

meatup FORUM

For the latest in red meat R&D

Northam, 5 August 2022

Hear about locally relevant on-farm R&D

•

Hear from and network with leading producers

•

Gain insights into tools and programs to improve your business

•

Increase your productivity and profitability

About MLA

Meat & Livestock Australia Limited (MLA) delivers research, development and marketing services to Australia's cattle, sheep and goat producers. MLA has approximately 50,000 livestock producer members who have stakeholder entitlements in the company.



Program: Northam ‘Muresk’, 5 August 2022

Time	Session	
8.00am	Registration desk opens, tea and coffee available	
8:45am	Proceedings commence	
	Session 1: Welcome (Hall)	
8:45am	MeatUp Forum welcome Georgia Reid-Smith, MeatUp Forum Event Coordinator – WA, AgPro Management	
8:55am	MLA welcome and market update David Beatty, Group Manager– Productivity and Animal Wellbeing, Meat & Livestock Australia	
	Session 2 (Hall)	
9:25am	Productive but flexible: Profitable livestock traits Jason Trompf, Lambs Alive	
10:15am	What the commercialization of the MSA sheepmeat model means for producers Laura Garland, MSA Producer Engagement Officer, Meat & Livestock Australia	
10.40am	Morning Tea	
	Concurrent sessions	
	Session 3A - (Hall)	Session 3B - (Room 2)
11:10am	Heifer management: set ‘em up right Dr. Enoch Bergman, Swans Veterinary Services	Ewe lamb mating: Do’s, don’t, and benefits Jason Trompf, Lambs Alive
11:50am	Calving intervention: when, and what to do Dr. Enoch Bergman, Swans Veterinary Services	Determining and managing scanning to weaning loss Caroline Jacobsen, Murdoch University
12:35pm	Lunch	
	Session 4 (Hall)	
1:25pm	Proactive business and people management in mixed farming Paul O’Meehan, A. O’Meehan & Co	
2:05pm	Cost effective supplementation – when, where, how Adrian Baker, RAW Nutrition	
2:55pm	Afternoon Tea	
	Session 5 (Hall)	
3:30pm	Grazing Matcher: how to optimise feed utilisation Dan Parnell, Western Dairy, and producer James Bowie	
4:10pm	Johne’s Disease: what does it actually mean, what does it do, plus Foot and Mouth and Lumpy Skin Disease Anna Erikson and Courtenay Bombara, DPIRD	
4.50pm	Wrap up Georgia Reid-Smith, MeatUp Forum Event Coordinator– WA, AgPro Management	
5:00pm	Networking and drinks	
6.00pm	Event concludes	

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.

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Welcome

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, plus AgPro Management for WA Events) 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-farm. We thank the presenters on the program today for their involvement in MeatUp and encourage you to make the most of your time with them today.

Regional producer working group

We thank all past and present MeatUp Forum regional producer working group members from Western Australia for their contribution to MeatUp. The current working group includes:

- ◆ Jarrod Carroll, Manypeaks
- ◆ Michael Humphrey, Walebing
- ◆ Matt Nield, Augusta
- ◆ Zac Roberts, Dandaragan
- ◆ David Stade, Katanning
- ◆ Harris Thompson, Boyup Brook

Plus, Andrew Morelli, Southern Beef and Sheep Adoption Project Manager, MLA and representatives from the MeatUp Forum project management team (Natasha Searle, Pinion Advisory) and the MeatUp Forum Event Coordinator for WA, Georgia Reid-Smith, AgPro Management.

If you are interested in joining the WA MeatUp regional producer working group, please chat to a working group member, a member of the MeatUp Forum team or contact the MeatUp Forum Project Manager.

Contact

Natasha Searle, MeatUp Project Manager, Pinion Advisory | P:1300 646 746 | E: meatup@pinionadvisory.com

Visit: mla.com.au/meatup

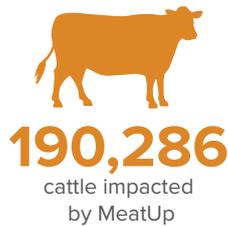
Launched in March 2021, MeatUp Forums are an opportunity for beef, sheep and goat producers to learn something new, stay up-to-date with the latest on-farm research and technologies and meet others working in the red meat industry.

Each forum is designed by producers from the local region through producer working groups to ensure topics, content and presenters are regionally relevant. MeatUp Forums demonstrate the value of implementing new practices or technologies on-farm. They also create awareness around other MLA activities, programs and projects that producers can get involved in to enable them to further build knowledge and skills.

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



2021 at a glance



"[MeatUp] is an opportunity to reassess and realign our business and say 'are we heading in the right direction? Let's get some good information and make some good decisions!'"

– Producer Gus Whyte, Broken Hill MeatUp

2 OUT OF 3 ATTENDEES
PLANNED TO MAKE CHANGES
FOLLOWING MEATUP

MLA welcome and market update



David Beatty

Group Manager – Productivity and Animal Wellbeing, Meat & Livestock Australia

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About David

David Beatty is a veterinarian with a PhD and background in agriculture research. In 2009, David joined Meat & Livestock Australia as the Live Export R&D Manager. Between 2012 and 2017 he was based in the Middle East firstly as the MLA Livestock Services Manager and then as the MLA Regional Manager for Middle East and North Africa.

Now based in Western Australia, David is the MLA Group Manager for Productivity and Animal Wellbeing. This role focuses on delivering research and development across on farm program areas including beef, sheep and goat productivity, animal health and welfare, feedbase, feedlot and live export.

Session summary

David will provide the welcome address for the 2022 MeatUp Forum, where red meat producers will hear the latest regionally relevant insights from research, development, and adoption (RD&A) programs funded by MLA. David will also discuss MLA's strategic priorities, provide a market update and discuss the MeatUp program, which has been designed by local producers through producer working groups.

Relevant tools and resources

◆ MLA membership

MLA membership is free to levy-paying producers of grass or grain fed 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 Co Marketing Program



◆ **Market update 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



◆ **Meat & Livestock Australia's 2020-21 Producer Adoption Outcomes Report**

The 2020–21 Producer Adoption Outcomes Report outlines the depth and breadth of adoption projects and programs that Meat & Livestock Australia (MLA) delivered for the 2020–21 financial year and how red meat producers benefited from their involvement in them.



◆ **Subscribe to MLA e-newsletters**

MLA newsletters to be delivered direct to your inbox at www.mla.com.au/news-and-events/enewsletters/



Productive but flexible: Profitable livestock traits



Dr Jason Trompf

Director of J.T Agri-Source Pty Ltd

Lambs Alive program founder

J.Trompf@latrobe.edu.au

About Jason

Dr Jason Trompf has a strong background in understanding the drivers and motivators of sheep and beef producers and designing programs that support and enable practice change. He undertook his PhD looking into farmer behavioral change and adoption.

Jason has contributed to the development and delivery of Lifetime Ewe Management, More Lambs More Often, Bred Well Fed Well, and the Triple P Program. Each of these programs are widely recognised for the industry leading impact they have had on changing knowledge, attitude, skills, aspirations and practice, while lifting productivity, profitability and resilience.

Jason also manages his family's 3000 composite ewe and 200 Angus cow enterprise. These self-replacing, high productivity enterprises provide Jason with a strong, practical background, and a constant reality check about the challenges facing producers on a day-to-day basis.

Session summary

On a daily basis, farmers have to juggle many factors to make big decisions. Decisions that affect not only their livelihoods, but the well-being of themselves and their families, their animals and their landscape. The complexity of this ongoing juggling act is exacerbated by our highly variable environment, but producers that have established flexible strategies in their production systems and deploy proactive tactical decision making and management can adapt most effectively.

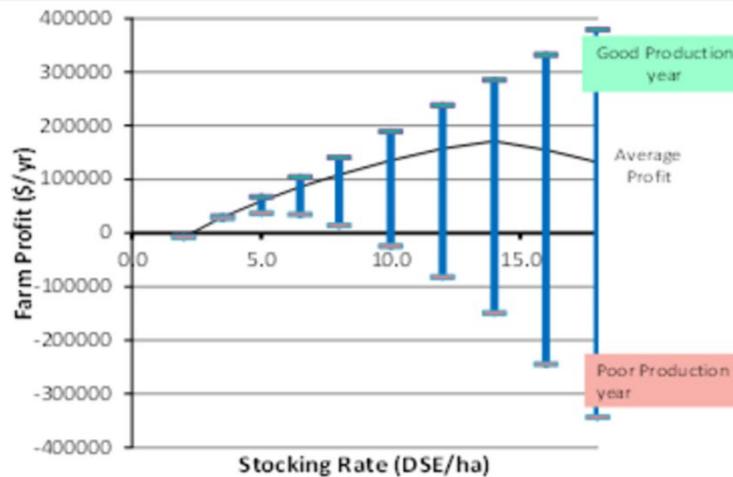
As sheep and beef producers, we are on the front line dealing with changes in the weather. Unfortunately, we can't control the weather, but we can make timely management and business decisions to control its impacts. Therefore, we need to make sure our production systems are designed to handle the variable seasons. This presentation will enable producers to better understand the impacts of climatic variability on their businesses and highlight opportunities to improve business resilience in a variable environment.

Improving the consistency of profits means you need a production system that can make money across most years, not just the good ones. This means we need to be proactive and have strategies in place that can quickly adjust to the individual circumstances of a production season. This presentation will critique the flexibility of enterprises from an enterprise structure/mix, feed demand to pasture supply, infrastructure, animal management, genotype, and business benchmarks. It will demonstrate what producers can do on farm to set up a flexible farming system to cope with variable seasons, using a strong practical focus with strategies that can be applied on farm to make a difference, aiming to bullet proof your business against varying seasons.

Know your enemy – the impact of variability on your business

Varying seasonal conditions can drastically affect farm profits, as highlighted in the graph below. For the 500mm rainfall environment, modelled as running a self-replacing Merino enterprise, profits are significantly affected by both stocking rate and varying season (in particular growing season rainfall). The need to be able to flex within the season is highlighted by the \$150,000 loss incurred in a poor production year, while maximising stocking rate at 14 DSE/ha. In reality, it is not possible to alter stocking rate to exactly match the season, however it does highlight that adjusting stocking rate in a timely manner is likely to be profitable.

Impact of season on profit



Effect of seasonal variation on profit at a range of stocking rates - blue bar indicates the variation between a good and poor production year. The average profit is indicated as the solid line.

Each enterprise needs to identify their worst enemy (seasonally) for their current productivity settings (stocking rate, time of lambing, reproduction rates and time of selling). Is your worst enemy a late autumn break or a failed spring? What is your ability to flex to cope with your worst enemy?

Adjusting your sights— setting flexible strategies for variable seasons

Eighty mixed enterprises benchmarked over five years identified what set the top performers apart from the rest. 80% of the difference between the top performers and the rest was due to their higher livestock trading profit driven by higher stocking rates, lambing percentages and higher price for surplus sheep and lambs.

What wasn't different?

1. Similar wool price and productivity

What set them apart?

1. Higher stocking rate. **+7%**
2. Higher lambing percentage, **+10%**
3. Higher price for surplus sheep. **+10%**
4. Leading to significantly higher livestock trading profit

Hitting your targets– improving the likelihood of success regardless of season

There is a series of critical practices for producers to adopt, to improve their likelihood of success regardless of season. Improving reproduction rates is a feature of flexible enterprises, allowing them to flex numbers and rebuild subsequently at faster rates. Producers must ensure they are building reproductive potential and implementing a series of practices to convert that potential into live progeny.

Key take home messages

- ◆ Ensure you are implementing key practices that improve the likelihood of success
- ◆ Review the flexibility of your enterprise settings in variable seasons
- ◆ Know your worst seasonal enemy - is it a late break or failed spring?

Relevant tools and resources

◆ Life Time Ewe Management

A 12-month course designed for producers to improve skills in managing ewes across their reproductive lifetimes. The course is delivered in small groups of five to seven sheep producers that meet six times per year with a professional facilitator. During these hands-on sessions, the group visits each participating farm and learn skills in condition scoring, pasture assessment and best practice ewe and lamb management to increase reproduction efficiency and wool production, mainly through reducing ewe and lamb mortality.



◆ The Toolbox

MLA's new eLearning platform has a collection of resources that feature tools, calculators and training courses, such as the Feed Demand Calculator. Visit <https://elearning.mla.com.au/>



◆ Lambs Alive

A training program to help lift production rates and yield more profit and better welfare for the animals and you. The focus of the coaching program is on implementing the practical applications that will have the biggest impact on your farm.



