



meatup FORUM

For the latest in red meat R&D

Casino, 6 December 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 – Casino, 6 December 2022

Time	Session
8.00am	Registration desk opens, tea and coffee available
9:00am	Session 1: Welcome
	Welcome, housekeeping and forum schedule Natasha Searle, MeatUp Forum Project Manager, Pinion Advisory and Tom Amey, NSW MeatUp Forum Working Group
	MLA welcome and market update Sally Leigo, Program Manager - Adoption, Meat & Livestock Australia
9.45am	Session 2: Setting the scene
	Productivity drivers – system thinking is the difference! Cameron Allan, Meat & Livestock Australia
10.20am	Morning tea (30 minutes)
	Session 3: Feedbase updates
10.55am	Winter forages and tropical pastures – opportunities and concepts Nathan Jennings, Local Land Services
	Pasture dieback – diagnosis and management in NSW Suzanne Boschma, NSW Department of Primary Industries and Nathan Jennings, North Coast Local Land Services
	Session 4: Carbon update
	Carbon neutral by 2030: What can be done in your production system to reach the industry target? Professor Richard Eckard, University of Melbourne
12.50pm	Lunch (60 minutes)
1.55pm	Session 5: Beef updates
	Improving within-breed genetic evaluation and developing multi-breed genetic evaluation with the Southern Multi Breed Project Brad Walmsley, NSW Department of Primary Industries
	Producing restocker cattle for existing and future markets Alastair Rayner, RaynerAg and Roger Bailey, RN & MA Bailey
	Managing parasite burden in challenging environments Phil Carter, North Coast Local Land Services
3.35pm	Afternoon tea (25 minutes)
4.05pm	Session 6: Virtual farm tour
	Winter forage and managed tropical grasses, an MLA Producer Demonstration Site project Host producers: Tom Amey, Araucaria; Ronny Meldrum, Compton Farms; Joe Leven, Cabra Glebe and John Gibson, Medlyn.
	Session 7: Wrap-up
	Tying it all together Cameron Allan, Meat & Livestock Australia
	Wrap up, evaluation and networking drinks Georgia McCarthy, MeatUp NSW Event Coordinator, Pinion Advisory
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

To join a presentation:

1. 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 R&D. They are developed by Regional Producer Working Groups that include members from the Southern Australian and Western Australian Livestock Research Councils, in collaboration with the MeatUp Coordinator (Pinion Advisory) and MLA staff.

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

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

Today you will be presented with clear and practical ideas, information, and tools that you can take home and put into practice on-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 the MeatUp Forum Regional Producer Working Group members from New South Wales for their contribution to MeatUp, including:

- ◆ Lisa Anderson, Wagga Wagga
- ◆ Tom Amey, Casino
- ◆ Roger Knight, Mendooran
- ◆ Kellie Penfold, Henty
- ◆ Christine White, Coolah
- ◆ Sarah Day, Girilambone
- ◆ David Greig, Tottenham

In addition, we would like to thank:

- ◆ Andrew Morelli, Southern Beef and Sheep Adoption Project Manager, MLA
- ◆ Natasha Searle, MeatUp Forum Project Manager, Pinion Advisory
- ◆ Georgia McCarthy, MeatUp Forum Event Coordinator for NSW, Pinion Advisory
- ◆ Lauren Rowlands, MeatUp Forum project team member, Pinion Advisory.

If you are interested in joining our Regional Producer Working Group to contribute to the development of MeatUp Forums in NSW, please chat to a working group member, a member of the MeatUp Forum team or contact the MeatUp Forum Project Manager.

Contact

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Visit: mla.com.au/meatup

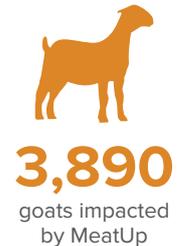
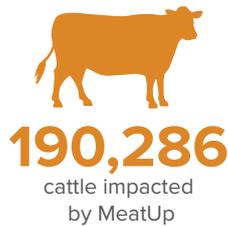
Launched in March 2021, MeatUp Forums are an opportunity for beef, sheep and goat producers to learn something new, stay up-to-date with the latest on-farm research and technologies and meet others working in the red meat industry.

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

Setting the scene

MLA welcome and update



Sally Leigo

Program Manager – Adoption, MLA

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About Sally

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

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

Originally a New South Wales resident, Sally's family runs a goat, sheep, and cattle property in far-western NSW, where she runs a small herd of her own cattle. Being more office bound these days Sally's pregnancy testing, pasture identification and feed budgeting skills are certainly under utilised.

Session summary

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

- ◆ Double the value of the Australian red meat sales.
- ◆ Australian red meat become the trusted source of highest quality protein.

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

Relevant tools and resources

◆ MLA membership application

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 subscriptions to MLA's regular member magazine *Feedback*
- free subscriptions to MLA suite of e-newsletters
- free access to up-to-date publications and information tools
- eligibility to apply for funding via MLA's CoMarketing Program



◆ MLA market trends and analysis

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



◆ MLA'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 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 e-newsletters to be delivered direct to your inbox at mla.com.au/news-and-events/emails/



◆ **Producer Demonstration Sites program**

Producer Demonstration Sites (PDS) are on-farm projects run by producer groups who want to validate the benefits of incorporating research findings into their businesses. MLA calls for preliminary applications for PDS projects that will help to improve the profitability, productivity and sustainability of beef and sheep meat enterprises on an annual basis.



◆ **Profitable Grazing Systems program**

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



◆ **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.



◆ **EDGE Network**

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



Productivity drivers – system thinking is the difference



Cameron Allan

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About Cameron

Cameron is an R&D Manager with MLA, overseeing the feedbase portfolio which includes pasture breeding, agronomy, nutrition, weeds and grazing management. Cameron has more than 25 years' experience with MLA (and former Meat Research Corporation) in developing the feedbase portfolio to support animal production and land management in the varied production contexts across Australia. Prior to MLA, Cameron worked for NSW Department of Primary Industries with a focus on animal production research (meat, fibre and fertility of sheep and goats), pasture and weed ecology, and grazing systems. This work supported a new role in the development and coordination of the PROGRAZE training course on pasture and livestock interactions across southern Australia, and then as the Education Coordinator of the Business Skills and Best Practice program – now MLA's EDGE network.

