss as a program provides industry leadership for ruminant livestock parasite management through its respected brands, a strong and independent technical foundation, extensive industry networks, and well-used industry web sites. ParaBoss also has a network of accredited advisers as well as self-paced training courses for producers to upskill themselves and their staff.

- TickBoss provides key information for how to control ticks on cattle, including preventing tick fever and regulations for transporting cattle across the tick line.
- FlyBoss is your source of authoritative, up-to-date information on buffalo fly control in cattle and preventing flystrike in sheep.
- WormBoss includes regional guides to help producers plan an annual worm control strategy for cattle, sheep or goats.

Best practice parasite management

Grazing livestock are a critical component of sustainable agricultural production. However, gastrointestinal nematodes and external parasites pose a constant risk of production loss, sickness and death to these animals which threatens profitability and industry sustainability.

Ruminant worms have a 'simple' or 'direct' life cycle. Many factors influence the speed of the life cycle, but the most important ones are temperature and moisture. Therefore, when temperatures are above 20°C and there is enough water present, you can expect worms to be a huge problem. Compounding the problem of high worm numbers is resistance, which means many of the older treatments producers have come to rely on no longer work at full efficacy.

Physical signs of worms include weight loss, poor body condition, scours, pale colour, inability to walk and death. However, using physical signs as an indicator of when to implement worm control programs such as drenching carries a high risk of death and loss of production. Instead, producers should be proactive and test their stock regularly to head off any problems.

Worm egg counts are done on dung samples. These can be collected from the animals directly or fresh samples (less than 10 minutes old) picked up from the yards or the paddock. WormBoss has 'Drench Decision Guides' for sheep and goats specifically for pastoral regions, which provides threshold values for drenching, depending on the number of eggs per gram and the amount of Barber's pole worms in the mix.

Worm egg counts done after a treatment are used to calculate how well the drench has worked.

For young and pregnant sheep and goats in pastoral regions, risk of problems from worms starts at about 300 eggs per gram, or a bit higher (450-500 epg) if the worms are mainly Barber's pole worms.

For young cattle, worm egg counts can be used to estimate the impact of worms on growth rates (Shephard et al. 2022). Once worm egg counts get above 100 eggs per gram, average daily gain is affected. Drench decisions can be made using worm egg counts, along with key factors such as species of worm, season, nutrition and worming history. It is also important to weigh young cattle to make sure they are hitting target growth rates for mating (heifers) or turn-off (steers).

Take home messages

- Livestock parasites are costly, kill stock and cause poor animal welfare.
- Control of parasites relies on an understanding of parasite biology, animal responses and the chemicals used for treatment.
- The ParaBoss website is the Australian authority on livestock parasites, with detailed advice on control programs for each region and updates available through monthly newsletters.

Relevant tools and resources

- **ParaBoss**

  ParaBoss is the national authority for sheep, goats and cattle parasite control in Australia, providing information on parasites and their control through its suite of products – WormBoss, FlyBoss, LiceBoss and TickBoss. The resources are a source of detailed information and regional programs developed to improve on-farm management of worms, flies, lice and ticks. See paraboss.com.au.

- **Paraboss Annual Programs for cattle, sheep and goats**

  The ParaBoss Annual Programs identify the worms of economic significance and describe the program of treatments and interventions for each Australian climatic and geographical region.

- **ParaBoss Products Search tool**

  Online tool for searching registered parasite treatment products.

- **ParaBoss Drench Decision Guides for sheep and goats**

  The easy-to-use *Drench Decision Guides* are designed for each WormBoss region to assist producers in deciding whether to drench now, use a persistent drench, and when to *WormTest* again.

Notes

Looking ahead

Containment feeding: applications and learnings from north-west NSW

Dr Jillian Kelly

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About Jillian

Dr Jillian Kelly is the founder of Animal Health and Nutrition Consulting, a company she started in 2022 after almost 20 years as a production animal veterinarian in the private and government sectors. She has a veterinary degree with first class honours from the University of Sydney and is a member of the Australian and New Zealand College of Veterinary Scientists in the Ruminant Nutrition chapter. Jill grew up at Coonamble and loves working alongside producers, elbows deep in sheep and cattle health and nutrition issues throughout central and western NSW and Queensland. She is passionate about proactive livestock production initiatives to offset disease issues before they occur. She founded the Drought Smoko concept, a way to provide education and support to producers during drought and was the inaugural host of the podcast Seeds for Success. She runs a side-line cattle trading business, loves watercolour painting and campdrafting and cooks a great batch of scones!

Session abstract

This presentation will discuss feeding systems, infrastructure and versatile set-ups, and how they could be applicable to a rangelands environment. Jillian will discuss the pros and the cons of confinement feeding and considerations before establishing. The practicalities of livestock management, nutritional considerations and disease risks will also be discussed.

Why containment feed?

Producers in northwest NSW started to hand feed livestock in 2017. By early 2018 the ground cover was severely depleted, and producers were making the decision to confine animals and fully hand feed, which they did until drought breaking rain was received in March 2020.

As a result of this experience, many farms are now equipped with a basic confinement feeding system which they can utilise in times of drought, flood, or fire to reduce grazing pressure on the property; or to production feed animals if market circumstances warrant it. Confinement feeding systems can also be used to early wean calves and lambs to reduce the nutritional load on breeding females. Below are some of the issues to consider when adopting containment feeding as a practice.

Feeding systems

Self-feeders

Self-feeders containing grain or pellets, with hay racks being separate is the most popular type of feeding system for sheep, and are often used for cattle (especially weaners).