◆ Winning With Weaners

This workshop is aimed at lifting the lifetime performance of Merino ewes through the improved management of weaners. Winning With Weaners assists participants in understanding the key issues affecting weaner survival, the impact of weaning weight on the survival of weaners to first joining and guides you through developing targets for growth individual to your flock to set up your breeding ewes for lifetime performance.



◆ **Genetics Hub**

What difference can genetics make? Visit the Genetics Hub for genetics information to get you started with breeding values, putting breeding values in place and case studies about other producers and what they've gained from genetics, and how their performance of their herds or flocks have been accelerated.



◆ **MLA Feedbase Hub**

Managing pastures for optimal performance with practical resources- featuring calculators, training packages, reference guides and case studies.



◆ **Bred Well Fed Well**

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



What the commercialisation of the MSA sheepmeat model means for producers



Laura Garland

MSA Producer Engagement Officer, Meat & Livestock Australia

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About Laura

Based in Armidale, Laura started with Meat & Livestock Australia as the MSA Producer Engagement Officer in August 2018. Originally from Scone, Laura studied a Bachelor of Rural Science (Hons) at the University of New England.

Prior to working for MLA, Laura was a Livestock Extension Officer with Agriculture Victoria for five years, working across several extension projects focusing on grazing management, and beef and sheep production. During this time, she also spent a year in Canada on a work/study tour learning about grazing management and the Canadian beef industry, working on several ranches, feedlots, and research stations in Alberta.

In her current role within the MSA team, Laura's focus is at the producer end of the supply chain. Laura works with producers to utilise carcass feedback and increase the awareness and compliance to MSA specifications with the overall aim of improving the eating quality of Australia's beef and sheepmeat.

Session summary

Changing markets and evolving consumer demand present new challenges for the beef and sheep industries. In response, the industry has been investing in innovations to deliver new products and management systems to consumers. One such innovation is the Meat Standards Australia (MSA) system. This system is a Total Quality Management System, aimed at delivering an eating quality guarantee to consumers, and through this adding value to the entire supply chain.

At present, the MSA program is a well-developed and sophisticated system in the beef processing sector. The program utilises a cuts-based model which allows for the segregation and sorting of carcasses, cuts to be packed with consumer-derived eating quality outcomes (taking into account cook method and days aging), as well as comprehensive grading data and carcass feedback readily available for producers MSA graded carcasses.

Based on over 10 years of research, the MSA sheepmeat cut by cooking method model will revolutionise the sheepmeat industry by enabling processors and brand owners to extract further value across the supply chain, through eating quality segregation. The commercialisation of the MSA sheepmeat model has the potential to also incentivise and reward producers by creating opportunities to boost profitability and productivity.

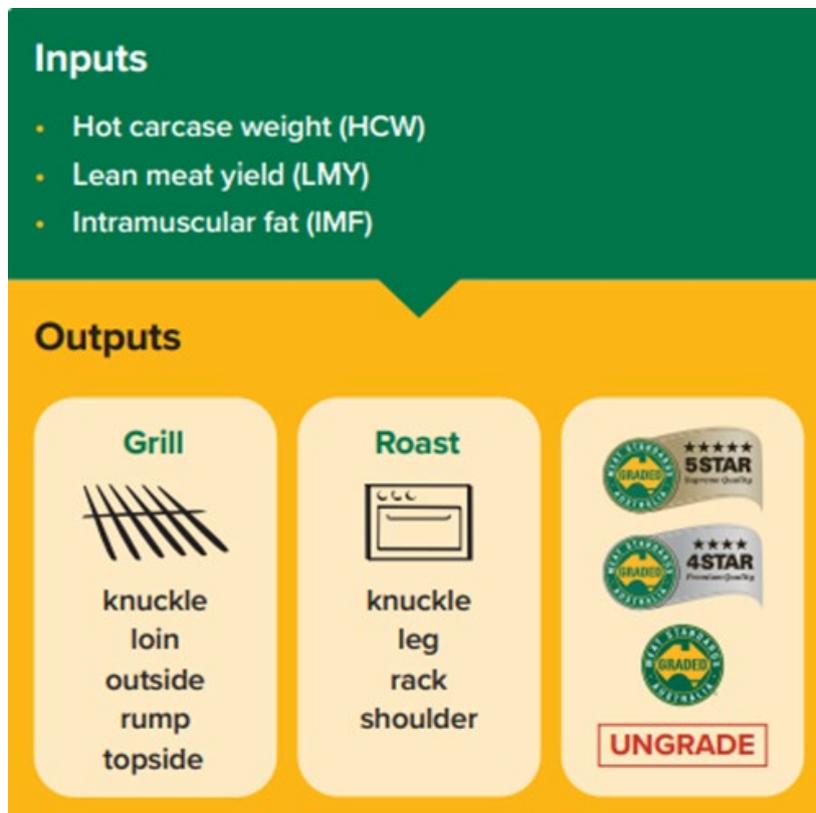
The model uses three measurements on each carcase:

- ◆ hot carcase weight,
- ◆ lean meat yield
- ◆ intramuscular fat (IMF).

The MSA model then predicts the eating quality of nine cut by cooking method outcomes (grill and roast) for each carcase.

There is further research underway which will allow additional cut by cooking methods to be utilised in future model versions, including stir-fry, slow cook, and low-n-slow barbeque.

The MSA team are conducting benchmarking activities to understand the range in eating quality in the commercial flocks across Australia. In addition, MLA is also investing in the creation of resources and further on-farm adoption activities to support producers to make on-farm changes to improve eating quality and carcase performance.



Key take home messages

- ◆ A cuts-based model for sheepmeat has been developed and is in the process of being commercialised in commercial supply chains.
- ◆ The model uses three measurements on each carcase: hot carcase weight, lean meat yield and intramuscular fat (IMF) to predict the eating quality of nine cut by cooking method outcomes (grill and roast) for each carcase.
- ◆ Eating quality in sheepmeat can be influenced by on-farm genetic and management practices. These practices can be implemented now in preparation for future opportunities and incentives for improved eating quality and whole carcase value.

Relevant tools and resources

◆ Meat the Market

With a whole supply chain focus, this package trains producers in improving lamb processing compliance and lifting meat eating quality.



◆ Livestock Data Link (LDL)

LDL is an online program that enables the timely sharing of carcass and animal disease information between processors and their producers with the aim of optimising supply chain performance



◆ MSA Meat Science Course

This course explains the scientific factors affecting the eating quality of red meat. Facilitated by Dr Graeme Martin (Murdoch University) and Dr Peter McGilchrist (University of New England) this five-day intensive is suitable for producers, lot feeders, stock agents, traders and consultants.



◆ Meat Standards Australia (MSA)

MSA was developed by the Australian red meat industry to improve the consistency of eating quality of beef and sheepmeat.



◆ MLA Genetics Hub

The one-stop shop for resources to help build understanding of breeding values, and applying genetic tools to improve their flock.



Heifer management: How to set 'em up right from the start



Dr. Enoch Bergman DVM

Director and Veterinarian, Swans Veterinary Services

enoch@swansvet.com

About Enoch

Enoch Bergman is a practicing veterinarian and part owner of Swans Veterinary Services located in Esperance WA. Growing up in rural Eastern Colorado, he left the town of Wild Horse (population 12) to secure a veterinary degree, hoping to help make his friends and family more profitable beef producers. After graduating from Colorado State University in 2001, he struck out on his own, primarily working for the lot feeding and sale yard sector. In 2003 he went back to university to work with students and to complete a Food Animal Medicine Internship, prior to emigrating to Australia. He had intended to only visit Australia for a year, but quickly fell in love with his new clientele, their cows, the town and a gorgeous young physio.

Enoch almost exclusively provides bovine veterinary services, consulting to a range of beef producers, ranging from cow/calf enterprises to lot feeders, as well as to other veterinarians. He has spoken broadly throughout Australia, as well as overseas, on a range of bovine topics but is possibly best known for his work pertaining to Bovine Pestivirus, also known as Bovine Viral Diarrhea, or BVD. He pioneered ear notch testing in Australia to diagnose carrier animals, or Persistently Infected (PI) animals in 2006. Enoch is also well known for his 'Building a Better Cow' series, which focuses on the proactive management of heifers to improve lifetime breeding success, including strategies to improve reproductive efficiency through the integration of Fixed Time Artificial Insemination (FTAI) in their breeding programs.

In 2014, and again in 2015, Enoch was elected as the President of the Australian Cattle Veterinarians (ACV), a special interest group of the Australian Veterinary Association (AVA). He is a passionate advocate for the Australian beef sector and a vocal proponent of the veterinary industry's role in supporting it.

Session summary

Building Better Cows

Beef cows have a job to do. Starting work as a two-year-old, they need to raise one calf per year. Some do it better than others, and there will be a range of performances in any herd. The key to developing a good cow workforce is to focus on engaging good heifers and setting them up right. A producer's focus should be on their junior workforce-resources allocated to young stock will pay dividends for the remainder of those animals' lives.

Our target animal: A three-year-old young cow, in good body condition, having already reared one calf, delivering a healthy newborn calf within the first month of the calving season.

How do we get there?

Much like we prepare a paddock well before harvest, we must carefully manage our young stock to increase the likelihood of a positive outcome. Heifers are expensive, wasting their time and our money is bad business.

The keys to success are relatively straight forward. Heifers should:

- ◆ Attempt to achieve 65% of their mature weight by joining.
- ◆ Be on a rising plane of nutrition through joining.
- ◆ Be joined so that they finish calving early in the calving season.
- ◆ Be in optimum body condition at calving (score 3).
- ◆ Attempt to achieve 85% of their mature weight by calving.
- ◆ Be closely supervised through calving and early intervention provided.

Reproductive vaccines

At marking and weaning, heifer calves should be set up with an appropriate vaccination, deworming, and micromineral program. Vaccines are designed to reduce the incidence and severity of disease should an animal become exposed to the agent for which the vaccine is designed. The more robust an animal's immune response to a vaccination, the better the immunity conferred. Colostrum consumed in calfhood protects neonatal calves but can also reduce an animal's immune response to vaccination. Until an animal is six months old, some degree of 'maternal interference' can be expected in vaccinated animals. Stress also diminishes an animal's immune response. Vaccines should be given pragmatically, balancing risk and effective response.

Clostridial vaccines are important to reduce the incidence of gastrointestinal disease, tetanus, and pulpy kidney. As risk is more common in young animals, it is appropriate to vaccinate at marking and weaning, with most animals receiving a booster at feedlot entry. Retained females should receive an annual booster, either on its own as a 5in1, or with Lepto in a 7in1. Should heifer calves be upgraded to a 7in1 program, remember that two doses of 7in1 are required for effective immunity.

Pinkeye vaccines are not widely used within the Australian beef and dairy industry. If challenge with pinkeye is either routine or severe enough on an annual basis, perhaps vaccinating may render a return. Pilligard is the only registered vaccine and is best given one month prior to challenge, such as prior to being grazed on stubbles with green pick beneath in the peak of fly season.

Leptosporosis vaccines are important, not only for reproductive efficiency, but also for occupational health and safety. Leptosporosis is a zoonotic, meaning it can be shed from beast to man. In relatively wet coastal areas, I usually advocate a 5in1 program to young stock, followed by 7in1 to replacement heifers prior to joining and annual boosters. For producers raising animals in more arid environments, I advocate blood testing to assess evidence of historical exposure and vaccinating accordingly.

Pestivirus (Bovine Viral Diarrhea Virus) is considered the second most costly disease affecting the Australian beef

industry. Pestivirus is a unique virus, spread almost exclusively by animals which were 'Persistently Infected' (PI) with the virus in utero when their dam was exposed to the virus. These PI animals can be diagnosed with simple and accurate diagnostic tests and removed and susceptible breeders can be protected by vaccination. I advocate blood testing a small proportion of each year's group of replacement heifers three months prior to joining. If they are found to be immune, they are ear notch tested and all "PI" animals removed. If they are antibody negative at serology, the entire group is vaccinated instead. In this way, each new group of heifers will be PI free and immune, and the cycle can be stopped.

Vibriosis is a true venereal disease, sporadic in its incidence throughout Australia. A solid bull vaccination strategy will manage the disease across the rest of the breeding herd. Under extensive management, with micky bulls, vaccinating young females as well may be warranted.

Virgin bulls often succumb to severe balanoposthitis (inflammation of the prepuce and penis) after exposure to Bovine Herpesvirus. IBR vaccines confer immunity to Bovine Herpes. I strongly advocate all new bulls, at a minimum, have an effective IBR vaccine prior to joining.