Session summary

A range of factors influence the profitability of a beef enterprise, within and between years. In its simplest form, profit drivers are the number of units multiplied by the price received per unit less cost of production. The setup of the business enterprises (joining, calving and target market) requires appropriate matching of feed supply to animal demand to allow beef to be produced to required specifications. Managing components of the production system to ensure the best cost-effective match of feed supply and animal demand, is key in influencing profit drivers.

The core components of a profitable production system are the number of cows joined, sale weights and herd fertility. These can be unpacked into influencing factors – such as stocking rate, growth rate, reproductive rate (calves sold per cow joined) and considerations of these factors on product (meat) quality. This is a multi-dimensional space and challenges decision making. However, considering the production system you are in and the influencing factors is the key to managing these profit drivers.

Joining and calving time largely determine the turn-off date for beef. The feed supply influences each step of the reproductive cycle (from joining to return to service date) and growing out / finishing stock. As such, aligning feed supply and animal demand, and addressing feed limitations, shapes the number of beef units for sale at the target weights and price received.

Cost of production also influences profitability, requiring efficiency in resource use (e.g., labour and feed produced). Matching the animals' feed demand and increasing the utilisation of the feed produced can make a great difference to production efficiency.

Efficiency of production – pasture quality, quantity, and utilisation

Driving efficiency stems from increasing beef outputs compared to inputs. Reviewing the feed required by livestock is a significant first step, followed by maximising pasture utilisation. This review will highlight:

- ◆ the rate limiting step (to number of units produced or targeted weights)
- ◆ what interventions could assist production targets being met
- ◆ what changes are required to stock numbers to use available feed.

Pasture productivity limits stocking rate and animal growth rates. Feed budgeting provides a basis for decision making to ensure animal targets are met, and secondly (depending on how the season progresses) – to consider purchasing additional livestock (to improve pasture utilisation) or whether to sell stock.

Feed quality and quantity determine animal intake and are the main drivers of animal performance per head and per hectare. It is important to manage the pasture to achieve quality as well as quantity targets. Start at the end (e.g., turn off time and target market specs) and work backwards to identify critical decision points (e.g., at change of season) throughout the production year.

The desired production outcome, target market and herd composition (genetics, body condition and liveweight), will determine the pasture feed (quality and quantity) that needs to be supplied throughout the production cycle. With these factors in mind, producers can then consider if there are changes needed to address any feed deficits. By considering the system's design, its components, and what can be influenced, offers an opportunity for producers to manage the profit drivers in their production system.

Seasonal gaps and opportunity

Beef production areas east of the dividing range where tropical pasture species are used can suffer a deficit in pasture growth in winter to early spring. This feed gap reduces whole farm carrying capacity. The feed deficit has flow on issues for the drivers of profit across years:

- ◆ cows in poorer condition will delay joining – calving is then delayed
- ◆ sale weights – lowered live weight gain; late calves require longer to finish as the quality and quantity of the feed available may have diminished
- ◆ herd fertility – growth of replacement and trading stock (calves sold per cows joined).

Addressing this winter feed gap allows the rate limiting step in the production system (winter stocking) to capture the benefit of autumn sale to a higher priced weaner market. Adjustments to the feed supply curve to cater for seasonal variations can include small areas of special purpose pastures (e.g., annual rye grass) or the use of a winter forage crop such as a cereal or brassica crop, in addition to tactical applications of nitrogen to increase available pasture in the winter.

Addressing this winter feed gap can enable more breeders to be carried and allow higher grazing pressure on the tropical pastures, such as *Setaria* and Rhodes grass, resulting in higher pasture quality and animal performance. Subtropical grasses managed with higher grazing pressure in summer and autumn can allow increased clover growth in autumn and spring – a key contributor to pasture quality and therefore, energy for animal growth.

A local Producer Demonstration Site (PDS) project reported benefits of improving the winter feed supply allowing:

- ◆ A higher stocking density of breeders, on a feedbase that met their nutritional needs
- ◆ Increased pregnancy rate for breeding cows
- ◆ Breeding cows retaining an early calving pattern
- ◆ Improved live weight of replacement heifers

- ◆ Raised agisted heifers
- ◆ Calves sold earlier (with an acceptable income)
- ◆ Options to enable keeping stock off vulnerable pastures
- ◆ Summer grasses to be more heavily grazed and retained quality.

Producers in this PDS described improvement to the profit drivers. Kilograms of red meat produced per hectare increased on all sites and while the production cost per kilogram of red meat generally increased, overall, the profitability of all winter forage sites increased.

Supply and demand – planning ahead

The goal is to put in place a grazing system that can improve the match between the feed requirements of cattle and feed supply, and concurrently best use the feed resources at your disposal. In doing this, both sides of the ledger (likely costs and returns), must inform decisions.

These decisions, on demand with feed supply, need thinking both at a strategic and tactical level. Strategically – in how an enterprise may be set up. Breeding and trading enterprises are impacted by feed supply, animal genetics, management calendar and target market. Tactical decisions are then around which paddock, timing, and duration of grazing as well as opportunistic decisions on stock purchases.

Starting at the desired sale weight and time, work backwards and map out the plan – animals to be at a certain weight by date. Define the ‘critical decision points’ and ask:

- ◆ Are animals on track to the target?
- ◆ What quality and quantity of pasture do cattle need to ensure required production?
- ◆ If cattle are above planned weights and feed supply permits, then additional stock may be purchased (i.e., increase units for future sale).
- ◆ If animals are below planned weights – then a corrective action is needed. This may be:
 - do nothing – targets may not be met
 - supplement
 - change paddocks to a feed source.

Improving feed supply (quality and quantity), and in advance establishing special purpose pasture (e.g., ryegrass drilled into setaria or a forage brassica) provides a longer window of feed supply. Likewise, allocation to less productive feed sources when the animals’ feed requirements align (e.g., dry cows) allows a rest period of other paddocks for growth. The MLA Feed demand calculator assists understanding of feed demand and supply and when a solution to a feed gap is required. Cost effective solutions are critical, as are actions to mitigate risk to production targets. Winter feeding options can address both needs.

What does it all mean?

Feed resources will vary over the property so alignment of nutritional needs with demand is a priority. Flexibility in feeding options increases feed use efficiency in the production system. Systems that have a higher grazing pressure have higher output per hectare – a primary profit driver. Utilisation of feed produced is directly influenced by the system design.

The implications of feed supply not meeting live weight gain targets or animal maintenance energy requirements has both animal health impacts, and short term and long-term impacts on all three profit drivers.