The reason this is a popular option is it is relatively low cost. When the time for confinement feeding is finished, the self-feeders and hay racks can be packed up into the shed or moved around the farm and used for other purposes, leaving little infrastructure at the confinement feeding site to deteriorate in the weather.

It also allows for lower daily labour inputs. Water troughs must still be cleaned daily and the animals checked for health issues, but the grain and hay can be filled up every few days, or weekly. It is a feeding system which allows you to get away from the farm for a couple of days. The self-feeders are usually located along the fence line of a laneway, so they can be filled without entering the pen, making this job quick and easy.

The downside of this system is that it is very difficult to measure how much the animals are eating each day, and who is eating what. There will be some animals who eat far too much grain, resulting in acidosis, and some animals who eat far too much hay, resulting in poor growth rates. Acidosis events will be difficult to manage in the face of weather events and barometric pressure changes using this system.

It is very difficult to maintain animals (e.g. breeding ewes or cows) using self-feeders. Even when they are screwed down very tightly, animals in confinement that are bored will lick until they get far more than their allocated quantity of grain each day. Hence, this system is best suited to fattening stock.

Induction is also difficult using self-feeders. Therefore, induction into this system must be done by hand, by bucketing or trail feeding the grain to the newly inducted animals once, twice or three times daily for the first 10–14 days.

Trail feeding

Trail feeding sheep and cattle in confinement can be done. It is best done onto conveyor belting or low troughing to avoid wastage and faeco-oral contamination. Usually, the grain is trail fed and the hay is fed separately ad-lib in hay racks, although a mixed ration including roughage can be fed onto the ground if there is a feed mixer. It can be tricky to drive into the pens towing a feed cart with the animals mobbing the vehicle, so a system where the trail is laid in an adjoining pen and each mob let out separately to eat can be used as an effective, albeit time consuming method.

Automated systems

In recent years, technological advancements have seen automated feeding systems come onto the market.

There are pros and cons of each of these systems and it is recommended that they are researched fully prior to establishing.

Bunk or trough feeding

This is the most common feeding system for cattle and is becoming more popular for sheep. To do this, a feed mixer is required that is capable of mixing hay or silage with grains and additives. There also needs to be enough bunk space for each animal to eat its daily ration. The ability to feed a mixed diet that contains the correct proportions of roughage, grain and minerals means that the growth rate responses are a lot more reliable, and the acidosis incidence and death rate is much lower. The downside of this system is the cost to build the bunks, acquire the feed mixer and related equipment. It also relies on the stock being fed once or twice per day which increases the labour and commitment component of the feeding activity.

In some cases where a feed mixer is not used, grain could be troughed out to cattle daily in bunks, from a feed cart or chaser bin, and hay fed separately. There is a higher risk of acidosis where cereal grains are fed. Cotton seed is oil based rather than starch based and so is safe and can be fed in troughs every few days to cattle, along with good quality roughage.

Containment infrastructure

Stocking density and mob size is important to success. Too much space means that animal feed intake decreases. Too little space means that bullying and shy feeders increase. Stocking density recommendations vary across states, but a guide is $5m^2$ per head for sheep and lambs, and $12m^2$ per head for young cattle, and slightly more for older cattle.

Suggested maximum mob sizes are no more than 350 sheep and lambs, and no more than 150 cattle. Smaller mobs have less bullying, less shy feeders and more even feed intakes.

Trough space will vary depending on the feeding system, but as an idea calves require 3cm per head of trough space for water, 7–10cm for self-feeder trough space and 40cm per head of bunk space. Lambs require 2cm per head of trough space for water, 3–5cm per lamb for self-feeder trough space and 15–20cm of bunk space.

Aim to put the water as far away from the feed as possible to reduce water contamination with grain and hay. Try to ensure the troughs empty outside of the pens as they will be emptied daily and the water released can create a bog, or shoots of green feed in the pens. Some clever designs allow the trough runoff to water trees just outside the pens.

Establishment considerations

Before building a confinement feeding system, check your local council and state requirements for approvals and consent.

In NSW legislation, specifically the State Environmental Planning Policy (Primary Production and Rural Development) 2019, confinement feeding areas used on a temporary basis for drought, fire, flood or routine husbandry procedures are viewed as stock containment areas and do not require approval. However, if the area was to be used to feedlot animals on a commercial basis for production outcomes, approval is required.

In Queensland, sheep feedlots feeding more than 1,000 standard sheep units in a feedlot require a development approval from the local council and an environmental authority under the *Environmental Protection Act 1994* from the Department of Agriculture and Fisheries (DAF). A cattle feedlot is defined as keeping more than 150 standard cattle units in a yard or enclosure, where the animals are fed entirely by hand or mechanically and cannot graze. Drought feeding sheep and cattle in a drought declared area, where animals are fed no more than their nutritional requirements, supplementary feeding in the paddock or keeping animals confined and fed temporarily for sale, slaughter, animal husbandry practices or transport are not considered feedlotting and do not require approval.

Site selection is important, and planning is essential. The aim is to select a site that is:

- well-drained
- accessible even in wet weather
- on a slope of 2-4%
- has shade
- is close to feed storage
- has good water quality and quantity
- has minimal impact on the environment
- is a suitable buffer distance from watercourses, property boundaries, dwellings and public roads
- allows for future expansion.