Appropriate and timely vaccinations programs for Leptospirosis, Pestivirus and Clostridals may require annual boosters going forward. Prior to joining is an excellent time and provides an opportunity to both deworm or to supplement with appropriate microminerals.

Heifer growth pattern

The goal is to get heifers to 65% of their mature weight prior to joining, they should then continue to grow to reach 85% of their mature weight by the time they calve. To achieve these targets, heifers may need to be managed separately from the rest of the herd. Don't think of this as a cost, it is an investment!

Heifer replacements need to continue growing steadily. Growing in a stop-start pattern predisposes a heifer to be small framed and obese, impairing udder development, impacting conception rates, and reducing the likelihood of a smooth delivery. After weighing them and calculating their target mating weight, one can easily program their appropriate rate of gain. If the replacement's weights are widely distributed, splitting them into two mobs may simplify effective management. Protein supplementation can play an important role in heifer development. Low protein summer paddocks may stunt musculoskeletal growth even though the heifers may still be gaining weight due to sufficient carbohydrate intake. The disastrous end result is a dumpy, small-framed fat little heifer that will be prone to having a hard time calving. We want heifers to maximise their frame score as dictated by their genetics, not limited by their nutritional plane. Even so, some heifers are genetically predisposed to have small pelvic apertures. Pelvimetry, the science of measuring a heifer's internal pelvic diameter, is one option to reduce the number of smaller framed heifers. By removing the smallest 10 to 15 percent of the heifers a producer can reduce their dystocia rate directly and improve their herd genetics at the same time.

Joining strategies

Perfectly managed beef heifers generally take from 20 to 30 days longer than cows to begin cycling again after they calve. For this reason, it is a sound management practice to breed the heifers in advance of the main cow herd. Not only does this allow the heifers more time to return to estrus, but it will improve the consistency of the calf crop at weaning, providing the calves from the heifers a few weeks more of growth than their siblings from older cow mobs.

Another sound management practice utilised as a selection tool and to shorten the labour-intensive heifer calving

interval is to short join the heifers. Heifers are joined for two to three cycles, which places selection pressure on the earlier maturing heifers, removing late calving heifers which often end up empty as three-year-olds. If all of the heifers are properly developed and cycling then we can expect around 84% of them to conceive in a six-week joining.

Short and early joining heifers can be a risky procedure, especially if there are flaws within a heifer development program. An additional strategy with a host of additional benefits is to integrate a Fixed Time AI program into your heifer mating program. By artificially inseminating your heifers on the first day of the joining season, you will further improve your calving distribution, be able to apply proven superior genetics to your newest generation of breeders, simplify your calving season and provide yourself an insurance policy against catastrophic results should your bulls fail to work.

Calving

Getting our heifers in calf early in the joining period is half the battle. The joined heifers still need extra attention to assure they continue to grow musculoskeletally and avoid becoming obese up until calving. Once they begin calving, appropriate dystocia management, focusing on early intervention is paramount to success. Heifers who suffer calving troubles take even longer to begin cycling again and suffer lower subsequent conception rates.

Let's rock

A three-year-old young cow graduates when she calves. She has spent the last three years in the classroom, learning to eat roughage, raise calves, and work for us. Her final grade is based upon when she calves. If she calves early in the season, she will likely go on to be a highly productive cow, annually weaning a heavier calf as her calves are statistically more likely to be older. In traditional fixed mating programs, three-year-old animals have the highest proportion which fail to calve and many that do calve, calve the latest. An empty three-year-old is a tragedy. Let's stop blaming her, it is our job to help her to graduate at the top of her class. Now get to work!

Key take home messages

- ◆ Invest in your heifers early. Manage from the start to achieve their potential lifetime productivity.
- ◆ Three-year-olds are a challenge- but often it's our fault, not theirs!
- ◆ Vaccine programs need to be planned and stuck to

Relevant tools and resources

◆ Building Better Breeders

Building Better Breeders covers the A-Z of beef breeding in southern and temperate zones while supporting producers to introduce and utilise eID in their operation, which takes producers through every step to improve the performance of their cattle enterprise.



◆ **Heifers for Profit**

This package develops skills and confidence in managing heifer nutrition to improve animal welfare, increase future reproductive success, optimise stocking rates, and increase whole farm profitability.



◆ **MLA Feedbase Hub**

Managing pastures for optimal performance with practical resources- featuring calculators, training packages, reference guides and case studies.



◆ **Reproductive health and management practices for beef heifers**

This Producer Demonstration Site (PDS) is designed to optimise the reproductive potential of heifers through to second calving, and improve cattle herd health, welfare, productivity and profitability.



◆ **More Beef From Pastures (MBfP)**

The MBfP program aims to achieve a sustainable (economic and environmental) increase in kilograms of beef produced per hectare through optimal management of the feedbase. An online producers manual is available online. Each module provides tools and information to enable southern beef producers to increase productivity and profit while minimising risk.



Calving intervention: when, and what to do



Dr. Enoch Bergman DVM

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Session summary

We all know that reproduction is the key driver of beef and dairy economics. Just like getting cows in calf, diagnosing bludgers, and managing threats to the maintenance of pregnancy to term, ensuring calves hit the ground with minimum stress, ingest plenty of good quality colostrum, and get on to their chosen routine food source without drama is paramount to seeing the reproductive equation carried through. Dystocia has been shown to account for almost half of perinatal calf losses – no surprise to most veterinarians. Heifers requiring intervention have demonstrated a 15.9% reduction in subsequent conception rates, a significant flow-on cost. Lastly, calving handled poorly can have a huge psychological effect upon producers, and when we are forced to provide late intervention, can have similar effects upon vets.

Training producers to recognise dystocia, to intervene in a timely fashion, to improve their likelihood of successful intervention, to train them to recognise when they need our help, and lastly to get us there in time so that we can do our job with the odds stacked more in our favour is the name of the game. Getting a live calf on the ground isn't the true definition of success. Getting a live unstressed calf on the ground from an unstressed dam is our ultimate goal. While there are many proactive strategies to managing dystocia, this presentation is about advising producers to intervene appropriately and timely.

Calving! The best time of year! Nothing beats watching calves whipping around, tails held high like safety antennas on four-wheeled motor bikes. I reckon we all love seeing the little fellas cavorting in the front paddock, especially if we AI'd their mums, diagnosed their presence rectally, or helped them to enter this world. Calving season is, in effect, the beef and dairy production system's harvest. Just like the grain game, timing, know-how, appropriate gear, and professional assistance improve our client's bottom line. When it comes to assisting animals during calving, the key is appropriately timed intervention, as tired heifers aren't much help at expelling calves. Recognising impending parturition and lending assistance when needed is perhaps the most important job of any producer.

I try to educate my clients about the three stages of parturition. Stage one beginning with the initiation of labour and ending when the cervix is fully dilated and the amniotic sac becomes visible. Stage two lasts from that point until the calf hits the ground. Lastly stage three begins at delivery and ends when the placenta is passed. Understanding the three stages, when to intervene, and giving them the incentive to intervene can make a world of difference. I reassure producers that they aren't disrupting nature's plan as long as they adhere to a few simple rules.

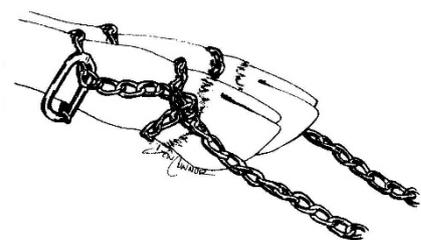
As an animal enters stage one the heifer will usually begin 'nesting', hunting for a spot to lie down, separating herself from the remainder of the mob. She will often appear somewhat uncomfortable, shifting her weight, arching her back, or wringing her tail. This discomfort is associated with uterine contractions, progressing from every 15 minutes to every 3 minutes throughout stage one. Simultaneous to the contraction of the uterine muscle fibres, the cervix dilates, externally first, normally becoming fully dilated by the beginning of state two. Stage one should be considered prolonged and requiring intervention if it lasts longer than eight hours. Progression to stage two requires the head or a leg of the calf to enter the cervix, to initiate complete cervical dilatation and increased strength and frequency of uterine contractions, ie. the Ferguson reflex. I try to get my producers to make a note of animals, including multiparous cows that have been walking the fences, mildly straining, or packing their tails. If those animals have not calved within eight hours, I advise my clients to bring her to the yards and perform a vaginal examination. She may be carrying a breech calf that has failed to enter the cervix and stimulate the Ferguson reflex. If left alone, the calf will die, and a few days later the cow or heifer may suffer the same fate.

Stage two begins after the 'bag' has broken. By rights, the heifer or cow should have the calf delivered within two hours and make visible progress every half hour. If either of these criteria are not met, I advise producers to bring the cow or heifer into the yards and perform a vaginal examination. Any animal with an abnormal presentation, position, or posture ie. leg back, head back, reverse presentation, etc. should be examined immediately. Calves with swollen heads and tongues or green or yellow staining should be examined immediately. Swelling indicates prolonged time spent in the birth canal, staining of foetal fluids and the skin of the calf is from meconium, or calf faeces,



which often indicates a stressed calf. If foetal parts are noted to glide in and out of the heifer's vulva or the heifer vocalises with each contraction, the cervix and soft tissue are likely still in the process of dilatation. Such a heifer has probably not been trying long. If that heifer does not make progress within half an hour assistance should be rendered. Alternatively, if the calf's foetal parts fail to move with each push, the calf is probably jammed up against the pelvis and is too big for natural delivery. If the foetal parts do not move with each contraction I advise my clients to intervene immediately. Oversize calves often also present with crossed forelimbs or with the soles of their forelegs rotated so that the 'palms' are together. Assessing the likelihood of an oversize calf from hoof size and limb posture and intervening immediately may be the key to success. A quick useful check when performing a vaginal exam to assist in determining whether or not you will be able to deliver the calf is to see if you can get your hand reasonably comfortably all of the way around the calf's head. Most malpresentations are associated with foetal oversize as well, as the calf may have been trying different postures to negotiate their exit. Once corrected, we may still have a hard pull or even caesarean on our hands.

Most dystocias present normally, meaning that the calf has presented headfirst with all appropriate limbs postured appropriately, however the heifer's pelvis is too small in proportion to the size of the calf. If the calf is in a normal position but oversized, the first step is to work out if it can be pulled without injuring the calf or the heifer. I, and most vets, typically use long stainless steel calving chains, though some vets or producers use ropes or straps— I try to get producers using calf chains, as

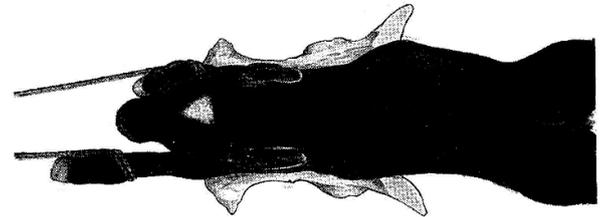


In North America, the most common method of applying obstetric chains on a bovine fetus is to place the loop of the chain above the fetlock joint and a half-hitch around the pastern. Traction is applied to the dorsal aspect of the limb. (Original art by Mr. Don Conner, College of Veterinary Medicine, University of Missouri.)

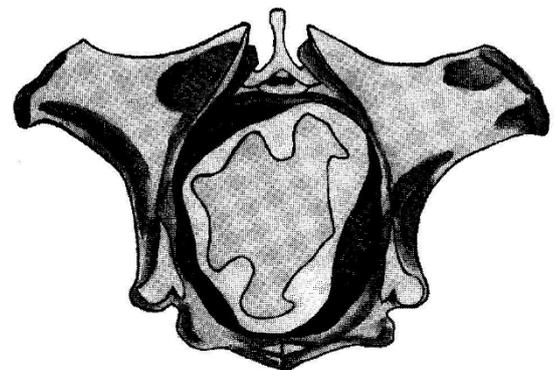
they are easily disinfected between calves. I advocate long chains so that producers can place one loop well above the fetlock in the diastema of the metacarpus/tarsus, followed by a half hitch placed just below the dewclaws, with the chain located dorsally. Surprisingly this is apparently the safest way to apply chains for traction. Most traction associated fractures result due to the loop being placed near the distal growth plate of the metacarpus/tarsus resulting in a physical fracture.

The force of two men is all that should be needed to deliver an anteriorly presented calf. I get producers to manually apply traction to each foreleg, using the strength of one man per leg, one after the other to walk the shoulders through the pelvis. They will know when they have pulled one leg sufficiently when each fetlock is about one hands breadth beyond the vulva.