Key take home messages

- ◆ Feed supply (quality and quantity) and utilisation of feed grown influences profit drivers via reproductive efficiency (calves sold per cows joined), stocking rate (units produced) and product quality (price received).
- ◆ Consider limiting components to the production system (winter feed constraint). Then identify one action that ensures multiple benefits (e.g., a special purpose pasture extending the summer feed supply).
- ◆ Feed budgeting (recording feed on offer and predicting times where there will be a surplus or deficit) raises awareness of any corrective actions necessary to ensure production targets are met.

Relevant tools and resources

◆ Feed Demand Calculator

Understand the pattern of feed supply and demand over a 12 month period. This calculator was developed for MLA by CSIRO, with DJM Livestock Consultants P/L and PSA Services and is based on the more detailed decision support tools, GrazFeed and GrassGro.



◆ Cost of Production Calculator

Cost of production (CoP), measured in cents per kilogram, is an indication of the outlay required to produce each kilogram of meat for beef, sheep and goat.

For producers wanting to improve the performance of their meat-producing enterprise, a good understanding of the current health of the business is essential.

Cost of production is a key factor affecting the profitability of beef, sheep and goat producing businesses. Calculating your cost of production is an important step in assessing herd and flock performance and a first step to making change.



◆ Feedbase planning and budgeting tool

Developed by EverGraze, this calculator assists with:

- planning rotational grazing systems
- determining appropriate stocking rates
- calculating pasture growth rates
- determining how long paddocks will last
- calculating the most economical ration stock.



◆ **More Beef from Pastures**

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



◆ **Gra\$\$ to Dollars**

Grass to Dollars is a training package which will provide producers and managers with the skills to grow and utilise more pasture, learning to be less reactive, more proactive and to better manage risk. Participants will learn to:

- assess pasture quantity, quality and composition
- assess animal condition
- determine how much a ruminant animal can eat, how to measure this and to understand if this is adequate
- allocate adequate pasture to achieve livestock targets
- develop a grazing and livestock management plan.



◆ **Pasture Principles**

Pasture management is the fundamental skill that determines the profitability of pasture based grazing systems as the key driver of stocking rate.

Pasture Principles developed by Pinion Advisory, provides a group training environment for producers to learn the guiding principles of pasture management that will allow them to work confidently regardless of the season or system.

Pasture Principles is a seven-day program including theory and on-farm coaching sessions delivered within a 12-month period, with sessions aligned with key seasonal pasture management timeframes.

The program covers:

- leaf stage and emergence
- animal requirements
- feed budgeting
- measuring pasture cover
- cost:revenue decision making
- setting rotation lengths.



Feedbase updates

Winter forages and tropical pastures – opportunities and concepts



Nathan Jennings

Senior Livestock Officer, North Coast Local Land Services

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About Nathan

Nathan Jennings is a Senior Livestock Officer with North Coast Local Land Services based at Casino on the NSW far north coast. He has over 12 years' advisory experience in the subtropics focusing on beef production from pasture. Nathan has been following pasture dieback in Queensland since 2016 and confirmed the first case in NSW in early 2020, since then he has been working with producers and industry to find practical options for managing dieback and maintaining beef production. Nathan also 'has some skin in the game' owning and operating the family's tropical composite breeding enterprise in the northern rivers.

Session summary

There is no one right farm system, but the concepts of feeding livestock and matching feed supply with demand will apply equally to every farm system.

Every beef herd has a feed requirement that is needed to achieve the desired level of production and as producers, we chose our herd size, and the targeted production (kilograms beef/ha). By selecting our stocking rate and a production target, we set the feed requirements needed by our operation. Do you know your herd's daily feed requirement?

As managers, we then choose how we will supply the feed to meet the herd requirements. The most common, and the most efficient way we feed animals is through pasture grown and utilised. However, when the herd's daily feed demand is greater than our pasture growth rate, what do we do? Often producers are forced to purchase supplementary feed at a relatively expensive price.

The more reliant a beef enterprise becomes on purchased supplementary feed, the more exposed it is to beef prices. Understanding your herd's feed requirements across the year will assist you in making decisions about how you will fill a feed gap in the most economic and efficient way.

Winter forages have significant opportunities to help meet animal feed requirements and bridge the winter feed gap on the north coast of NSW, as a relatively inexpensive feed source. In some beef operations, the inclusion of winter forage species into the feedbase will enable producers to increase beef production (kilogram of product produced/ha) and drive the profitability of their beef enterprise.

The basis of determining whether winter forage crops present an opportunity to bridge the winter feed gap and drive the productivity of your beef enterprise is understanding the daily feed requirements of your herd across different times of the year, and how these requirements differ between livestock classes. This knowledge influences decision making regarding supplementary feeding and the impact your chosen feed supply strategy will have on production and profitability.

Key take home messages

- ◆ Knowing your herd's feed requirement is essential if you are to profitably manage anything else.
- ◆ Supplementary feed costs range from relatively inexpensive to expensive. The more producers rely on expensive supplementary feed sources, the more exposed to beef price drops they become.
- ◆ When it comes to supplying feed to a herd, including pasture, knowing the individual animal and mob's daily feed requirements is essential to feeding in the most economically efficient form.

Relevant tools and resources

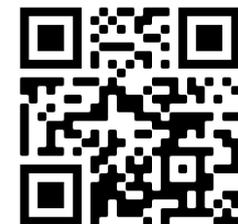
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◆ **MLA Stocking rate calculator**

The stocking rate calculator is designed to determine the number of cattle or sheep you should put into a paddock based on its carrying capacity.



◆ **Feedbase hub**

Manage your pastures for optimal performance with practical resources found on MLA's feedbase hubs.

These hubs bring together the latest R&D on soil, pasture and weed management to increase pasture production, quality and persistence.

Featuring case studies, calculators, reference guides and training packages, the hubs offer plenty of practical information to support producer decisions throughout the season.



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Pasture dieback – diagnosis and management in NSW



Nathan Jennings

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About Suzanne

Dr Suzanne Boschma is a Senior Research Scientist with NSW DPI based at Tamworth in northern NSW. She has over 20 years' experience in pasture grass and legume field-based research, in particular tropical pastures. Sue has been following pasture dieback in Queensland since 2016 and has led the NSW DPI team raising awareness of pasture dieback and developing resources to assist producers and advisors.

Session summary

Pasture dieback is a condition affecting large areas of grass pasture in Queensland and more recently in NSW. Dieback-affected pastures have reduced productivity and die prematurely. There has been a significant spread of the condition throughout eastern Queensland from the Atherton Tablelands to the NSW border, and in recent years into NSW. All tropical grass species commonly sown in NSW and Queensland are susceptible to pasture dieback, including a number of native species.