Whether you are feeding in confinement or feeding in the paddock, it is always important that the financial benefit of feeding livestock is assessed prior to embarking on the feeding program. There are a number of very useful calculators that can be used to help with weighing up the option to feed or sell. As the feeding activity continues, it is recommended to constantly reassess the cost vs the benefit based on commodity prices and livestock prices.

Pros and cons of containment feeding

Pros	*Cons*
◆ reduce grazing pressure, topsoil and groundcover depletion ◆ reduce livestock daily energy requirements ◆ reduce time it takes to feed mobs of stock ◆ maintain breeder base ◆ meet production targets ◆ maintain cash flow ◆ improve pasture response after rain ◆ improve conception rates, growth rates, condition score, wool quality.	◆ cost and quantities of feed required ◆ infrastructure costs ◆ disease risks ◆ environmental impacts ◆ labour inputs.

Livestock management

Animals do best when they are divided into confinement pens based on body weight. Around 5% of animals are shy feeders, and this number will be higher if the animals have not been imprint fed grain while on their mothers. During the induction period and the first few weeks on the full ration, the mob needs to be checked daily and these shy feeders removed and placed in a hospital pen with some good quality hay and grain. Some learn to eat once they are removed from the bigger lambs, others remain shy feeders and are best put back out onto pasture.

Animals should be drenched and vaccinated for clostridial disease, and potentially respiratory disease (cattle) prior to being fed in confinement.

Induction is an essential period in the confinement feeding activity. Typically, the grain rations are troughed out to animals several times per day. Adequate trough space needs to be provided so that all animals can get access as the quantities of feed are quite low to begin with stepping up gradually each day until the daily requirement is reached. The induction period is the period where the labour inputs are the highest, the highest rates of illness and death are seen, and the greatest care is needed.

Once inducted and into the pens, animals need to be redrafted on bodyweight every 2–3 weeks to keep the animals in their body weight categories.

Monitoring faeces colour, consistency and content is vitally important and should be done regularly when confinement feeding. Very dry or stacked up faeces indicates the animals are consuming a diet that is low in protein and energy (usually too much hay/fibre), while scours or bubbling faeces indicates sub clinical acidosis in the pen.

Checking what is left in the bunk or self-feeder trough is important – are they eating their daily ration? Are they sorting the ration and leaving components behind?

Nutritional requirements

For good results and few disease issues, it is imperative that the animal's energy, protein, roughage, mineral and vitamin needs are met while being fed in confinement – and the actual ingredients and proportions in their diet will depend on their size, age, physiological state and the outcome desired.

An example of a confinement feed is a cereal grain/pulse/hay/buffer pellet mix (e.g. 61% barley, 20% lupins, 15% hay, 4% buffer pellet). Often confinement areas are used during drought, and so commodities are limited to what is available, rather than the ideal. Feed testing of commodities, and getting some professional advice is highly recommended to ensure the diet is adequate. When constructing any diet, the following nutritional principles should be followed:

- Try to base the diet primarily around energy (or carbohydrates). How many megajoules of metabolizable energy does the animal need? The NSW DPI drought feeding calculator is an excellent mobile tool that can assist with this. This is the starting point from which to create the diet.
- Starch is one form of energy. Different grains will have different starch contents. The higher the starch, the better the animal's growth and performance, but the higher the acidosis risk. This will need to be balanced.
- Structural carbohydrate (lignin, cellulose, hemicellulose) is another form of energy. This will scratch the rumen, create a fibre mat in the rumen, provide comfort and help prevent acidosis. Around 10–15% roughage is recommended for growing stock, higher percentages for lactating animals or early weaners.
- Oil is another form of energy. The rumen cannot tolerate any more than 6% oil in the diet.
- Ensure you know the dry matter percentage (DM%) of your diet. If there is a large moisture component (e.g. feeding silage), then the 'as fed' requirements will be higher to take this into consideration.
- The protein content of the diet will vary depending on the class of animal. For example, 8% is required for maintenance, 12% or greater for lactation, 12–15% for growing animals and 16–18% for early weaning. For lactating or growing stock it is important that a portion of this protein is true protein (e.g. from grain) as opposed to non-protein nitrogen sources (e.g. from urea).
- Most drought or confinement feeding diets will be low in sodium, calcium, vitamin A and vitamin E. A compete feedlot inclusion pellet or powder can be used to meet this requirement. Otherwise, provision of lime and salt into the diet is recommended. Injections of Vitamin A and E if being confinement fed for longer than 3–4 months is also recommended if this is not being fed in the diet.

Sheep do not typically require the grains to be processed from a utilisation point of view, however they will sort the grains, so processing of the grains so that they are matched in terms of particle size can be of benefit.

Cattle require pulse and cereal grains to be processed in order to get effective utilisation. The losses of feeding whole grains can be quite considerable. For this reason, pellets (made of processed grains) are often a common choice when feeding cattle.

When feeding a high grain diet, it is common to include some sort of a rumen buffer to reduce the incidence of acidosis and increase feed conversion efficiency. This can be particularly helpful in feeding systems where the grain is fed separately to the hay and the acidosis risk is higher.

Commonly, these buffers are ionophores (for example Bovatec® or Rumensin®) which alter the rumen environment to improve feed conversion. It is important to be aware that some of these have market implications, so check with buyers before including. Other common inclusions used for buffering include Acidbuf®, bentonite, bicarb soda, lime, Causmag® or antibiotics such as Eskalin®. Which one is right for your situation will depend on the class of animal being fed, the diet, the target market, and your ability to mix either powder or pellets into the ration.