Maintaining firm traction on the first leg, traction is applied forcefully to attempt to clear the second shoulder far enough to have both fetlocks a hands breadth beyond the vulva. If this can be achieved, then the calf should be deliverable. It is very important to walk the shoulders through the pelvis in this manner. If traction is applied to both legs simultaneously the shoulders may wedge in the heifer's pelvis and the calf or heifer may be unnecessarily injured. If the force of two average sized men can't simultaneously exteriorise both fetlocks beyond the vulva, a caesarean for live calves and a fetotomy for dead calves are the best options in my opinion. Once both fetlocks have been advanced a hand's breadth beyond the vulva, simultaneous pulling can commence. Producers can use a calf jack from this point forward as long as they use it properly, applying traction when the cow is pushing. The head is often the next big obstacle – if the vulva is very small, some vets perform an episiotomy to prevent uncontrolled tearing of the dorsal vulva and perineum. A surgical wound is easier to stitch! The incision should be placed at either the 2 or 10 o'clock position. An epidural is not required initially, as the vulva is fairly desensitised during parturition, but lignocaine/epidural is useful when stitching after the calf is delivered.



If it is shaping up as a hard pull, once you have pulled the calf's head through the vulva you should begin rotating the calf. If using a calf jack, pressure will need to be temporarily released to disconnect one leg to be able to rotate the calf as they extract it. The widest and incompressible portion of the calf's body is across the hips. The widest aperture of a cow's pelvis is on the diagonal. If you roll the calf's body 90 degrees, typically the pelvis will roll the appropriate 45 degrees to facilitate delivery. It is the calf's femoral greater trochanters which are responsible for the majority of calving paralysis cases, by rolling the calf you can minimise this risk. The calf rolls much easier if it is gradually rolled while it is being extracted. Attempting to roll the calf after the pelvis of the calf and heifer are bound is futile. If I come across a hip-locked live calf I try to repel the calf so as to rotate it properly before applying traction. Don't be afraid to allow the calf to catch their breath once the thorax is clear of the cows vulva, some stressed calves expire due to inability to catch a breath while undergoing prolonged traction. If both fetlocks of both forelimbs had been spontaneously extended a hands breadth beyond the vulva by manual traction and the calf was successfully rotated while being extracted to prevent hip lock, the delivery should finish successfully with minimal trauma to the calf or dam.



Calves that present backwards also benefit from rotation. If the calf is already wedged in the vaginal canal, repelling the calf may be necessary, after which the hind limbs can be crossed and whilst twisting and simultaneously pushing

the calf back and forth the pelvis of the calf can be rotated in relation to the dam's pelvis. Once the calf has been rotated, simultaneous traction should be applied to both hind limbs, again with the force of two strong men. If the hocks of the calf cannot be exteriorised a hands breadth beyond the vulva then a safe forced extraction is not likely and a caesarean should be performed on live calves or a fetotomy attempted on dead calves.

When should we perform a caesarean, vs fetotomy? We can be skilled at both procedures. I remove all dead fetuses via fetotomy, unless there is no room. Withdrawal reflex, suckling reflex, blink reflex, and anal tone are good signs of life. Regarding the withdrawal reflex, stressed, near death, calves will sometimes respond vigorously to stimulation, so I try not to be too optimistic about the impending outcome when they are alive. Regarding anal tone, be sure you have found the top hole when checking heifer calves-a flaccid foetal vulva does not indicate a dead foetus.

Back to the start: As cows and heifers approach their calving date their udders fill and the sacro-sciatic ligaments which support their vulvas relax. Heifers are especially easy to pick out as they bag up and get springy. If worried about a calving train wreck, a weekly sorting off of the "heavies" and keeping them close at hand can sometimes help them tremendously.

When should producers ring us? I suggest when heifers haven't made any progress after working away for half an hour, or sooner if they recognise that they are in over their head. If they have intervened early enough and haven't overstressed the calf or heifer, the calf can survive for four to six hours until we can arrive. But the more we can get producers to intervene in a timely fashion, the more likely they are to seek our intervention in a timely fashion and the more likely we are to drive back to the surgery with a smile on our face. You have worked all year to get cows to this point, lets help get the calf harvest done!

Key take home messages

- ◆ The aim isn't just to get the calf out, it's to get a live unstressed calf on the ground, from an unstressed dam.
- ◆ Intervention needs to be timely. First check is in stage one- if after eight hours of 'nesting' there is no sign of a calf. In stage two, after the 'bag' has broken, the calf should be delivered within two hours.
- ◆ Producers are advised to call a vet if they haven't made progress within 30 minutes of intervening.
- ◆ Parting tip: Feed heifers hay daily just before sunset, started a couple of weeks before and continue throughout calving season. It will stimulate most of the calves to be born during daylight hours. Try it!

Relevant tools and resources

◆ Building Better Breeders

Building Better Breeders covers the A-Z of beef breeding in southern and temperate zones while supporting producers to introduce and utilise eID in their operation, which takes producers through every step to improve the performance of their cattle enterprise.



Ewe lamb mating: do's don'ts and benefits



Jason Trompf

Lambs Alive program founder

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Session summary

Mating ewes to lamb at 12 to 15 months is an effective option to rapidly build ewe numbers and increase lamb supply. However, the reproductive performance of ewe lambs is much lower than that achieved by mature ewes and is highly variable. This variation in performance and lack of information on joining ewe lambs has contributed to relatively poor adoption of the practice.

It is estimated that 30% of maternal and 5% of Merino sheep producers are currently joining ewe lambs. 'More lambs from ewe lambs' is a current MLA project that aims to significantly increase the number of ewe lambs being mated and their reproductive performance by further developing and extending best practice to deliver reproductive success in ewe lambs.

This presentation will cover critical factors that influence the success of joining ewe lambs, focusing on pre-joining and joining strategies to build potential reproductive rate. It will discuss the main challenge with ewe lambs – of converting that potential into live lambs and setting up ewes lambs for their subsequent joining as hoggets.

Should you or should you not mate ewe lambs?

The decision to mate ewe lambs or not is an important one. Each producer must weigh up the potential advantages and disadvantages for their own system before deciding whether to join ewe lambs.

Table 1 below summarises the pros and cons for mating ewe lambs. The main factor for producers to contemplate is that the in-lamb ewe lamb becomes a priority stock class. Feeding levels must not only meet the maintenance and live weight gain requirements of the hogget, but also the needs of the developing foetus and mammary glands.

In the last trimester of pregnancy onwards, ewe lambs require more than 20 MJ ME/day compared to 12-14 MJ ME/day if they were dry. Pregnancy is the period when producers must have appropriate management strategies in place to ensure maximum performance of the ewe lamb and her offspring. This is all the way through joining, pregnancy, weaning and beyond, to ensure the young mother is well set up for subsequent breeding as a hogget. Also mating ewe lambs shouldn't be contemplated if the current reproductive performance of your adult, and in particular 2-year-old maiden ewes still has significant room to improve. Optimise that before mating ewe lambs.

Table 1. Potential advantages and disadvantages of mating ewe lambs

Potential advantages	Potential disadvantages
<ul style="list-style-type: none"> • The production of a lamb within the first year of ewe’s life. • More efficient use of feed in spring. • More lambs produced on farm in a year. • Higher profit depending on costs and returns and ewe lamb performance. • An early selection/screening tool for ewe replacements. • More progeny born on farm which can increase selection pressure if replacements are selected from those born from ewe lambs. • A potential reduction in the generation interval if progeny born to ewe lambs are selected as replacements. • An increase in ewe lifetime reproductive performance. • Improves ability of farm to flex with varying seasonal conditions - don’t have to join every year, can rebuild quicker after periods of drought or fire. • By preparing ewe lambs for mating, it lifts the sale weight of dry ewe lambs. • A potential reduction in lifetime greenhouse gas emissions per unit of product produced if lifetime productivity is increased. 	<ul style="list-style-type: none"> • Often low and variable reproductive performance of ewe lambs. • Increased feed requirements during the ewe lambs first year of life, especially during their first winter. • The need for ewe lambs to achieve live weight targets at 7-8 months of age, adding more pressure to farm system during the summer/autumn period. • If the ewe lamb experiences ‘hardship’ in her first pregnancy and lactation, or is poorly managed, there is the potential for reduced two-year-old live weight and reproductive performance. • Progeny born to ewe lambs have lower survival rates and weaning weights. • Ewe lambs breeding is often associated with extra costs – such as the requirement for more rams and vasectomised (teaser) rams. • Mating ewe lambs lifts their winter feed requirements, which may require less adult ewes to be run (big trade-off). • The potential for a higher death rate in lambing ewe lambs. • Increased workload when mating and lambing ewe lambs, which may clash with already busy periods of time.

Factors influencing the success of mating ewe lambs

This presentation will outline the many factors impacting the success of mating ewe lambs and ultimately, pregnancy scanning rates achieved (fetuses per ewe lamb mated). The factors include:

- ◆ Weight at joining (keeping multiples)
- ◆ Condition score at joining
- ◆ Weight change during joining
- ◆ Age at joining
- ◆ Genetics- Yearling NLW, growth/age of puberty, body wrinkle, wool cut, carcase merit
- ◆ Seasonality
- ◆ Teasers and ram joining rates

The ultimate measure of success is more live lambs from ewe lambs

The ultimate success from mating ewe lambs is the number of live lambs weaned to ewe lambs mated, not pregnancy scanning rates! Yes, building reproductive potential (fetuses per ewe lamb mated) is important because if you don't start high you can't end high, BUT lamb survival out of ewe lambs is the biggest challenge, with research indicating only two-thirds of lambs conceived survive to lamb marking. This presentation will outline key ways to lift lamb survival from ewe lambs.

Key take home messages

- ◆ The ultimate success from mating ewe lambs is the number of live lambs weaned to ewe lambs mated, not pregnancy scanning rates – you must set and convert potential!
- ◆ Producers must proactively manage the growth trajectory of ewe lambs through first 18 months of life, over four critical stages– from their weaning to joining, through joining, through pregnancy and then lactation/recovery to second mating.
- ◆ Thoroughly evaluate the pros and cons of mating ewe lambs - its suitability for your genotype, production system and labor availability (you can't do it half baked!)

Relevant tools and resources

◆ **Winning With Weaners**

This workshop is aimed at lifting the lifetime performance of Merino ewes through the improved management of weaners. Winning With Weaners assists participants in understanding the key issues affecting weaner survival, the impact of weaning weight on the survival of weaners to first joining and guides you through developing targets for growth individual to your flock to set up your breeding ewes for lifetime performance.



◆ **Picking performer ewes**

This practical workshop is aimed at lifting the lifetime performance from Merino ewes by recognising and total lifetime productivity and value of Merino ewes (fleece, meat and surplus stock). Step through sessions relating to the whole reproductive cycle and focus on understanding ewe lifetime performance and the concept of 'passengers vs. performers'; the importance of undertaking the three key performance practices of scanning, condition scoring and wet and drying at marking; turning potential into profit by lambing and weaning well; and strategies for success - mapping it all out in a management calendar.



◆ **Lifetime Maternals**

Improved guidelines for managing non-merino ewes.



Determining and managing scanning to weaning loss



Caroline Jacobsen

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About Caroline

Caroline Jacobsen has worked in private veterinary practices in Western Australia and the United Kingdom, with 20 years of experience in research focused on sheep health and production. She teaches animal nutrition, livestock health and production to veterinary and animal science students at Murdoch University and is a member of the WA Livestock Research Council.

Session summary

- Marking rate is typically lower in maiden ewes compared to mature ewes across most breeds and production systems.
- Poorer marking rate in maiden ewes is related to both poorer reproductive (scanning) rate and poorer lamb survival.
- Reproductive (scanning) rate and lamb survival is highly variable, with maiden ewe performance below industry targets for most sheep enterprises.
- Both the amount and causes of losses occurring during pregnancy and lambing varies widely.
- Investigation of disappointing marking rates can differentiate losses occurring between joining and early pregnancy (up to scanning), during pregnancy and between lambing and marking. Understanding the timing of losses on your farm allows you to prioritise actions that can improve ewe reproductive performance.
- Ewe lambs have a more variable reproductive rate and lamb survival outcomes compared to maiden hogget ewes. Ewe lambs will probably need different strategies to adult ewes to improve reproductive rate and lamb survival.
- Losses after scanning occur at or soon after birth. However, losses occurring during pregnancy (abortion) are an important contributor to reproductive performance in some maiden ewe flocks, and especially ewe lamb flocks.
- Identifying flocks where abortion is occurring is challenging and often goes undetected. Strategies are available to assess lamb losses occurring in pregnancy for flocks with disappointing and unexplained lamb survival.
- The DPIRD Abortion Surveillance scheme provides subsidised testing for investigation of abortions and

stillbirths. Veterinary investigation with laboratory testing provides important information on what diseases are probably causing losses, and importantly which diseases are not present in your flock. Any aborted lambs and/or the membranes (placenta) can be collected into a clean sealed plastic bag and kept cool until you have had a chance to discuss with your local vet or DPIRD veterinary office.