Pasture dieback on north coast NSW

Pasture dieback was confirmed in the Tweed Valley of NSW in March 2020. It has since spread south to Alstonville and west to Grevillia with more than 10,000ha affected. The condition has caused rapid and dramatic loss of pasture productivity on the north coast. Carrying capacities have been reduced on affected properties, the extent varying with the proportion of their property affected. Stocking rates have commonly declined 30–50%, with increased supplementary feeding and/or annual forages sown to maintain some animal production. Some properties have been

destocked and the incursion of broadleaf weeds is widespread due to lack of ground cover and competition from the grass pasture.

Pasture dieback only affects grasses, and the symptoms usually start as circular-type patches and are often first observed under trees or tree belts on the sides of hills. The symptomatic area then spreads in all directions, random patches commonly joining to cover larger areas but occasionally the spread will be more even and progress in a front across a paddock. The first grasses affected in a paddock are usually broadleaf paspalum and creeping bluegrass. Other species affected, in decreasing order of occurrence, include common paspalum, couch grass, bahia grass, Rhodes grass, setaria and kikuyu. Symptoms are evident most months of the year but rapid changes in pastures occur during the warmer months of the year, particularly in early autumn following rainfall.

Pastures on the sides of hills are often severely affected. In these locations, soils are typically shallow, highly acidic ($\text{pH}_{\text{Ca}} < 4.8$) with high levels of exchangeable aluminium and lower fertility (low phosphorus, sulphur and nitrogen). Commonly, flats with deeper soils and better fertility (e.g. >50 mg/kg Colwell P) are less affected and slower to succumb to the condition. Greatest impact of pasture dieback has been on properties with high biomass and single species pastures.

What's causing pasture dieback?

MLA and the Australian Department of Agriculture, Fisheries and Forestry in collaboration with several organisations have been:

- ◆ Conducting multifaceted research and development to identify and understand potential causal agent(s)
- ◆ Developing strategies to control dieback and return to productivity
- ◆ Developing tools and resources.

The combined research has reinforced that pasture dieback is a complex issue. Extensive sampling of plants and soils has identified a range of fungi and bacteria, plus some novel viruses, however no single or collection of microorganisms or nutrients has been associated with pasture dieback symptoms (S. Buck, QDAF, unpublished data).

Two insects have been under investigation for their role in the condition: pasture mealybug (*Helicococcus summervillei*) and white ground pearl (*Margarodes australis*). Both are pasture pests and have been found in pasture dieback areas in Queensland, but only pasture mealybug has been identified on the north coast of NSW.

Studies conducted by Queensland University of Technology (QUT) have gained a greater understanding of the biology and life cycle of pasture mealybug (C. Hauxwell, QUT, unpublished data). This information is essential for developing long term sustainable management options for control of this insect.

Management to minimise the impact of pasture dieback and maintain/return to production

On the north coast, pastures affected by pasture dieback have recovered, but are commonly less thrifty and the botanical composition changes, often to fewer and less desirable species. Recovery is highly variable and has taken up to 24 months for a decent level of tropical grass to return but there is no set time frame. Weed control, particularly broadleaf weeds, is essential to assist recovering pasture.

Pastures with high grass biomass, particularly monoculture grass pastures, appear to be more severely affected and die faster than pastures with several grass species. This is possibly because species succumb to pasture dieback at different rates. Presence of legumes in a grass pasture can give an illusion of improved resilience as legumes are not affected by pasture dieback but the grasses can still be affected and die.

Managing pasture biomass to maintain levels ≤ 3 t DM/ha slows the spread of pasture dieback. Ideally grazing pastures, and in some cases if country is arable enough, following with a slasher helps manage pasture biomass and has helped slow the rate of spread.

Fertiliser applications allow for healthier and more robust pastures however, the extra growth must be utilised. Pastures that have been fertilised with high levels of nitrogen and left un-utilised have succumbed to pasture dieback quickly. Fertiliser applications in conjunction with frequent rotational grazing has resulted in a much-reduced rate of spread.

Sowing annual forages on the more arable areas provides an opportunity for improving feed quality and ground cover. Annual ryegrass and summer forages, such as millet and chicory, have been successful short-term strategies.

Demonstration plots and now some producer sown paddocks suggest that some perennial tropical grasses can be resown into dieback affected country. Whilst there is still the risk of them succumbing to dieback in the future, some species are showing more tolerance, especially when coupled with biomass management or a more intensive grazing system.

Sowing perennial legumes is an option as they are not affected by dieback however, broadleaf weeds are a significant barrier. Producers who have used a systems approach to managing their more arable country have found reasonable success establishing legumes and intend to re-introduce grasses that show more tolerance in the future.

Conclusion

While pasture dieback is an emerging challenge on the north coast, in many cases it is presenting opportunity to improve our pasture base and maintain livestock production. Albeit these opportunities are through some adjustments to our 'farming as normal' practices. We have enough evidence from both research and on-farm experiences that show with confidence that 'you can keep producing beef' in the face of dieback. As always, as industry undertakes more research and producers continue to try new things, it is evitable that new information will come to light to continue to provide profitable options for managing dieback into the future.

Key take home messages

- ◆ Pasture dieback is a complex issue involving pasture mealybug and poses a threat to tropical pastures in NSW. It has been slowly and sporadically spreading across the far north coast and is so far confined to undulating to steep county.
- ◆ Whilst it can have devastating impacts on productivity, it can be managed, and many producers have now treated it as an opportunity to improve their feedbase and tweak their enterprise.
- ◆ Attempting to wait it out has significant challenges in our environment, largely resulting from excessive weed burdens.

Relevant tools and resources

- ◆ **NSW and Queensland Government Pasture Dieback Identification Guide**

Download the *Pasture Dieback Identification Guide* to view pasture dieback quick assessment flowcharts, outlines of situations which favour pasture dieback, symptom progression pictures, insects associated with pasture dieback, and information on some of the common pasture disorders and diseases which are similar to pasture dieback.



- ◆ **MLA pasture dieback management guide and website**

The red meat and livestock industry is working in close collaboration to respond to the on-farm challenges presented by pasture dieback. MLA, Queensland Department of Agriculture and Fisheries and NSW Department of Primary Industries are working alongside red meat producers, research institutions, peak industry councils and state farming organisations to



ensure ongoing investment in pasture dieback research is effective, well-coordinated and clearly communicated.