Disease risks

Acidosis

Acidosis is by far the most commonly diagnosed disease in containment feeding situations, even when the sheep have been on a grain diet for a long period of time. Subtle changes in weather, management, feed batches and the environment can precipitate an event. I believe that sub-clinical acidosis underpins many of the other diseases seen clinically in sheep feedlotting situations, and that a more stable rumen would lead to a lower incidence of many different diseases.

It is important to watch the weather and close down the feeders, put more hay in the pens or increase the roughage component of the diet in the lead up to and during a weather event.

Acidosis can be tricky to diagnose in some situations. Occasionally it will present as random and sporadic sudden deaths in the biggest sheep in the mobs. In these cases, the underlying cause seems to be insufficient feed trough space, which causes some dominant sheep to overeat. In this scenario, the solution is to provide more trough space, which may feel contradictory! In a mob where there is a large spread of body weights, acidosis in some animals can present concurrently with malnutrition and starvation in others. This is because the bigger, bully sheep overeat, and the small, runty 'shy feeders' can't or won't compete. This can be confusing unless the two conditions are considered.

Acidosis can also present as sheep that are tucked up, scouring or have sore feet due to laminitis. Treatment of individual sheep can be attempted with oral drenching of bicarb soda, however the best idea is prevention through dietary and livestock management.

Shy feeders

Approximately 5% of sheep are shy feeders and won't eat grain. This rate will be higher in an early weaning situation, or if the stock are not imprinted onto grain whilst on their mothers. Animals that are shy feeders will look underweight, hollow in the belly and are often standing in the corner on their own. They need to be drafted off and put in their own pen with plenty of good quality hay or, if there is pasture available, put out into a paddock to graze. On postmortem they will have rumens that are largely empty or contain small amounts of hay and/or dirt, have poorly developed ruminal papillae, low body fat stores, and can have concurrent disease such as coccidia or pneumonia.

Hypocalcaemia and water belly

Hypocalcaemia is a very common problem and is seen as sheep that become shaky and have difficulty walking before becoming recumbent and dying. Calcium is essential for muscle contractions and if livestock are fed a grain-based diet that is low in calcium, clinical signs ensue. It can present in livestock that have recently been trucked or walked, animals that have been handled for weighing or animal husbandry procedures or following weather events. Diagnosis is via blood testing or testing the eye fluid post-mortem. Treatment can be attempted via calcium boluses under the skin, however ultimately ensuring that the diet contains plenty of calcium is essential for prevention.

Water belly (urinary stones) can also occur if there is not enough calcium in the diet, if the phosphorus content is too high, and if the Ca:P ratio is <1.5–2:1. This is most commonly seen when feeding commercially made pelleted rations due to price and availability of whole grains, or when lime has been excluded from the diet. It is easily diagnosed in the mob – affected animals are tucked up with ventral oedema and may be dribbling urine. Low water intake can be a contributing factor, precipitated by accessibility, water temperature or palatability issues. Correction of the dietary mineral imbalance, improving water intake and acidifying the urine by including 1% ammonium chloride in the diet can help to reduce the incidence of water belly.

Vitamin A deficiency

Vitamin A deficiency started to occur commonly on NSW drought-affected farms around one year into full hand feeding with no pasture, which presented as excessive lacrimation (tear production), night blindness, ill thrift and neurological signs. It probably also contributed to many other conditions such as the development of water belly.

Provision of Vitamin A (and E) in the diet using a feedlot premix, or Vitamin ADE injections every three months is therefore recommended if full hand feeding is going to continue beyond 3–4 months. The injections can cause severe pain, so placement and technique are important. There have been cases seen where the animals were too sore to put their heads in the trough to eat following an ADE injection into the neck, which then caused acidosis events when they recovered.

Other diseases

Other diseases that may need management are pink eye in both sheep (*Chalmydia or Mycoplasma*) and cattle (*Moraxella bovis*), respiratory disease in sheep and cattle, scours due to *E.Coli* or Coccidiosis, bloat, protein or urea poisoning, rectal prolapses, pulpy kidney, nitrate poisoning and polioencephalomalacia.

It is recommended that you develop a relationship with your veterinarian and investigate all cases of morbidity and mortality. Often one dead animal is the tip of a sub-clinical iceberg that could be affecting your production.

Take home messages

- Confinement feeding is a temporary, proactive management strategy to maintain livestock production and reduce grazing pressure.
- Confinement feeding areas can be low cost and versatile.
- Confinement feeding areas require careful planning in establishment and attention to detail with regards to nutrition and management to achieve good results.

Relevant tools and resources

- **Managing Drought ninth edition – Todd Andrew, Tracey Lamb, Ted O'Kane (2019), NSW Department of Primary Industries**

  This guide contains information aimed at NSW primary producers to assist them in making informed decisions to manage the impact of drought and extended dry spells.

- **Dry Times Smoko, You Tube – Dr Jillian Kelly (2018)**

  The Central West Local Land Services' Dry Times Smoko session with Dr Jillian Kelly provides an overview of the livestock issues which arise from dry conditions.

- **Drought and supplementary feed calculator, NSW Department of Primary Industries**

  The drought and supplementary feed calculator is designed to assist sheep and cattle producers in developing feed rations in drought or supplementary feed rations for dry periods.

- **A Guide to Confinement Feeding Sheep and cattle in NSW – Geoff Duddy, Jeff House and Brett Littler (2022), Central Tablelands Local Land Services.**

  This guide aims to provide producers confinement feeding stock with best practice management protocols and recommendations.