- The most common causes of abortion in WA sheep include bacterial infections (Chlamydia, Campylobacter and Listeria) and parasite infections (Toxoplasma).

Key take home messages

- ◆ There is scope to improve statewide scanning to weaning survival - but first you need to measure it!
- ◆ Utilise DPIRD subsidised testing if suspect problems - this is under utilised!

Relevant tools and resources

◆ Wean More Lambs: Making More From Sheep

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



◆ Lifting Lamb Survival

Combines practical group workshops with on-farm one-on-one coaching to develop strategic lambing plans.

The Lifting Lamb Survival PGS gives producers the skills to:

- develop and implement management practices to increase lamb survival and reduce ewe mortality
- understand the effects of mob size, nutrition, animal health and genetics on lamb survival
- understand the causes of lamb mortality
- use of scanning information to make informed management decisions

Join a small group of like-minded producers who want to lift lamb survival rates and increase production.



◆ Winning With Weaners

This workshop is aimed at lifting the lifetime performance of Merino ewes through the improved management of weaners. Winning With Weaners assists participants in understanding the key issues affecting weaner survival, the impact of weaning weight on the survival of weaners to first joining and guides you through developing targets for growth individual to your flock to set up your breeding ewes for lifetime



Proactive business and people management in mixed farming



Paul O'Meehan

A O'Meehan and Co

aomeehan@bigpond.com

About Paul

Paul O'Meehan is a farmer with a motorbike addiction, freshly back from a trip to the desert. A Borden boy, he came home after school to work with his father and their one workman and has built up the business in the many years since. He's proud to now have a feedlot capacity of 5000 head and their own brand, Stirling Ranges Beef (formerly Butterfield Beef) and employs up to 13 people in the busy seasons.

He would like to add that "Twitter has dubbed him in so to speak" after many have seen his proactive, hands-on approach to managing a large number of staff over seeding.

Session summary

Paul will be focusing on culture in the workplace, and how to manage scaling up a family farm. From a father and son set up, to taking more of a 'manager' role, Paul is outlining his family's journey thorough upscaling and making sure you're still 'in the trenches' and not just stuck in a "HR or office type role and still get to jump on the tractor".

What is taken away from this presentation is personal to you and your business, as although many aspects are applicable to all farming businesses "Not one size fits all".

Paul will address what he identifies as three key aspects of managing a farming business as it grows:

1. Vision

Vision should be created with the involvement of the whole workforce, creating ownership by the whole team.

2. Values

Values are an internal reference for what is good or bad, desirable or undesirable in ourselves and others. Values are moral principles, so significant they drive our behaviours and our interactions with others and the world, and are just as important in the workplace as they are personally.

3. HR

HR is a critical part of our business. We believe establishing a well-functioning team is vital to the execution of a farming enterprise, so we create several opportunities throughout the year for our team to have input and receive understanding of the farm program.

Key take home messages

There are 3 key aspects to managing people, and managing your business as it grows:

1. Vision
2. Values
3. HR

Relevant tools and resources

◆ The Toolbox

MLA's new eLearning platform has a collection of resources that feature tools, calculators and training courses, such as People and Business. Visit <https://elearning.mla.com.au/>



◆ People in Ag

People in Agriculture is an initiative that provides all the latest information about working in the industry. The easy to use website features information on employment law, news, career management and professional practice. It is a free resource built for all employees and employers within the Agricultural industry



◆ Lead with Certainty (PGS)

Participants develop a better understanding of themselves and their teams, whilst learning more effective ways of creating a positive team culture through planning, goal setting and communication.



Cost effective supplementation – when where and how



Dr Adrian Baker

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About Adrian

Adrian is a ruminant livestock veterinary consultant. He has specific interests in animal nutrition, production, health and preventive medicine. A long connection with sheep and cattle began with an up-bringing in north-west NSW and continued through experience in rural veterinary practices in Australia and production systems in the Middle East and WA. Continuing to consult to industry and primary producers and spending time on livestock vessels keeps him off the streets.

Session summary

The ‘what, when, why and how’ of mineral supplementation continues to be a bit of a minefield for many livestock producers to negotiate. There are various reasons why adoption of commercially sound programs might fail to occur including difficulties interpreting conflicting information from scientific and commercial sources.

This presentation will offer insight into reasons to re-evaluate the importance of mineral nutrition in the evolving landscape of ruminant production. It will also aid decision making regarding mineral supplementation.

The focus will be on helping to understand the principles of devising a supplementation program to fit an individual enterprise. As I will be presenting candidly and answering audience questions, you’ll have to write good notes rather than rely on my session summary!

Key take home messages

- ◆ Nutrient deficiencies rob performance long before obvious clinical signs
- ◆ Have a plan that fits available resources
- ◆ Make sure the plan is cost-effective

Relevant tools and resources

◆ Nutrition EDGE

Nutrition EDGE is a three-day workshop providing a comprehensive look at ruminant nutrition to assist producers to better match pasture and feed options to their livestock needs.

The workshop will better enable producers to define production targets for their cattle, sheep and goats and compare current and predicted performance against these production targets.

The workshop covers digestion and nutrients, water requirements, pasture growth, intake and forage budgeting, mineral nutrition and practical nutritional management.



◆ Phosphorus management of beef cattle in northern Australia

This MLA publication addresses the challenge of phosphorus (P) as a serious nutritional limitation to cattle production, reducing the efficiency and profitability of beef businesses in many regions of northern Australia.

It looks at, why, who, what, when, how much and how to feed phosphorus; including plants and phosphate fertiliser and the economics of phosphate supplementation, and many property case studies.



◆ MLA Feedbase Hub

Managing pastures for optimal performance with practical resources- featuring calculators, training packages, reference guides and case studies



◆ Reproductive health and management practices for beef heifers

This Producer Demonstration Site (PDS) is designed to optimise the reproductive potential of heifers through to second calving, and improve cattle herd health, welfare, productivity and profitability.



Grazing matcher: how to optimise feed utilisation



Dan Parnell

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James Bowie

Bowie Beef

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About Dan

For the past 11 years, Dan has run a part-time farm consultancy business with a focus on agronomy and business in high-rainfall beef and dairy. He also works part-time for Western Dairy managing the dairy effluent project which involves design and installation of dairy effluent systems and dairy shed design. In his role at Western Dairy, he also runs Feeding Pastures for Courses and has been involved in the Dairy Farm Monitor Project since its inception.

Dan has a Bachelor of Ag Science degree from UWA and a Graduate Certificate in Business from ECU. He worked briefly for DPIRD in Three Springs then for 17 years with CSBP at Lake Grace, Narrogin and Bunbury. He enjoys long distance running, plays competitive darts and has an original song on Spotify.

About James

James, his wife Katina and young family run a beef breeding operation on 1619ha across 10 properties based around Bridgetown. They moved to the farm permanently in 2020, having previously managed the farms remotely. Prior to that James worked for Chevron in Government Affairs. The farming properties were purchased over many years by James's father, Dr James Bowie (OA) who famously was the Manjimup GP for 43 years. The first farm was purchased in 1968 and the most recent in 2018.

Since James took on the farm in 2018, he and the team at Bowie Beef have more than doubled the production of beef per hectare from purely a pasture base. James has a strong focus on people and building long-term relationships. He has sought qualified advice and employed great people along his short but successful journey so far. James attended the Grazing Matcher course in 2019 with his farm manager Matt Fairbrass.

Outside of the farm operations James provides oil and gas consulting services, is currently establishing the Asia Natural Gas and Energy Association, all while fixing up a 1949 series 1 Land Rover.

Session summary

Grazing Matcher (an MLA Profitable Grazing Systems program) are producer focused feed base management workshops for beef and sheep producers in the high rainfall zone of WA.

The course uses scientifically sound principles and tools that are freely available and easy to use.

The main objectives are:

1. Embed profit driver measurements in the farm business
2. Help match the feed demand to pasture supply as efficiently as possible
3. Implement a controlled grazing rotation to grow and utilise more pasture
4. Improve understanding of the feed requirements of different classes of stock
5. Improve condition scoring skills
6. Better forage decisions – making and feeding

The main **profit drivers** considered are annualised DSE/ha, annualised liveweight produced per hectare and the cost production. The DSE measure is further expanded to focus on energy and a subsequent pasture harvest figure.

Matching feed demand with pasture supply is an often-discussed topic around the time of calving/lambing and weaning. There has been a trend away from Jan-March calving to March-May with some businesses also calving in late winter. This is a better match with pasture supply and has less reliance on costly hand feeding. This growing trend gives producers confidence to increase stocking rates.

Most farms in the high rainfall zone **rotate** stock and allow rest periods for pastures of some sort. The Grazing Matcher program has refined some of the grazing principles from dairy and adapted these to beef and sheep. A controlled rotation defined by 3 leaf ryegrass and 4-6cm residuals is a key part of the better utilisation of pasture puzzle. The understanding that the grass sets the rotation is a concept that has seen farms improve productivity. Seeing other farms use such practices gives producer confidence that the principles work.

Condition scoring is one of the few ways to monitor how animals are fed in beef and sheep enterprises. Each Grazing Matcher Course has two cattle and one sheep condition scoring sessions on-farm to practice these skills and compare with other producers.

Which **forage system** to use to conserve the spring surplus is a key pasture utilisation tool. The Grazing Matcher course focuses on the value of forage rather than the cost in multiple ways by asking the following:

- ◆ What will it be fed to?
- ◆ What it will be fed with?
- ◆ What is the ability to make a quality and consistent product?
- ◆ How does the forage system compliment the grazing rotation?
- ◆ What does the feed test look like?

In answering these questions there has been a general trend to more silage in the SW.

Grazing Matcher

The course was developed in 2017 by Jesiane Accioly, Dr Martin Staines, Dan Parnell and Peter Clifton with further refinement over the years. Dario Nandapi of Smart Cow Consulting has been involved in course delivery since 2019. The Grazing Matcher course has now partnered with catchment groups and industry groups such as MLA and Western Beef. The courses usually involve 8-10 farming businesses with 8 half day meetings, on farm over a 12-

month period. These meetings are a mixture of presentation and in paddock/yard peer group learning and sharing of ideas. The businesses involved are very diverse and range from generational farms to new enterprises.

Key take home messages

- ◆ Controlled rotational grazing allowed maximum pasture utilisation
- ◆ Measure to manage: the first step is to know what you are achieving before trying to make any changes
- ◆ Key profit drivers are stocking rate and liveweight produced per hectare

Relevant tools and resources

◆ Grazing Matcher PGS

This package aims to improve the productivity, profitability and resilience of red meat producers by enabling them to better match grazing pressure, fertiliser application, animal requirements and market demands. See attached flyer in following pages.

◆ Pasture growth estimates

A series of pasture growth rate (kg/ha/day) tables and graphs for regions across Australia. The data set was compiled for the Meat & Livestock Australia Feed Demand Calculator using validated curves from research sites, data presented in GrassGro, and with input from experienced research and extension professionals.



◆ How to utilise Pastures from Space

Pastures from Space™ estimates green feed on offer (FOO) and the pasture growth rate (PGR). FOO is the above-ground green pasture biomass expressed as kg/ha and PGR is the current rate of pasture growth in kg/ha per day.



◆ Feed On Offer Library (FOO)

The FOO library allows users to estimate FOO and nutritive value of grazed pastures. Animal performance is determined by the quality and quantity of pasture available and when known, better decisions can be made on allocation of stock to paddocks or supplementary feeding. The records were collected by experienced agronomists across VIC, NSW, QLD, WA and SA, from typical pastures in each region in summer, autumn, winter and spring with a range of FOO values at each harvest.



◆ **Pasture Paramedic**

Pasture Paramedic is a decision-making tool that allows rapid assessment of pasture condition in the high rainfall zones of southern Australia. The tool is used in the paddock to measure the quality and quantity of available pastures and identify requirements for pasture renovation or rejuvenation.