Pasture dieback: a management guide for producers and agronomists brings together the latest information on causal factors and management strategies associated with pasture dieback.

◆ **NSW Department of Primary Industries (DPI) pasture dieback website**

The NSW DPI pasture dieback website contains useful pasture dieback information including what symptoms to look for, species affected, and maintaining productivity with alternative forage options.



◆ **FutureBeef pasture dieback website**

Pasture dieback information for northern Australia, including links to signs and symptoms, species affected, research into management solutions, ongoing management, and comparing pasture dieback to pasture rundown. Visit futurebeef.com.au/resources/pasture-dieback/



Apple store

◆ **MLA Pasture dieback survey app**

Pasture dieback survey is a survey tool for reporting suspected or confirmed pasture dieback in tropical and sub-tropical grass pastures in grazing lands. Development has been coordinated by the Department of Agriculture and Fisheries Queensland, on behalf of MLA.



Google Play store

◆ **AgForce Pasture dieback survey**

The AgForce Pasture dieback survey is a crowdsourcing web map where producers can report where they have found suspected pasture dieback. Data collected will assist in gaining a better understanding of the spread and management of pasture dieback across eastern Australia.



Carbon update

Carbon neutral by 2030: What can be done in your production system to reach the industry target?



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About Richard

Richard is a professor of Sustainable Livestock Systems in the Faculty of Agriculture and Veterinary Science at the University of Melbourne. His research focuses on carbon farming and accounting towards carbon neutral agriculture, managing extreme climate events and options for agriculture to respond to a changing climate.

Richard is a science advisor to the Australian, New Zealand, UK and EU governments, the International Livestock Research Institute and the UN Food and Agriculture Organization on climate change adaptation, mitigation and policy development in agriculture. Richard was recently named on the Reuters list of the world's 1,000 most influential climate scientists.

Session summary

The Paris Climate Agreement set the world on a course towards climate neutral production systems by 2050, with the more recent Glasgow agreement setting interim targets for 2030. While governments have been relatively slow in their responses, we have seen a clear response from the multinational agri-business supply chain companies in setting greenhouse gas emission reduction targets by 2030. As more than 70% of Australian produce is exported, plus of the 100 largest economies in the world 69 are companies not countries, the targets of our supply chains are therefore more consequential than government targets. In response, a number of industries have set targets for net zero emissions from agriculture, notably the CN30 target by Australian red meat and livestock industry. This was not done in isolation, as we have seen our competitors set similar targets; the State of Matta Grosso do Sul, Brazil has a net zero target that includes livestock, the New Zealand government has set net zero target (but notably, not a zero target for methane).

A number of tools and resources have been developed to assist producers to understand their emissions, with training courses available to guide producers towards carbon neutral production. The presentation will start by addressing who is asking us to be carbon neutral, and what resources and tools are available to conduct carbon audits. The presentation will end with a summary of the steps livestock producers can take now and what is available from research in the near future to achieve carbon neutrality.

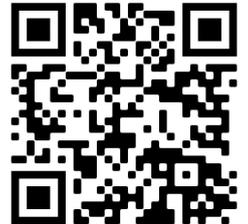
Key take home messages

- ◆ By 2050 producers will need to be carbon neutral, with the journey starting in 2030.
- ◆ Tools and a short course are available to equip producers to respond to this CN30 target.
- ◆ Options for reducing methane have shifted from 20% reduction 20 years ago to some technologies that can deliver 80% less methane today.

Relevant tools and resources

- ◆ **Primary Industries Climate Challenges Centre (PICCC) tools**

Includes access to the Farm Greenhouse Accounting Framework Tools which are freely available for primary industries including Sheep & Beef (SB-GAF): piccc.org.au/resources/Tools



- ◆ **MLA Carbon Accounting Technical Manual**

A technical manual, developed for wider industry use, based on the outcomes and feedback received from a series of pilot carbon accounting workshops run in early 2020 across Australia. The purpose of this manual is to provide background information on carbon accounting and guidance around building a carbon account using the GHG Accounting Framework calculators developed by the University of Melbourne.



- ◆ **Carbon Neutral Agriculture Training Program**

A 1.5 day intensive course supported and facilitated by PICCC, which introduces participants to government policy, industry and carbon market drivers, and Australian agricultural emission sources and sinks. Participants will also develop a full farm carbon audit, account and footprint as part of the program.



Visit piccc.org.au/education/carbonneutraltraining for more information.

◆ **Carbon 101 – MLA eLearning module**

A training package developed for MLAs eLearning center by Pinion Advisory and reviewed by Greenham Tasmanian supply chain producers. The free online training package will provide foundational information about carbon farming and greenhouse gases relevant to agriculture. At the completion of the module users will:

- Have improved carbon literacy and better understand the language of carbon
- Understand what is meant by carbon farming, carbon neutral and climate neutral
- Understand what is meant by carbon farming, carbon neutral and climate neutral
- Understand how to start to improve your carbon performance

Visit <https://elearning.mla.com.au/courses/carbon-101/> for more information.



◆ **Carbon Neutral 2030: Get your business CN30 ready**

The Australian red meat and livestock industry has set a target to be carbon neutral by 2030 (CN30). This means that by 2030, Australian beef, lamb and goat production, including lot feeding and meat processing, aim to make no net release of greenhouse gas (GHG) emissions into the atmosphere.

With a commitment from all of industry, the right policy settings and ongoing research investment, the Australian red meat and livestock industry can be at the forefront of carbon neutrality.

MLA's investment into CN30 research, development (R&D) and adoption aims to enable and empower the red meat and livestock industry to achieve the CN30 target, with a focus on reducing emissions while maintaining productivity gains.

Learn more about the steps you can take right now, within three years, and longer term, to get your business CN30 ready on the MLA website.



◆ **Creating a carbon account for your business – MLA article**



Beef Updates

Improving within-breed genetic evaluation and developing multi-breed genetic evaluation with the Southern Multi Breed Project



Brad Walmsley

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About Brad

Brad Walmsley is a research scientist at the Animal Genetics and Breeding Unit (AGBU). Brad is responsible for the R&D into breeding objectives and selection indexes for beef cattle including the continued development and industry application of the BreedObject technology (breedobject.com). Brad is also the principal investigator in the Southern Multi Breed (SMB) Project that is being conducted across NSW Department of Primary Industries research stations in partnership with Meat & Livestock Australia and the University of New England (UNE). The SMB Project is designed to deliver multi-breed reference data on traits of future economic importance to facilitate the development of multi-breed genomic evaluations. Brad originates from Glen Innes, off a beef grazing enterprise and joined NSW DPI in 2008 after completing a Rural Science degree and PhD at UNE. Brad played a central role in the phenotypic prediction and maternal productivity programs of the Beef Cooperative Research Centre.