- **Managing breeding ewes in containment areas**

  A producer guide on the key considerations and decisions required for managing ewes in containment areas.

- **Production feeding for lamb growth**

  A producer guide providing information on important considerations for intensive lamb finishing including animal health and welfare, nutrition, running a viable finishing system, and management and marketing.

Notes

Virtual farm tour

Ben and Andrea McKenzie - BAM Pastoral, ‘Yaralla’, Cunnamulla

Ben and Andrea McKenzie

BAM Pastoral, ‘Yaralla’, Cunnamulla

About Ben and Andrea

Ben and Andrea McKenzie of BAM Pastoral own and manage ‘Yaralla’, an approximately 24,000ha station in south-west Queensland (180km south of Cunnamulla). The property runs predominantly goats and meat sheep, with some trade cattle. Their operation includes a goat breeding program for their Kalahari and red Boer stud goats in addition to commercial livestock operations.

Ben is the operations manager for Yaralla, and he also runs the livestock trading side of the business. Ben originally grew up near Glenmorgan, with his family moving to the Cunnamulla region 22 years ago. The original Cunnamulla property his parents operate is called Gamarren, with Yaralla purchased as a second property 12 years ago. Andrea and Ben began with leasing Yaralla off Ben’s parents before purchasing it from the family business over twelve months ago.

Andrea is originally from the coast and has been involved in the business for eight years. She is a qualified veterinarian, previously working clinically for approximately two years in mixed practice. Andrea currently works part-time for the Queensland Department of Agriculture and Fisheries – through this position Andrea works in the animal health preventative space, talking to producers about important topics such as vaccination and dystocia. On Yaralla, she oversees the pregnancy testing, faecal egg counts, animal husbandry and bookkeeping.

Ben and Andrea are also raising their two young sons Oscar and Angus at Yaralla, who enjoy watching mum and dad at work on the property and learning more about the land and the livestock they run.

Session abstract

The virtual farm tour will provide insights into Ben and Andrea’s business, BAM Pastoral. Ben and Andrea will share key aspects of their operation including:

- The goat, sheep, and cattle enterprises at Yaralla, including the goat breeding program using Kalahari and red Boer goats.
- Infrastructure and water management on Yaralla, including the improvements they have made over the years and what they are looking to implement into the future.

- Risk management strategies Ben and Andrea have implemented to ensure the safety of their team.
- How Ben and Andrea have used the diversification of their enterprises and the use of the goat enterprise to continue building business resilience into the future.
- The importance of a strong community in a remote location.
- How succession planning has progressed for the McKenzie family.
- What's next for Yaralla and the business.

Relevant tools and resources

- **MLA MeatUp Forum virtual farm tours**

  Visit the MLA MeatUp website to view the past MeatUp virtual farm tours which have been showcased at different MeatUp events across southern Australia.

  The MeatUp Rangelands 2023 virtual farm tour of BAM Pastoral with the McKenzies will be uploaded to this website and YouTube following the MeatUp Forum.

Notes

My take home messages and actions

Reflect on the presentations delivered at the MeatUp Forum. For those of relevance to you, note the session title, your key messages, and actions you can take to implement ideas.

Session	Action – things I could do to implement ideas

Producer Demonstration Sites: quick start guide

Producer Demonstration Sites (PDS) are on-farm projects run by producer groups who want to validate the benefits of incorporating research findings into their businesses.

By supporting producers to use best practice management techniques and technologies that improve business performance, the PDS program aims to:

- increase the rate of R&D adoption
- encourage producers to pursue new skills and knowledge
- foster collaboration within the red meat industry.

MLA calls for preliminary applications for PDS projects that will help to improve the profitability, productivity and sustainability of beef and sheepmeat enterprises on an annual basis.

What can I demonstrate?

Your PDS producer group could get involved in demonstrating practices that support:

- increased lamb survival
- control of regionally important weeds
- improved induction to drought rations, or
- remote measurement of carrying capacity.

What do I need to do?

The practice you plan to demonstrate must be trialled on at least:

3 different properties

with 10 core producers

with a larger producer network keeping track of the project

Other considerations

The project duration should be a minimum of two years and a maximum of six years

Ensure your project includes communication activities to extend key learnings beyond the core group

Implement monitoring, evaluation and reporting processes to demonstrate producer engagement, practice change and benefit to the Australian red meat industry

What are the funding opportunities?

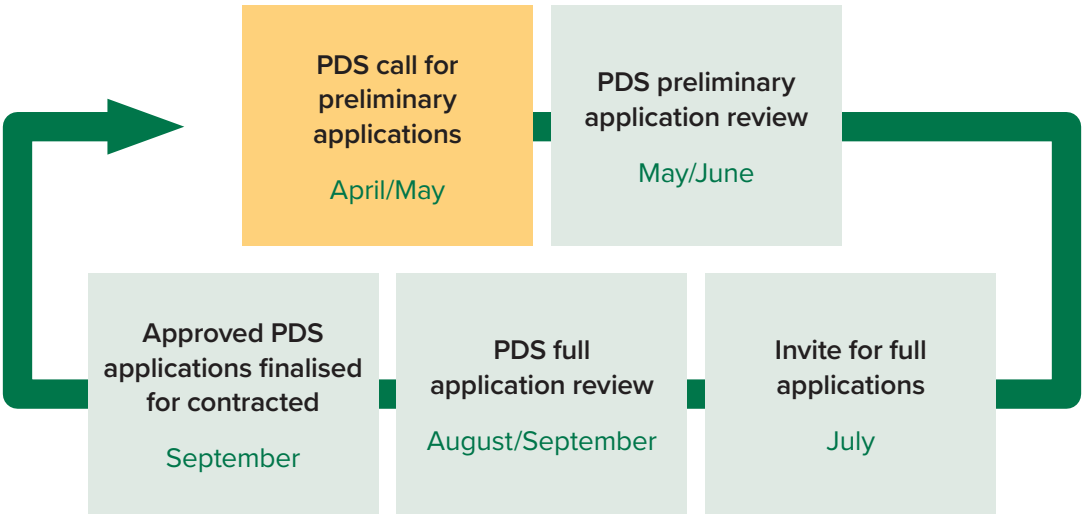
There are two primary funding streams that aim to increase the rate of adoption of on-farm management practices and technologies in PDS projects: levy and co-contributor.