◆ **Feedbase planning and budgeting tool**

Developed by EverGraze, this calculator assists with:

1. Planning rotational grazing systems
2. Determining appropriate stoking rates
3. Calculating pasture growth rates
4. Determining how long paddocks will last
5. Calculating the most economical ration stock



◆ **Predicted livestock daily pasture intake**

The predicted livestock daily pasture intake tables are a set of reference tables are used in the EverGraze Feedbase Planning and Budgeting Tool. They have been mostly drawn from ProGraze (a MLA and DPI NSW initiative), Lifetimewool (a Sheep CRC initiative), High Performance Weaners (a Rural Industries Skills Training Initiative) and the Agriculture Victoria Drought Feeding Manual.



Rotational Grazing Training

Improve productivity and efficiency with Grazing Matcher



The Grazing Matcher program supports groups of livestock producers to improve grazing, fodder and feed decisions.

Next program, commencing Autumn 2023, include groups from each of the areas shown in the map below (pending minimal numbers and co-funding confirmation). Other areas may be considered.

What you'll learn:

- Grazing management tailored to local conditions to maximise productivity, quality, resilience to grazing, root growth and nutrient uptake
- How to maximise pasture utilisation
- Efficient fodder production (quality, quantity and cost), storage and use
- Seasonal animal requirements
- Feed analysis and efficient feed allocation
- Animal monitoring to meet production targets
- Farm business performance indicators.
- ...and more!



How it works:

- Eight to ten businesses per group,
- Up to two people per business,
- Eight grower meetings per group over 12 months, meeting at participant's farm,
- Four hour sessions facilitated by local consultants: Jeisane Accioly (ALIS Consulting), Dan Parnell (Agsure Consulting) and Dario Nandapi (SmartCow Consulting),
- Peer networking and professional advice to support your business both at and between meetings.

Cost per business: \$650 (up to \$3700 additional cost per business is covered by sponsorship and in-kind).



Feedback from past participants:

- It showed me the extra production you can get from pastures that recover better from grazing —Paul Fry, Donnybrook.
- It just pushed me. I've done more rotations than I've ever done.—Matt Nield, Karridale.
- It was a huge learning. The informal interaction as well as the formal group discussion. —Linda Brumby, Ferguson Valley.
- It was good to put numbers to what we were feeding and refine it.—Richard Walker, Wilga.
- Fine-tuning hay and silage is probably where we made the most gain.—Andrew McNab, Scott River.
- Impressive speakers. Very lucky to have that access. It's stimulating to see other farms.— Ken MacLeay, Vasse.
- I didn't know how to condition-score before. Now we use it to divide mobs and feed accordingly—Brodie Allen, Boallia

For more information, contact:

Jeisane Accioly on Jeisane.alis@gmail.com or on 0403 327 216

Or search for "Grazing Matcher" online



Department of Water and Environmental Regulation

Department of Primary Industries and Regional Development

This program is supported by South West Catchments Council, Western Beef Association Inc, GeoCatch, Wilson Inlet Catchment Committee, Oyster Harbour Catchment Group and Peel-Harvey Catchment Council, through funding from the Australian Government's National Landcare Program; Healthy Estuaries WA, a State Government Program; and Profitable Grazing Systems, a MLA initiative.

Johne's: What does it actually mean, what does it do?

Plus, Foot and Mouth, Lumpy Skin Disease

Dr Anna Erikson and Dr Courtenay Bombara

Department of Primary Industries and Regional Development

Anna.Erickson@dpiird.wa.gov.au; courtenay.bombara@dpiird.wa.gov.au

Session summary

There are several diseases currently challenging the WA livestock industry, and others that are testing our biosecurity. Originally, DPIRD vets Courtenay Bombara and Anna Erikson were to discuss the on-farm implications of Bovine and Ovine Johne's Disease, as well as other causes of discounts at the abattoir.

In light of the current biosecurity threats of Lumpy Skin Disease (LSD) and Foot and Mouth Disease (FMD) on our doorstep, this talk will be much more flexible, addressing the challenges the industry faces, what producers can do about it, and the implications of an outbreak.

Johne's Disease

Johne's Disease (JD) is a chronic, incurable infectious disease that affects sheep, cattle, buffalo, goats, alpaca and deer, and results in wasting and eventually death. JD in cattle is commonly referred to as bovine JD (BJD) and in sheep as ovine JD (OJD). There is no treatment for JD. It is caused by the bacteria, *Mycobacterium avium subsp. paratuberculosis*. The bacteria affect the intestines, preventing absorption of nutrients, and the bacteria are then shed in the faeces of infected animals.

JD occurs in most countries of the world. JD in sheep was first diagnosed in Australia in 1980 in New South Wales. By 2003 it had been detected on several WA properties and was shown to have been on those properties for some time. The disease is now endemic in WA and most sheep areas of Australia.

Typical signs of JD include:

- ◆ Animals lose condition/are ill-thrifty despite adequate feed/nutrition and parasite control, and usually die within a 12-week period.
- ◆ There is a 'tail' of poor animals in herds/mobs
- ◆ Scouring may be seen but is not always present.

How JD spreads

JD can be spread between livestock through:

- ◆ faeces of infected animals or infected or contaminated colostrum or milk
- ◆ soil, feed or water contaminated by the bacteria. The bacteria can survive in the environment for long periods, including in soil for up to 12 months.

The most common means of spread between properties is movement of livestock, either as purchased or agisted animals, or straying stock.

JD bacteria may survive in moist, shaded areas for 12 months or more. Survival time is shorter when exposed to sunlight but can vary depending on ground cover and other factors. Animals become infected when they consume pasture or water contaminated by these infected faeces.

Susceptibility to JD infection decreases with age; animals over two years old are much less likely to become infected. Young animals under 12 months of age are most at risk of picking up infection. Stress and the presence of other diseases increase susceptibility.

While animals are usually infected early in life, they do not shed the bacteria for a number of years nor do they show signs of disease until they are much older. They are not infective (capable of spreading the disease) to other animals until they start to shed the bacteria in their faeces, usually after 3–5 years of age. This is important in managing the disease on a property as the time between infection and the sheep shedding bacteria in faeces is generally nine months to two years.

Testing for JD

Early detection will help you to manage the disease more effectively and reduce the risk of further spread. DPIRD subsidised disease investigations and testing are available where JD is suspected.

Several tests are available for JD, but they all have limitations, as detailed below. These limitations should be considered when undertaking any testing. Producers should consult their veterinarian to determine the most appropriate testing. Available tests for JD are:

- ◆ **Faecal tests** – Faecal testing is best used for herd-level testing. The tests look for bacteria in the faeces (by culture) or bacterial DNA (by PCR tests). Faecal tests are not very sensitive when used for individual animals as they will only detect infection in animals shedding bacteria, which can occur intermittently. Faecal testing will not detect infection in young animals that are not shedding yet. The standard test to detect JD in a flock involves testing a sample of faeces from 350 adult sheep (two years and older).
- ◆ **Blood tests** – These look for an immune response to infection. There are known cross reactions to this test with other Mycobacterium bacteria that can lead to a false positive result. Blood tests are less sensitive than PCR tests and only detect an immune response after infection is established, which is unlikely before four years of age. Blood tests are not used for definitive diagnosis.
- ◆ **Post-mortem and laboratory testing** – These involve examining dead animals to look for gross and microscopic changes indicative of JD infection and detecting bacteria in the gastrointestinal tract and lymph nodes. Pathological changes may be detectable before clinical signs are seen in an animal.

Abattoir inspections for JD in sheep are carried at one of the processors in the Great Southern on request. For more information, contact the WA JD coordinator Dr Courtenay Bombara. A practical and cost-effective method, trained inspectors inspect lines of adult sheep for visible signs of JD in the intestines and lymph nodes. Where there is suspicion of JD, samples are sent to the DPIRD laboratory for testing to confirm a diagnosis.

Biosecurity planning for JD

The level of risk mitigation necessary will depend on the individual property's business model. There are three key factors WA producers should consider when undertaking JD biosecurity planning. These are:

- ◆ the impact of JD at an individual property level
- ◆ the likelihood that JD will be introduced onto the property
- ◆ property-level risk mitigation strategies

Lumpy Skin Disease

Lumpy skin disease (LSD) is a viral disease that infects all breeds of cattle and buffalo. It has never occurred in Australia but is an emerging threat as it continues to spread through Asia.

The disease is primarily spread by biting insects. The disease can also be spread by contaminated equipment or infected hides and may occur directly from animal to animal. LSD does not have a high death rate but can cause severe loss of condition, damage hides, reduce reproductive rates, cause animal welfare issues and would impact international agricultural markets if introduced to Australia.

An incursion and outbreak will result in an overnight loss of international export markets including up to 95% of all live export and up to 50% of the \$3.5 billion boxed beef products. The dairy and grains exports will likely initially be impacted. The disease can lead to significant animal health and welfare consequences and production losses.

What does LSD look like?

- ◆ Affected cattle and buffalo develop a fever of up to 41.5C and may also have watery eyes, nasal discharge and excess salivation (drooling).
- ◆ Within 1–2 days, raised nodules up to 50mm in diameter commonly appear around the head, neck, limbs and genitals and may cover the entire body.
- ◆ Scabs form on these nodules and may fall off, leaving large holes in the hide that can become infected.
- ◆ The brisket and legs may appear swollen.
- ◆ Cattle may look lame or be very reluctant to move.

What are the likely entry pathways into Australia?

Entry in Northern Australia may be via insects carried across from Indonesia via strong winds during monsoonal weather. Long distance spread of biting insects, such as Culicoides, (a type of biting midge) from Indonesia have been detected in the past.

Other entry pathways into Australia, include insects entering on returning vessels, or souvenirs made with contaminated animal products. Animal handling equipment, clothing and shoes that have been used with livestock overseas and brought back without proper cleaning also pose a risk.

Strict insect control protocols are implemented on returning vessels to reduce their risk. The Department of Agriculture, Water and the Environment has heightened border controls to reduce this risk and target travellers and items from high-risk destinations to detect other prohibited items in personal luggage, mail and freight. Returning livestock vessels are also inspected by biosecurity officers.

How could LSD be spread between herds within Australia?

The two main methods of transmission of the LSD virus in the cattle population are through movement of infected animals and windborne movement of infected biting arthropods such as ticks, biting flies and mosquitoes.

The movement of contaminated equipment from infected properties is also a risk. Disease transmission by direct contact between animals can occur. Movement of contaminated vehicles, feed and water, and re-use of equipment such as hypodermic needles will all be important methods of spread within Australia if LSD is introduced. Infected bulls can excrete the virus in semen and experimental transmission has been demonstrated.

Foot and mouth disease

Western Australia's access to livestock and livestock product export markets, worth about \$2 billion annually, relies on Australia being free of foot-and-mouth disease (FMD).

Foot-and-mouth disease is a highly infectious viral disease that affects cloven-hoofed animals including sheep, cattle, pigs, goats, buffalo, camels, alpaca, llama and deer. It does not affect non-cloven hoofed animals such as horses, dogs, cats or birds. It is not the same as hand, foot and mouth disease in people.

Although many affected animals may survive foot-and-mouth disease, they take a long time to recover and often do not regain their full productivity. Surviving animals may also become carriers of the virus.

If foot and mouth disease did occur in Australia, everyone who works with livestock could help to reduce the economic and social impacts of an outbreak by being vigilant for the signs of the disease and reporting it immediately to a veterinarian. The faster an outbreak is detected, the sooner it can be stopped. Minimising the spread of the disease through early detection and reporting will reduce the devastating economic and social costs of an outbreak to livestock producers, the livestock and regional industries and the national economy.

What are the signs of foot and mouth disease in animals?

Signs of foot-and-mouth disease vary depending on the species infected and the strain of the virus. Blisters form in the mouth, nostrils, on teats, and on the skin between and above the hoofs of cloven-footed animals. Foot and mouth disease reduces productivity and may kill young animals. Note that in sheep the signs are often mild and difficult to see, and lameness may be the only visible sign.

Signs include:

- ◆ blisters (vesicles) in the mouth, nostrils, teats or on the feet. These blisters are often not obvious until they have ruptured. Blisters in sheep are usually small and difficult to see.
- ◆ slobbering/drooling
- ◆ lameness, reluctance to move
- ◆ severe depression
- ◆ lack of appetite
- ◆ sudden death in young animals
- ◆ a large drop in milk yield in dairy animals
- ◆ abortion in pigs

Animals usually show signs of foot and mouth disease within 3–5 days of infection, but signs can take up to 14 days to appear. Infected animals spread the virus before they show signs of the disease.