Session summary

Genetic improvement, through the use of estimated breeding values and selection indexes, has helped deliver important productivity gains and improve the competitive advantage of the Australian beef cattle industry. These productivity gains through genetic improvement will need to be replicated and increased in the future along with an adjustment in focus to include a greater consideration of consumer expectations around their eating experience (meat quality), animal welfare, sustainability and environmental impact. There is also a need to take stock of how genetic information is delivered to assist the beef industry to increase the gains delivered through genetic improvement.

Genomic selection, or the inclusion of DNA information in genetic evaluations, has the potential to increase the rate of genetic improvement in many livestock species. BREEDPLAN, the genetic evaluation system for beef cattle in Australia, has already implemented models that incorporate both genomic and traditional pedigree information (single-step genetic evaluation). To transfer the full benefits of this development to help on-ground decision making that impacts commercial profitability, those traits driving current and future profit need to be measured on animals that have important influence in industry and are genotyped. These traits include those that are hard-to-measure in the seedstock industry (such as carcase yield and quality), or occur later in life (such as female reproduction) and are often expensive to measure. These phenotypes and genotypes taken on such animals are referred to as a 'genomics reference population'. If developed appropriately, genomic references allow those animals which carry favourable genes for desirable traits to be identified earlier and allow more animals to be assessed for those traits that are hard

and/or expensive to measure. Significant investments have been made to address these challenges and to help drive genetic improvement in the Australian beef industry.

The RepronomicsTM project, being conducted across Queensland and the NT, in association with the Southern Multi Breed (SMB) project, being conducted across NSW, provide a diverse genetic resource on which traits that drive current profitability and/or are considered to be important for future profitability can be measured. These projects aim to generate between 1200–1800 progeny annually through artificial insemination and natural mating programs that are managed in commercially relevant self-replacing systems where these traits are recorded. The females are retained and grown out at each research site prior to joining the breeding herd as maidens at ~15 months of age. They are naturally mated to sires of their own breed as heifers and first-lactation cows with the aim of retaining them in their respective herds for a minimum of three matings. The males are all castrated and following weaning undertake backgrounding until they reach feedlot entry weights. The steers are then feedlot finished for a minimum of 100 days prior to slaughter.

Key trait recording

All calves generated by the project are intensively recorded from birth to the end of backgrounding (steers)/grow-out (heifers). Recording includes accurate recording of birth date, birth weight, calving ease and survival, gestation length (AI calves only), weaning weight, flight time, docility score, yearling weight, and structure. Other traits, such as worm egg count, are recorded regularly beginning at weaning and continuing until the steers enter the feedlot and the heifers wean their first calf. Horn/poll assessments are conducted on all calves at marking, with monitoring continuing while animals are involved in the project.

Following weaning, the heifers have regular ovarian assessments conducted using real-time ultrasound performed by highly skilled ultrasonographers to determine follicle development, and identify the attainment of puberty. All first-lactation cows are regularly scanned after calving to determine their return to cycling. Females have live weight, hip height, body condition score, eye muscle and subcutaneous fat depth recorded prior to mating and at weaning each year, and are assessed for calving ease, teat and udder score at calving. Steers have weight and scan traits, as well as net feed intake, recorded while in the feedlot, with full abattoir, meat quality and consumer testing undertaken following slaughter. All animals are genotyped in alignment with BREEDPLAN standards to allow their data to contribute to single-step genetic evaluations.

The SMB and RepronomicsTM are designed in such a way that data recorded on these profit driving traits has the capacity to be included in current within-breed genetic evaluations. The designs also incorporate multiple breeds within management groups such that the data recorded also serves the purpose of providing foundation data for the future development of multibreed evaluations.

Locations and breeds

Focusing on the SMB project, to reflect the diversity of production environments in southern Australia across years, the breeding herds are located on five NSW Department of Primary Industries (NSW DPI) research properties dispersed across NSW (Trangie Agricultural Research Centre, Trangie; Grafton Primary Industries Institute, Grafton; Tocal Agricultural Centre, Tocal; Glen Innes Agricultural Research and Advisory Station, Glen Innes; Elizabeth MacArthur Agricultural Institute (EMAI); Menangle).

The growing out of the heifers and backgrounding of steers occurs on these properties and the north coast cluster of NSW DPI properties (Duck Creek Agricultural Field Station, Ballina; Wollongbar Primary Industries Institute and Pearce Creek Agricultural Field Station, Wollongbar) with feedlot finishing occurring at the University of New England research feedlot, 'Tullimba' (Kingstown). The SMB project includes the five numerically largest temperate breeds (viz. Angus, Charolais, Hereford, Shorthorn and Wagyu) in southern Australia and the Brahman breed, which is commercially important in the sub-tropical regions of NSW and creates linkage to the RepronomicsTM project. There is a small component of cross breeding occurring at the north coast cluster and Grafton sites involving crossing between the Brahman, Angus and Hereford breeds to produce F1 calves which are commercially relevant to the local

north coast area. Critically, at all locations including in Repronomics™, the breeds are being managed and recorded in mixed breed groups.

Current status

The SMB project has just finished the second year of the five-year project with the third group of calves currently being born. Some of these calves are the progeny of heifers born during the first year of the project. The project now has in excess of 4,000 birth records including calving ease, 2,500 weaning records, 600 feedlot and carcass records and 600 heifer puberty and fertility records. The project will continue to generate more data in the coming years prior to inclusion in any within-breed evaluations or development of multibreed evaluations.

Commercial outcomes

Currently, the SMB project does not contribute data to any within-breed evaluations due to the infancy of the project but moving into the future there is the capacity for SMB data to begin to be available for these evaluations. However, data is already being contributed to the Brahman, Droughtmaster and Santa Gertrudis within-breed BREEDPLAN genetic evaluations by the Repronomics™ project across a number of the current BREEDPLAN traits. This is adding significant accuracy to the EBVs such as those being published for carcass and days-to-calving traits. The benefits from this are being seen in industry with a greater number of tropical breeds having EBVs published for the profit driving traits such as days-to-calving due to the genomic linkages to the Repronomics™ project. This also allows better selection decisions to be made from a wider range of economically important traits.