What's the difference?

Levy	Co-contributor
Producer-driven projects to address regional PDS priorities **set by the Regional Research Advisory Councils (RACs)**/Regional Committees	Producer-driven projects aligned with **industry** priorities/targets
Offers producer groups the opportunity to receive funding of **up to $25,000/year** for the life of the project	Offers producer groups the opportunity to receive funding of **up to $50,000/year** for the life of the project
100% funded by producer levies	Funding consists of: **50% levies, 25% producer cash contribution, 25% MDC** (matching the producer contribution), **8% access fee** (of the total project value – 25% producer, 75% MLA/MDC)

When can I apply?

Preliminary applications for the PDS program will open in April annually.
See below for a full overview of the application process.



Want to know more?

For more information contact:

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Maria Thompson	PDS Coordinator	0411 961 545 | maria@agstarprojects.com.au

Visit mla.com.au/pds

paraboss

Integrated parasite management for **sheep, goats and cattle**

ParaBoss is the industry's go-to resource for parasite management information, bringing together the latest R&D and practical resources all in one place.

This online resource offers regionalised and seasonal tactics to reduce the impact of flies, ticks, worms and lice in any sheep, goat or beef system.

Find information on the management, treatment and biology of parasites and the latest advice on preventing chemical resistance.

Tried and tested by producers, see how ParaBoss can benefit your business.

Visit **paraboss.com.au.**

flyboss wormboss liceboss tickboss

ParaBoss has been developed and funded by Meat and Livestock Australia, Australian Wool Innovation, Sheep CRC, University of New England, and Queensland Department of Agriculture and Fisheries, with technical guidance and endorsement by sheep, goat and cattle parasite technical experts.

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BredWell FedWell

mla MEAT & LIVESTOCK AUSTRALIA

An introduction to

Breeding and feeding to maximise profit

On the back of a decade of success, the BredWell FedWell workshops have been redeveloped to reflect evolving best practice genetics and nutrition management.

- Develop a customised breeding plan for your livestock enterprise aligned to your profit drivers
- Identify sires and select animals that help you meet your objectives
- Learn about feeding animals well to achieve your objective and maximise your genetic investment

Informative
Presentations and discussions with deliverers and peers

Interactive
Practical and written activities hosted on-farm

Individualised
Learning outcomes you can apply in your own enterprise

So far, BWFW workshops have delivered $17.2m* in total net benefits to participating producers

1.9M
cattle influenced by the BWFW workshop

$2.98
net benefit per cow mated

639k
breeding females

19.6M
sheep influenced by the BWFW workshop

$2.48
net benefit per ewe joined

12.7M
breeding ewes

*Calculated as net present value of adoption to 2045, discounted at 5% annually.

New workshops are available for all sheep types, southern cattle and northern cattle production systems. Register your interest to participate or host a workshop.

mla.com.au/bredwellfedwell

Australian Feedbase Monitor

Information for producers

The Australian Feedbase Monitor is a world-first tool to help producers improve grazing management, forage budgeting and ground cover.

The Australian Feedbase Monitor provides:

- access to farm-level rolling monthly pasture biomass estimates for every Livestock Production Assurance (LPA) account holder, updated every five days
- regionally calibrated predictions based on more than 6,000 sites, using world-leading satellite monitoring and data analysis systems
- data showing the trends in pasture growth and ground cover dating back to 2017
- support for more objective and accurate feed budgeting, leading to sustainable grazing management decisions.

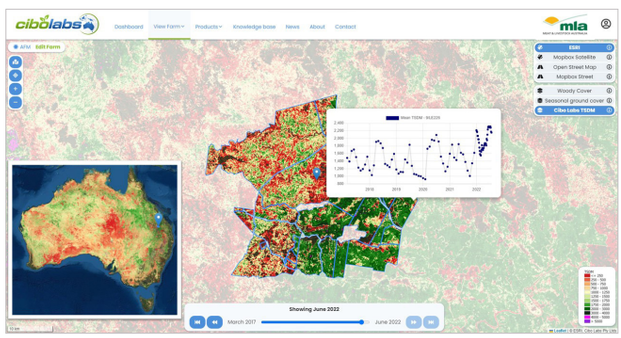
How will this tool help producers?

The Australian Feedbase Monitor will offer multiple benefits to producers and the wider red meat industry including:

- supporting more objective and timely grazing decisions allowing an increase in production and the ability to meet market specifications
- avoiding environmental or welfare issues in grazing enterprises due to increased ability to monitor and report on ground cover and pasture status and trends
- increased consumer confidence in the environmental stewardship of red meat producers.