How would foot-and-mouth disease enter Australia?

The most likely way that foot-and-mouth disease could enter Australia is by the illegal importation of meat and dairy products, which can carry foot and mouth disease virus.

Pigs are highly susceptible to foot and mouth disease and can become infected if they eat products carrying the virus. Once infected, pigs produce large quantities of virus, which can spread to other livestock.

Foot-and-mouth disease could also enter Australia by people from infected countries returning with the virus on their clothing, footwear or equipment and then having contact with animals.

On your return from overseas travel, always declare food products and whether you have been in a country where foot-and-mouth disease is present.

Key take home messages

- ◆ Producers should have biosecurity plans in place which should be reviewed (or implemented)
- ◆ Prompt, correct National Vendor Declarations are a key way producers can help improve traceability.
- ◆ Johne's Disease, FMD and LSD are all reportable diseases, and any suspected cases should be reported immediately to a vet.

Relevant tools and resources

◆ Johne's Beef Assurance Score (JBAS)

Published by Animal Health Australia, the Johne's Beef Assurance Score is a risk profiling tool for JD in beef cattle.



◆ Emergency Animal Disease Hub WA

This webpage will be updated as new information becomes available, specific to WA producers.



◆ DPIRD contact list

Animal Biosecurity & Welfare program contacts for Western Australia



◆ **Surveillance incentives for WA livestock producers**

Western Australian producers can access a variety of subsidies for disease investigations in livestock that will minimise the cost of calling a vet and maximise the benefits.



◆ **Animal Health Australia: Farm Biosecurity**

Farm biosecurity is your responsibility, and that of every person visiting or working on your property. We have tools, tips and manuals to help you implement farm biosecurity on your property. You will also find individual profiles for a range of livestock and crops: or you can create a profile tailored to your farm.



◆ **Foot-and-Mouth Disease: prevention and preparedness**

Information published by Department of Primary Industry and Regional Development on Foot-and-mouth disease: prevention and preparedness.



◆ **Lumpy Skin Disease: prevention and preparedness**

Information published by Department of Primary Industry and Regional Development on Lumpy skin disease: prevention and preparedness



My take home messages and actions

Reflect on the presentations 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.

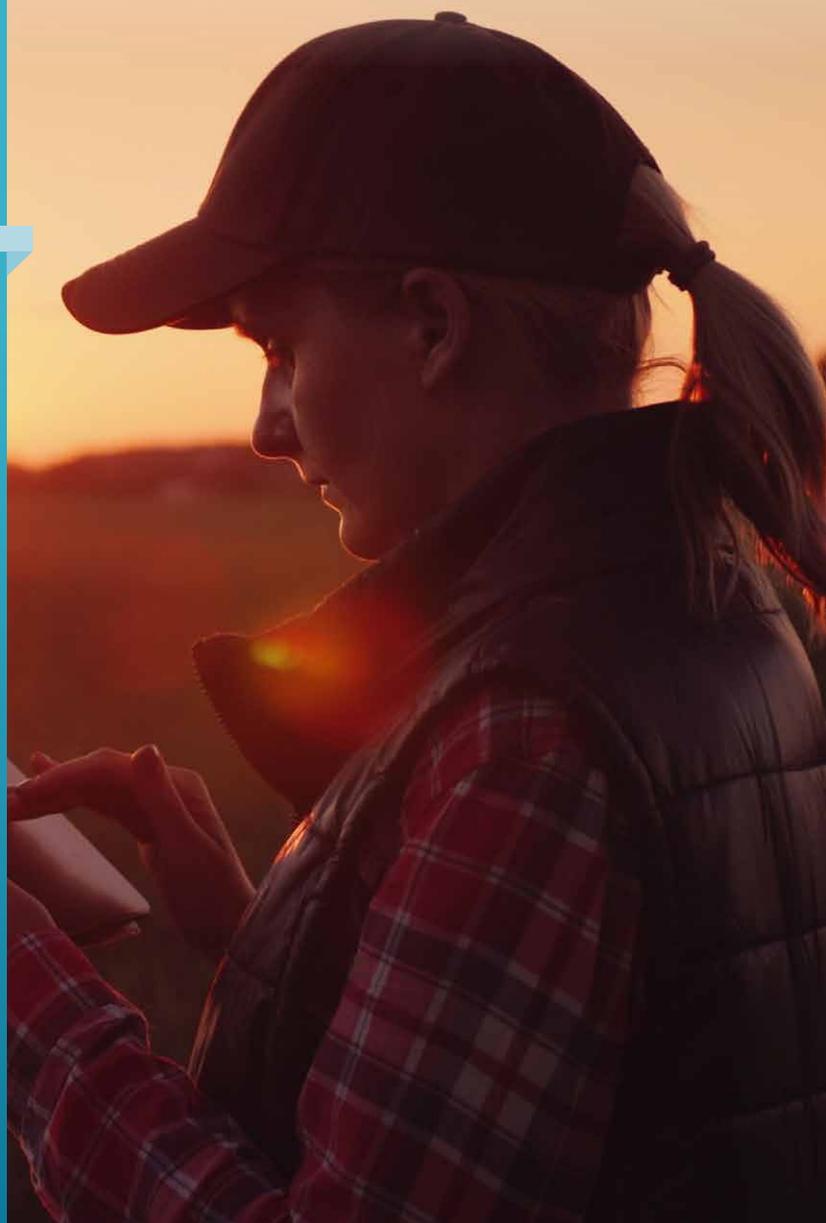
Session	Action - Things I could do to implement ideas



Business EDGE

Know your business,
grow your business

A two-day workshop to enhance your financial management and improve business efficiency and profitability. You will also develop strategies to determine if your business can fund future growth, how to reduce debt and how to plan for retirement and succession.



Events
near you

Business EDGE Perth: 13 - 14 September, 2022

To register contact Joanne Herley **M:** 0427 118 699 **E:** admin@bushagri.com.au

For more information about EDGE: mla.com.au/edge-network



Business EDGE has been developed by Meat & Livestock Australia

Beef Links

A collaborative research and development project between Meat & Livestock Australia (MLA) and The University of Western Australia (UWA) for the WA beef industry

About

BeefLinks is a four-year research partnership (2019-2024) that aims to drive an integrated and complementary R&D program for northern and southern production systems across Western Australia to achieve **profitable, consistent and sustainable beef yields matched to consumer expectations**.

The project brings together producers, researchers, state departments, private companies and processors to develop a greater understanding of opportunities to enhance productivity and value along the red meat supply chain.

Through the program, partners will explore and understand critical control points to produce evidence-based best practices, tactics and strategies for the management and movement of cattle.



BeefLinks : R&D for the WA beef industry from rangelands to market

Rangelands



Where cattle go

- Remote sensor technology
- GPS tracking – ear tags

What cattle eat

- Plant ID from dung
- Nutritional value of feed
- Methane mitigation

Better management

- North to south
- Rangeland ↔ pivot
- Virtual fencing
- Rangeland self-herding management

Sustainability

- Rangeland repair
- Carbon neutrality
- Socio-economic evaluation

Diversified markets

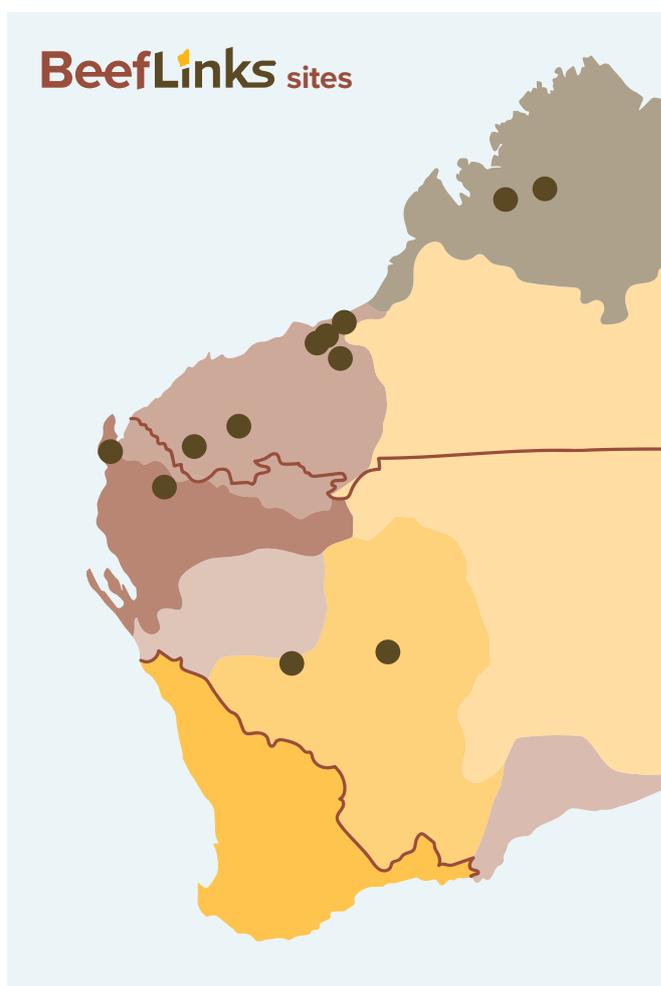




Current projects

The projects currently contracted under the BeefLinks program focus on:

-  developing practical and robust management practices to improve the transition of animals from the pastoral zone into backgrounding systems, as well as between grazing rangelands and forage produced under pivots, to build more certainty in year-round supply of in-specification cattle
-  developing innovative grazing management practices in the WA rangelands that increase productivity and carbon in the landscape by understanding more about where animals go and what they eat when they are there
-  evaluating the practical use of virtual fencing technology to manage animals in the WA rangelands and improve productivity and rangeland health
-  characterising the nutritional value and methane reducing potential of WA rangeland plants
-  better understanding the socio-economic pressures on the northern WA beef producers
-  engaging producers through a Producer Demonstration Site (PDS) to implement behavioural-based management practices and accelerate the transitioning of animals across different feed types and different regions



Get involved

BeefLinks is always looking for new partners from across the supply chain to get involved.

Contact us to learn out more about the project, find out how you can contribute to research, trials and data collection and keep up to date with project progress.

For more information, please contact:

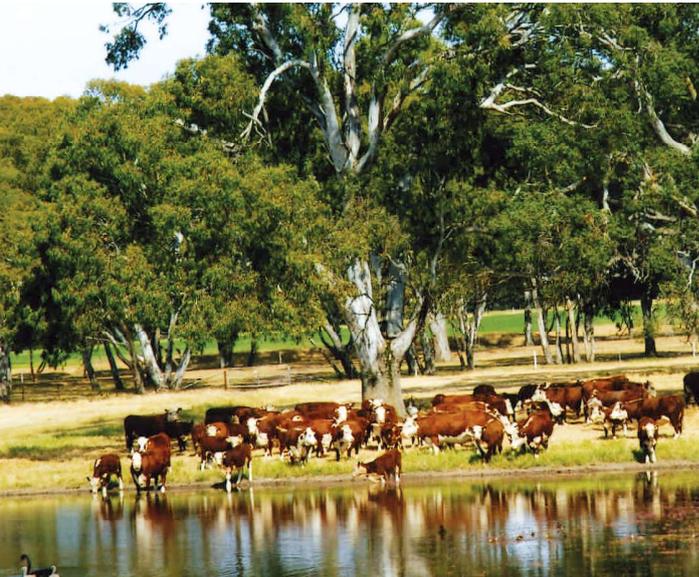
Project Leader, Professor Phil Vercoe (UWA) | [E philip.vercoe@uwa.edu.au](mailto:philip.vercoe@uwa.edu.au) | **P** 0437 019 836