Key take home messages

- ◆ Genetic evaluation has contributed significantly to productivity and profit gains in the past but further work is required to continue this and capture the benefits of genomics.
- ◆ Investment is being made in the Southern Multi Breed (SMB) and Repronomics™ projects which are designed to measure profit driving traits in animals managed in multibreed groups that have important linkages to the wider industry and are genotyped.
- ◆ Benefits from SMB will emerge in the future but the impacts from research in the Repronomics™ project can already be seen in current Brahman, Droughtmaster and Santa Gertrudis BREEDPLAN genetic evaluations.

Relevant tools and resources

- ◆ **BREEDPLAN**
BREEDPLAN enables substantial genetic improvement for commercially important traits. Using Best Linear Unbiased Prediction (BLUP) technology, BREEDPLAN produces Estimated Breeding Values (EBVs) for a range of economically important production traits.



◆ **BreedObject**

Using BREEDPLAN EBVs, the BreedObject tool draws together breeding objectives and Indexes to assist beef producers in identifying seedstock best suited for the targeted type of herd performance.



◆ **MLA Genetics Hub**

The one-stop-shop for resources to help build understanding of breeding values. The hub is a learning resource for producers who are keen to learn more about genetic tools, and how they can use them in their sire selection decisions. Go to genetics.mla.com.au and choose your enterprise to get targeted information on using genetics in your herd or flock.



◆ **Southern Beef Technology Services**

A joint initiative of the Agricultural Business Research Institute (ABRI) and Meat & Livestock Australia, and breed societies, the Southern Beef Technology Services (SBTS) provides extension services and technical support for southern Australian beef producers to assist them in understanding and using the different genetic technologies that are available. Visit sbts.une.edu.au/ for more information.



Producing restocker cattle for existing and future markets



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About Alastair

Alastair operates RaynerAg – an agricultural consultancy business in NSW, servicing the red meat sector with a focus on beef production. Alastair established RaynerAg in 2013, following a 17 ½ year career with NSW Department of Primary Industries as a District Livestock Officer (beef products). Since commencing operations as an independent advisor, Alastair has established a strong client base in NSW, Queensland and South Australia.

RaynerAg offers a full range of on-farm services including livestock management and selection, nutrition and drought management, breeding herd performance and from 2020 clients can also use Alastair as a licensed Stock and Station Agent.

Alastair is well known for his skills in training and delivery, and works closely with a number of organisations to deliver practical and tailored on-farm training courses and workshops.

Alastair is highly regarded for his technical skills, writing for Beef Central as the Genetics Editor and in leading the national extension strategy for the Australian Feedbase Monitor Project. This joint project between Cibo Labs and MLA will offer every red meat producer real time satellite updates of pasture growth and feedbase changes to assist in more informed grazing decisions.



Roger Bailey

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About Roger

Roger is the owner and manager of their family's grazing and farming enterprise which comprises of store cattle breeding with a summer crop/winter forage rotation and private native forestry. Roger graduated with an Advanced Certificate in Agriculture from Tocal College in 1977 and has been in the cattle industry for 45 years. He has been involved in various industry and community committees and organisations over the years too. Roger 'loves a good spreadsheet' and has a strong interest in science and technology, having used GPS guidance for 15 years and has been running drones for five years.

Roger's tips

- ◆ “It is better to debate the question without settling it, than to settle a question without debating it” – Joseph Joubert 1896.
- ◆ There is nothing more valuable to our industry than the decades of investment in our genetics.
- ◆ Look what we have collectively lost locally in the natural disasters of the last three years. Add to that the toll on our natural assets and infrastructure, and we are significantly reduced. The human cost is ongoing, and we are vulnerable at the moment.

Session summary

The north coast is a significant component of both the NSW and national beef industry. The region is responsible for 10% of NSW beef production and is ranked as 21st in the national rankings for cattle production.

Long considered as a source of cattle for grow out and finishing programs, the decisions made by producers on the north coast have the potential to impact businesses across the country. The design of breeding programs should factor in both the on-farm needs of the breeder as well as the potential requirements of backgrounders and finishing systems.

Understanding the profit drivers of a business should be the most significant consideration for any manager or owner. In the case of northern beef herds, key profit drivers should firstly focus on the production of kilograms of beef per hectare before considering off-farm variables.

The *Australian Beef Report 2020* highlights the difference in herd performance between the average and top 25% of beef businesses on the north coast. The average beef business produces 12.7 kg/DSE compared to 13.9 kg/DSE produced by the top 25% of producers.

In terms of sale weight across all head sold, the average weight is 361kgs, however the producers within the top 25% bracket achieve weights that are 44kgs higher, at 405kg. In terms of price received per kilogram, between 2008–2019 the average north coast beef producer received \$2.27/kg. During the same time frame the top 25% of producers received a slightly higher \$2.33/kg.

The significant difference in income and operating margin between average producers and those considered to be in the top 25% is not due to price received per kilogram, but in the amount of beef produced per hectare. Producers aiming to remain financially profitable need to direct their energy firstly on increasing production rather than chasing marginally higher prices per kilogram.

Developing a program around the production of restocker cattle needs to happen within the framework of a profitable enterprise. Fertility is the primary driver for most herds seeking to be more productive and profitable. In commercial programs, the opportunities to utilise heterosis (hybrid vigor) to assist in achieving higher levels of fertility, as well as increased growth rates and greater herd longevity, should never be overlooked.

Much of the research into the effectiveness of crossbreeding and the opportunities for improved productivity was conducted by NSW Agriculture (now NSW Department of Primary Industries) at the Grafton research station. While the results of this research are generally well known, particularly the value of hybrid vigour when looking to graze cattle on medium and low-quality pastures, there are several other valuable lessons for producers seeking to design restocker cattle.

For many producers the value of a crossbred animal is in the additional fertility – leading to higher conception rates, and importantly earlier conception. This contributes to both higher weaning weights and increased production per hectare. At the same time producers benefit from the hybrid vigor expressed by crossbred calves resulting in higher growth and heavier turn-off weights.

Many producers are tempted to consider introducing a third cross or backcross to a parent breed. This is often the case for producers who may be anxious that higher levels of *Bos Indicus* content may impact on market suitability of the finished animal. The NSW Agriculture research of the mid 1990's suggests some caution be used in choice of breeds over an F1 (crossbred) female.