How to sign up

Want free access to the Australian Feedbase Monitor? The free subscription to this tool can only be accessed by MLA members via myMLA, so make sure you've registered for myMLA and linked it to your current Livestock Production Assurance (LPA) account: mymla.com.au.



Not an MLA member?

You can still access the tool if you're not currently an MLA member:

- apply to be an MLA member (this process can take up to two weeks) at mla.com.au/membership
- sign up for a paid subscription through Cibo Labs: support@cibolabs.com.au

mla.com.au/afm

AFM news and updates: Sign up for MLA's e-newsletter, *The Weekly* (mla.com.au/enews), subscribe to *Feedback* magazine (mla.com.au/feedback) or follow MLA on social media.

Help with using the AFM: support@cibolabs.com.au

MLA membership support: membership@mla.com.au or 1800 023 100

MLA acknowledges the matching funds provided by the Australian Government to support the research and development detailed in this factsheet.

Learn about your responsibilities as an employer.

Providing a great workplace and managing your employees is a key part of running a successful business. People in Agriculture provides you with the latest, industry specific employment information through tools, tips and examples, wherever and whenever you need it.

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CN30 | Carbon Neutral 2030

Your questions answered

Want to know more about how the Australian red meat industry will become carbon neutral by 2030? Here are the answers to some of the frequently asked questions MLA receives from producers, industry stakeholders and the wider community.

When was the target set?

In 2017, MLA committed to support the Red Meat Advisory Council's goal to achieve net zero emissions by 2030.

Will the CN30 target restrict productivity?

No. The CN30 target and productivity are complimentary goals. While the target is based on a herd size cap (28 million cattle, 75 million sheep) the goal can accommodate herd and flock increases through increased carbon efficiency in production.

What progress has been made to date?

The red meat sector has reduced its emissions by 59.05% from 2005 baseline levels (2022).

Why is the baseline year for the target 2005?

Emissions are compared against the baseline year of 2005 as this is the year that Australia committed to a 26–28% reduction by 2030 on a 2005 baseline under the Paris Agreement.

Will all farms have to become carbon neutral?

No, the industry goal can be achieved without every individual producer becoming carbon neutral. However, it will require significant adoption of carbon efficient practices by a large majority of industry to achieve this collective goal.

Does carbon neutrality only refer to carbon? What about other greenhouse gases like methane?

The term carbon neutral encompasses the 3 key greenhouse gases, carbon dioxide (CO_2), nitrous oxide (N_2O) and methane (CH_4).

How can I lower emissions on-farm while maintaining productivity?

Focus on improving the emissions intensity of your business. Emissions intensity refers to the amount of emissions produced per kilogram of liveweight. The more efficiently we can produce meat, the better our intensity. Management decisions that improve reproduction rate, improve rate of weight gain or decrease time to turn off can all improve the emissions intensity per kilogram of liveweight of your operation, which is great for CN30 and productivity.

What carbon farming practices are eligible to earn carbon credits?

Not all methods that have a positive impact on emissions and productivity are eligible to generate carbon credits. Under the Carbon Farming Initiative, only methods approved by the Emissions Reduction Fund (ERF) and the Clean Energy Regulator are eligible to earn ACCUs. You can view approved methods online at the ERF website. A 5-minute survey via CSIRO's LOOC-C tool can also guide you on the most suitable methods for your business and region. Some of the most common project methods for Carbon Farming projects in livestock are revegetation, avoided clearing, soil carbon improvement and herd management.

What is a carbon credit?

A carbon credit represents 1 tonne of carbon dioxide equivalent abated or stored. In Australia, the financial product for carbon is an Australian Carbon Credit Unit (ACCU) which is issued by the Clean Energy Regulator through the Emissions Reduction Scheme.

What is carbon off-setting?

Carbon offsets refer to the purchase of carbon credits to compensate for emissions a business produces. Landholders and producers can generate credits through recognised carbon farming projects to sell as offsets to third parties who do not have the capacity to reduce emissions within their business - like airlines or offices. Producers may also purchase offsets to achieve a carbon neutral status for their own enterprise or product.

What is carbon in-setting?

Carbon insetting refers to credits generated by a carbon farming project which are retained or "inset" against the business's carbon baseline, to cover its own emissions. Insetting is a strategy for producers to lower or neutralise their own carbon footprint with credits they generate on-farm. It may be important to maintain market access with trade partners or participate in a low carbon or carbon neutral product line.

Where should I start?

Complete a carbon account on your own or with an independent consultant to see where your emissions are coming from on farm. The Sheep-Beef Greenhouse Gas Calculator (SB-GAF) Tool and manual are free online and can assist you to put your own farm data into the model.

I want to launch a registered carbon farming project. Who do I talk to?

MLA does not provide commercial advice about carbon development companies, but we can provide high level suggestions on what to consider. For example:

- Complete a carbon account on your own or with an independent consultant, for objective advice.
- Consider your comfort lodging a project independently.
- If you choose to have a third party (aggregator) lodge on your behalf, do your due diligence. Have any contracts reviewed by a trusted legal advisor.
- Check that the company is a signatory to the Carbon Market Institute Code of Conduct.
- Understand the implications of the project and what they mean for your property, cash flow or decision autonomy over the long term.

Carbon EDGE

A new training program for the red meat industry

Taking carbon from a concept to an action plan

Currently under development, Carbon EDGE will be a two-day training program for the red meat industry, providing participants with an understanding of the opportunities for emissions reduction and carbon storage activities in a livestock grazing business.

As a participant you will use your own information to develop an action plan for your business as you learn about the practices and technologies that could reduce your carbon footprint and improve sustainability and productivity.