HEIFERS *for* PROFIT

RURAL INDUSTRIES SKILL TRAINING

HEIFERS FOR PROFIT
GETTING HEIFER MANAGEMENT RIGHT



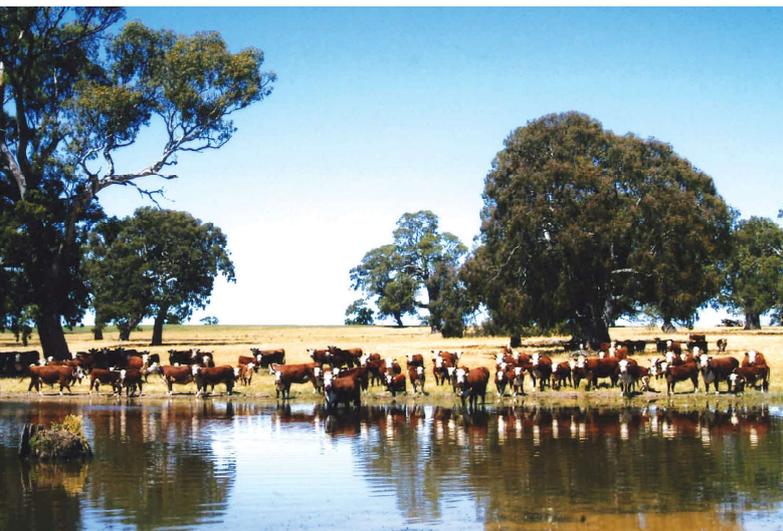
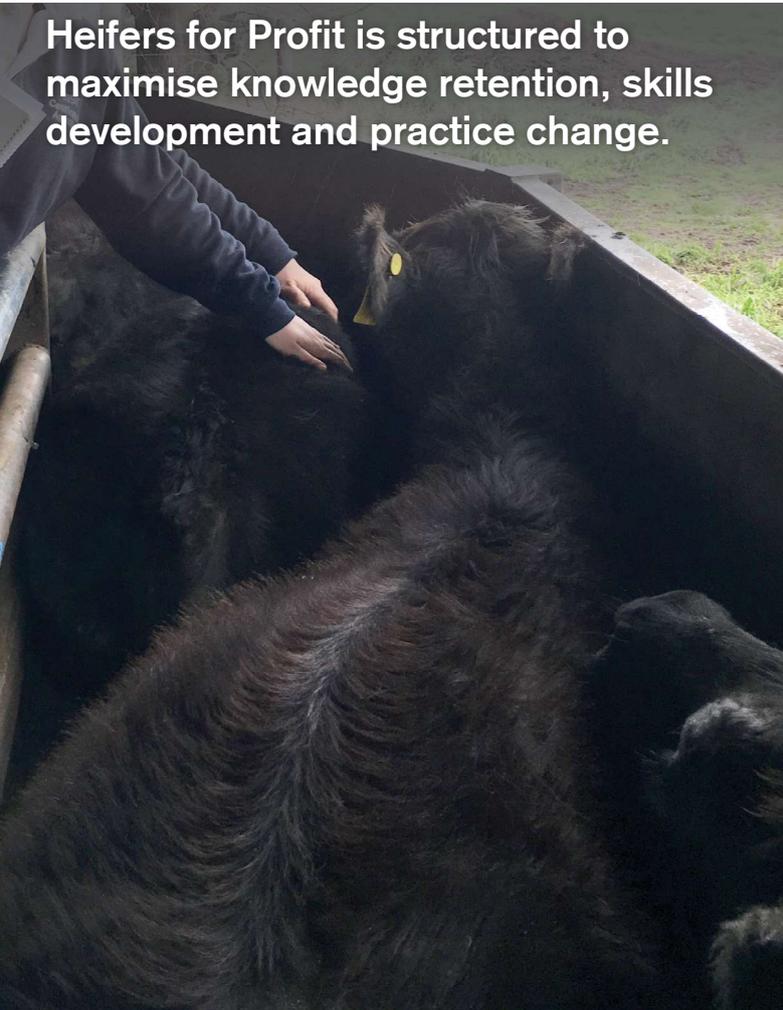
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Profitable Grazing Systems - an initiative of MLA

Heifers for Profit is structured to maximise knowledge retention, skills development and practice change.



COURSE OVERVIEW

Being involved in a Heifers for Profit course gives you the skills and confidence to manage your heifers' nutrition to improve animal welfare, increase future reproductive success, optimise stocking rates, and increase whole farm profitability.

Working with groups of 5-7 farmers who meet six times in 15 months, your trainer will work with you on:

- The principles and practices of Heifers for Profit
- Getting heifers in-calf efficiently
- Managing pregnancy and achieving critical weights
- Transitioning the heifer into a cow – preparation for calving and re-breeding
- Managing calving 'The fruits of your labour'
- Pre-joining management and calf marking

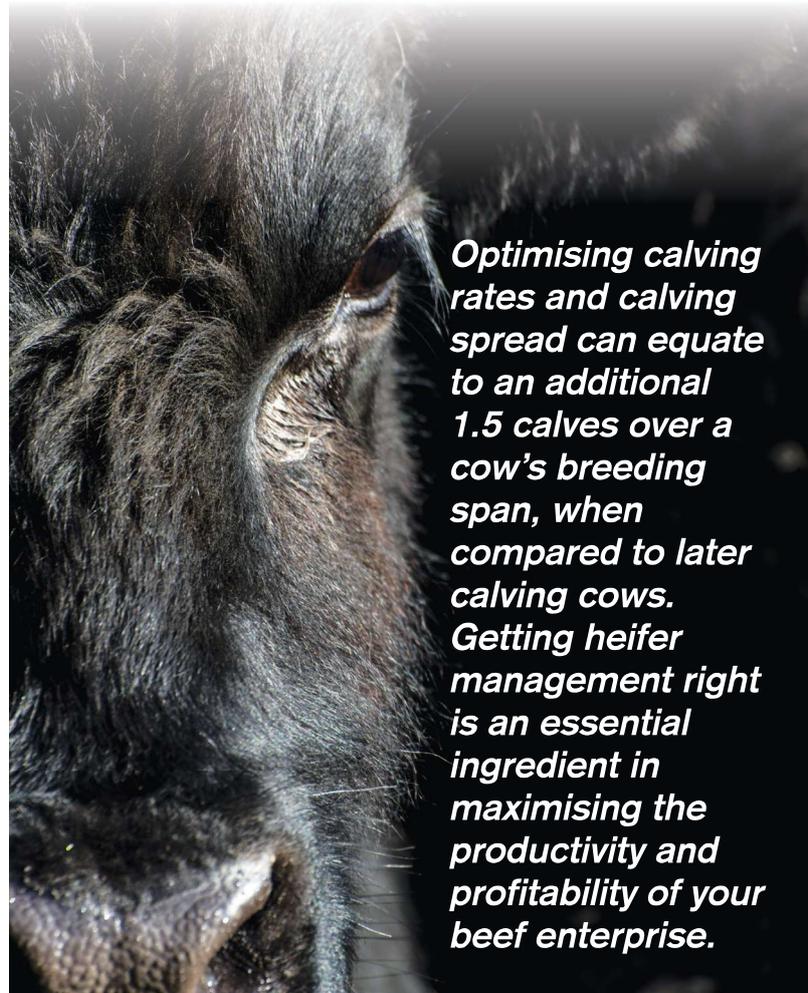
COURSE INVESTMENT

The cost of Heifers for Profit is valued at \$2,200 plus GST per participant, Heifers for Profit will be open to producers for \$1,540 plus GST thanks to the support of Meat & Livestock Australia through the Profitable Grazing Systems initiative.

HOW DO I JOIN A HEIFERS FOR PROFIT COURSE?

Heifers for Profit is delivered on farm and is ideally suited to a small group of 5-7 participants. It is anticipated that the Heifers for Profit program should commence when heifers have been weaned.

We encourage you to contact like-minded neighbours and farmers in your local area to form a group, and a trainer will come to you to deliver the Heifers for Profit course.



Optimising calving rates and calving spread can equate to an additional 1.5 calves over a cow's breeding span, when compared to later calving cows. Getting heifer management right is an essential ingredient in maximising the productivity and profitability of your beef enterprise.

bredwell fedwell

Updated BredWell FedWell workshop builds on 10 years of impact in genetics and nutrition training

On the back of a decade of success, MLA's BredWell FedWell (BFWW) workshop will soon be relaunched to reflect evolving best practice genetics and nutrition management.

The workshop program is being reviewed by the Schuster Consulting Group, Dubbo, to ensure BFWW continues to meet the needs of producers wanting to increase the welfare, productivity, and profitability of their herds and flocks through improved genetics and nutrition.

The review also included input from a panel of industry experts, who provided advice in areas ranging from practical breeding and nutrition strategies, cattle and sheep production in northern and southern regions, as well as approaches to capability building and adult learning.

The revised program developed through the review process will be further refined during a pilot stage later this year before being rolled out nationally via a network of trained and accredited deliverers.

Here, Angela Schuster of Schuster Consulting Group, whose team is leading the review and coordination of the program explains the background of the review process.

"The extension and adoption field has changed significantly since BredWell FedWell was first launched with more information and tools such as flock profiling, heifer select and new indexes now available to help producers apply the outcomes of genetics and nutrition research," Angela said.

"We've focused on integrating these tools into a new format that balances genetic and nutrition decision-making across the whole livestock production cycle with a specific focus on an individual's profit drivers.

"The new format is designed to help producers increase their productivity and profitability through improving genetics and nutrition."

What to expect

Building on the workshop's first iteration, participants will come away with skills to help them develop a customised breeding objective aligned to their profit drivers, identify sires and select and feed animals that help meet their breeding objective.

The new highly graphical, easy to follow one-day workshop will continue to be delivered on-farm, with the intent to drive practice change as well as whet participants' appetite for further learning.

Producers will gain fresh knowledge about the latest research and management strategies in the field and will apply this knowledge through guided learning that includes practical exercises.



Figure 1. BFWW breeding and feeding production cycle

The structure of the workshop will utilise the *BWFW breeding and feeding production cycle* – see figure 1 – which covers pre-joining and joining, pregnancy, calving/lambing, weaning and beyond, and selection. Each ‘wedge’ in the cycle represents a major decision point in a producer’s commercial enterprise where consideration of both breeding (genetics) and feeding (nutrition) is required.

Workshops will focus on:

- Increasing awareness of the impact both genetics and nutrition have on a producer’s flock or herd productivity and profitability.
- Assisting producers to develop their own breeding objective and a plan for selecting animals with consideration of the profit drivers for their business.
- Improving producer knowledge of feed availability and livestock requirements to achieve greater productivity during the livestock production cycle.
- Showcasing additional adoption activities in genetics and nutrition designed to improve productivity and profitability.

More than 140 predominantly MLA-supported resources, research papers, tools and reports have informed the refreshed BWFW workshop with the focus being on delivering implementable research outcomes to participants. The updated workshops are due to be delivered in 2023.

For more information, contact:

Peter Schuster

BredWell FedWell Coordinator

E: peters@schusterconsulting.com.au

To register your interest in future workshops, submit your details via the following QR code:



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?

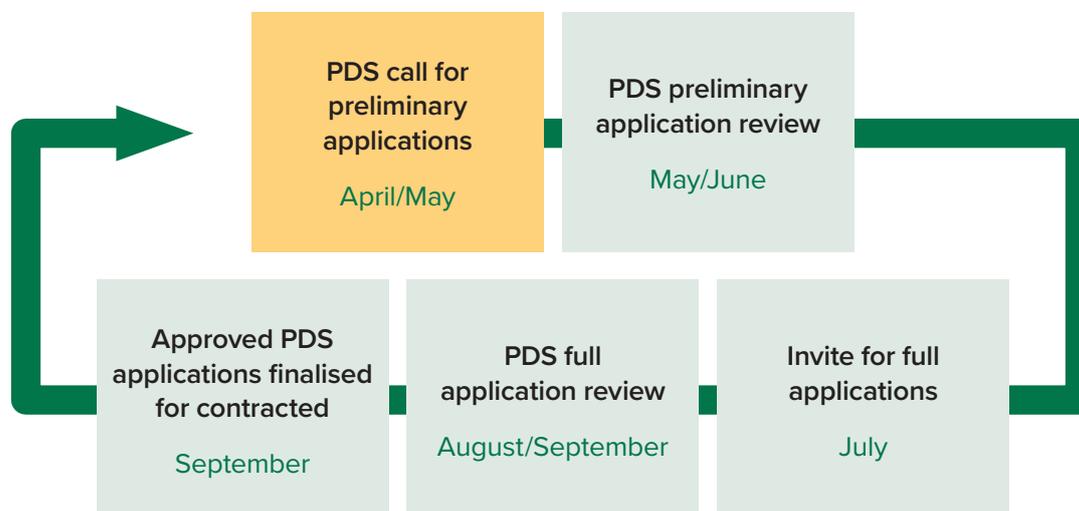
There are two primary funding streams that aim to increase the rate of adoption of on-farm management practices and technologies in PDS projects: levy and co-contributor.

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



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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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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.



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.



mla.com.au/pds

EDGEnetwork[®] 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.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.



mla.com.au/bredwellfedwell

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.



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.



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

RESOURCES

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

PUBLICATIONS

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

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