Carbon EDGE will cover:

- key terminology and concepts relating to greenhouse gases (GHG) within the red meat industry
- in-depth information on the practices to reduce and sequester GHG within a livestock grazing business
- weighing up opportunities and risks associated with generating carbon credits and how they can be used to benefit livestock businesses
- understanding carbon neutrality and how it aligns to your business goals
- developing a carbon action plan that incorporates practical, achievable strategies to meet your objectives.

You will learn through group-based activities and tools, applying new information to your own context with the support of an expert deliverer. Every workshop will include case studies and examples for participants to learn from.

All participants receive a manual, a workbook/planning template and tools and resources to take home.

Who is the Carbon EDGE program for?

The program is for red meat producers who are looking to build on their understanding of carbon. The program will help participants move into a planning and action phase, identifying practices and technologies that could be incorporated into their business to benefit their bottom line and the environment. It is also suitable for advisors and other service providers looking to enhance their understanding of the current operating environment.

Pre-workshop preparation

The design of the Carbon EDGE workshops recognises that everyone will be at a different starting point when it comes to carbon. However, it is highly recommended that participants complete pre-work before attending to get the best out of the program. This includes the eLearning modules available on MLA's Toolbox and a carbon account. Your workshop deliverer will be in touch to guide you through this process.

Carbon EDGE snapshot

Region: National
Industries: Grassfed beef, sheep and goats
Audience: Producers, advisors and other industry service providers

Course structure: Two-day workshop combining training and practical sessions
Course size: 12–20 people, no more than 15 people per deliverer

Pilot workshops: Five pilot workshops will be held in 2023
Program commencement: The program will open in 2024. Workshops offered based on deliverer availability and locations.

Upcoming workshops

Workshop deliverers

The EDGEnetwork is managed by MLA and delivered by experienced service providers to provide research-based independent information for red meat producers. Through a network of accredited Carbon EDGE deliverers, workshops will be delivered across Australia.

Pilot workshops

Five pilot workshops will be delivered in 2023 across different regions of Australia. We will be seeking feedback and ideas from pilot workshop participants to make Carbon EDGE the best it can be.

You can now register an Expression of Interest to participate in these workshops (using the QR code below). Please note that availability for pilot workshops will be limited, depending on dates, locations and places. Pilot workshops will be offered at a discounted rate of $750pp.

Commencement of the program

Carbon EDGE will roll out in 2024 across Australia, delivered in partnership with industry service providers. The program will expand over time with the onboarding of new partners. Anyone who has submitted an Expression of Interest (using the QR code below) will be contacted.

More information

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Carbon EDGE has been developed by Meat & Livestock Australia with the support of Environmental Accounting Services (EAS) and Pinion Advisory.

Better your business

MEAT & LIVESTOCK AUSTRALIA

MLA offers red meat producers a range of training opportunities, resources and publications.

TRAINING OPPORTUNITIES

Profitable Grazing Systems is a group-based delivery program designed to deliver training and coaching over several months and up to a year to improve producer skills and knowledge. The aim is to achieve practice change on-farm in the areas of people, business, reproduction and genetics, value chain and feedbase.

Profitable Grazing Systems
mla.com.au/pgs

Producer Demonstration Sites are on-farm projects run by producer groups who want to demonstrate findings from known research into their local farming system. MLA calls for Producer Demonstration Site applications that will help to improve the profitability, productivity and sustainability of red meat enterprises every April.

Producer Demonstration Site
mla.com.au/pds

EDGE*network*® workshops offer practical knowledge and skills on topics such as breeding and genetics, business management, nutrition, grazing and land management. Workshops range from one to three days.

mla MEAT & LIVESTOCK AUSTRALIA EDGE NETWORK
mla.com.au/edgenetwork

BredWell FedWell are practical one-day workshops designed to teach producers the key benefits of superior genetics and feed management for improved flock and herd performance.

BredWell FedWell
mla.com.au/bredwellfedwell

RESOURCES

The toolbox, MLA's free eLearning platform, builds knowledge in the areas of animal welfare, husbandry, feedbase and genetics. Packages take between 15 to 20 minutes to complete online, allowing users to learn at their own pace.

The toolbox
elearning.mla.com.au

myMLA is a customised online dashboard that provides news, weather, events and R&D tools relevant to you, as well as a single sign-on feature for integrity systems.

my mla MEAT & LIVESTOCK AUSTRALIA
mla.com.au/aboutmymla

Seasonal hubs provide resources, tips and tools organised by season to make it easy to find relevant information to support your business decisions.

mla.com.au/seasonal-hubs

Feedbase hubs provide tips and tools on soils, pastures, legumes and weed management alongside the latest R&D to increase pasture production, quality and persistence.

mla.com.au/feedbase-hub

PUBLICATIONS

MLA's *Feedback* magazine signposts producers to practical on-farm information and showcases how MLA is investing levies in research, development and marketing activities.

mla.com.au/feedback

Keep informed about the latest red meat and livestock industry news, market information, events, research and marketing with MLA's suite of e-newsletters. Mastheads include: ***The Weekly • Integrity Matters • Goats on the Move The Quarterly Feed • Global Markets Update • The Advisor***

mla.com.au/enews

Become an MLA member today

MLA membership is **free** to levy-paying producers of grass or grainfed cattle, sheep, lambs or goats.

To become an MLA member call **1800 023 100**, visit **mla.com.au/membership** or scan the QR code.

mla.com.au/meatup