The research found a backcross animal – (Brahman x F1 (Brahman / Hereford)) or (Hereford x F1 (Brahman / Hereford)) – had lower growth rates on high planes of nutrition when compared to a first cross animal. Producers wanting to use hybrid vigor and offer animals to restockers seeking higher growth should consider using a third breed to maximise heterosis and provide higher levels of growth at finishing.

While the value of cross breeding is evident to many producers, there are growing concerns that the use of *Bos Indicus* genetics can create a disadvantage for producers attempting to achieve higher MSA index values. Although *Bos Indicus* content does have an impact on MSA index, producers need to recognise the MSA index value is determined by a range of factors.

Recent industry research including the Northern Repronomics Project and the Southern Multibreed Project are identifying sires within *Bos Indicus* breeds that have superior genetic merit across a range of traits that impact eating quality. These include IMF% as well as genetic merit for tenderness and for other traits such as temperament. In addition, producers have the opportunity to utilise genomic testing, using the outcomes of the Northern Genomics Project within commercial programs. This project offers the opportunity to measure traits such as temperament, tick and buffalo fly resistance, as well as traits associated with fertility.

These traits impact an animal's ability to achieve higher levels of fertility and contribute to a more productive and profitable herd. They also allow producers to select for traits that can impact on performance for restocker cattle. Resisting the impact of buffalo fly can reduce costs in both treatment and lost condition as animals are grown to slaughter weights.

More significantly, producers can profile their herd and start to select for more genetically fertile animals. These can be joined to bulls with proven EBVs for traits such as IMF%. Making these joining decisions, producers can benefit from better genetics, improved productivity through heterosis, and still produce animals that should meet a restockers' market targets for acceptable eating quality.

Key take home messages

- ◆ Cross breeding continues to offer significant benefits that should be used to maintain or increase productivity and profitability.
- ◆ Genetic information from Southern Multibreed; Northern Repronomics and Northern Genomics should be used along with high accuracy Estimated Breeding Values (EBVs) to design animals suited to market and environments.
- ◆ Well-designed cross breeding programs must include the use of the best animals available to achieve higher outcomes.

Relevant tools and resources

◆ 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.



◆ 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.



◆ BREEDPLAN

BREEDPLAN enables substantial genetic improvement for commercially important traits. Using Best Linear Unbiased Prediction (BLUP) technology, BREEDPLAN produces Estimated Breeding Values (EBVs) for a range of economically important production traits.



◆ MLA Genetics Hub

The one-stop-shop for resources to help build understanding of breeding values. The hub is a learning resource for producers who are keen to learn more about genetic tools, and how they can use them in their sire selection decisions. Go to genetics.mla.com.au/ and choose your enterprise to get targeted information on using genetics in your herd or flock.



Managing parasite burden in challenging environments



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About Phil

Phil is a District Veterinarian with the North Coast Local Land Services, located right here in Casino. Phil has only been in this role since the start of the year. Prior to this, he worked for 20 years for the Queensland Government at the Tick Fever Centre, working exclusively with tick fever. Having survived the 2011 Brisbane floods, Phil felt he needed a bigger challenge and moved to Coraki at the start of the year - just in time for the record-breaking flood. He has since moved above the flood line and is enjoying re-learning about all the nasty little greeblies that infect and infest the cattle of the north coast area.

Session summary

As a result of a record-breaking flood events and continued wet weather, 2022 has been a very challenging year. Cattle (and their owners!) have been under severe stress through these times. These stressors (e.g. nutritional, displacement and other weather-related issues etc.) can all reduce an animal's abilities to cope with parasitic and infectious disease, and we have seen much of this through winter and spring.

Worms

The north coast region is a haven for many parasites given the warm, moist conditions. Infective larvae can be picked up off pasture almost all year round. Lately, there have been quite a lot of barber's pole and small intestinal worm issues presenting as ill thrift through to death.

Some of these worm burdens appear to be present despite a very recent drenching, often with a macrocyclic lactone drench, indicating the presence of drench resistant worm populations. This has also been seen in recent trials conducted by the NSW Department of Primary Industries (DPI), Local Land Services (LLS) and Virbac. Both barber's pole worm and *Cooperia* (small intestinal round worm) were resistant to several macrocyclic lactone (ML) drenches but susceptible to other older style oral benzimidazole (BZ)(white) and Levamisole (clear) drenches. Weight gains were also greater in animals whose barber's pole worm burdens were under control than those whose weren't.

Strategically timed drenches are probably appropriate for this region, given the conditions present which favour parasite survival. For example, a drench at weaning in autumn, followed by a drench in winter, spring and early summer. These drenches could be given to all young animals (less than 2 years of age) as worms are not a big an issue in adult cattle, and drenching adults unnecessarily can promote drench resistance. These strategic drenches will not only help decrease any production limitations due to current worm burdens, but also lessens pasture larval contamination which will help prevent worm burdens from being a bigger problem in subsequent seasons. In between these strategic seasonal drenches, consider using faecal egg counts to determine whether any additional drenching is required rather than just reaching for the drench gun. Remember, less frequent drenching will slow down the development of resistance.

Liver Fluke

Liver fluke infestation is the largest cause of offal condemnations through the local meat works and there has been a high fluke presence this season.

Liver fluke are picked up off pasture, often in wet, poorly drained paddocks, or around soaks and springs. Liver fluke infection does not tend to cause diarrhoea but causes weight loss or poor growth rates, anaemia, and protein loss, leading to bottle jaw.

If unknown, test to see whether animals are actually infested with liver fluke before treatment, so money and time are not wasted on unnecessary treatments. If you have had a previous diagnosis of liver fluke within the mob then its likely infestation will be reoccurring annually and infection can be assumed. Liver fluke is diagnosed by testing blood (or milk) for antibodies or faeces for fluke antigens. Speak with your private or district vet for these tests to be administered.

On fluke-prone properties, treatments should be strategically administered. The most useful treatment is to give a flukicide in autumn which kills both adult and immature fluke. Products containing Triclabendazole or Nitroxylin generally kill fluke at all stages of their lifecycle. A second drench can be given in late winter or early spring to kill any adults. The winter/spring drench should be a different chemical to that used in autumn because only adults are being targeted and it reduces the selection pressure for resistance to the previous chemical. A product containing Clorsulon or Oxytoclozanide could be used here. A third drench in December may be required in very fluke prone areas.

On-farm management of paddocks can also help reduce the reliance on chemical treatment for liver fluke. Prevention practices include improving drainage on wet paddocks and fencing off swampy areas.

Buffalo Fly

The aim of treatment is not total elimination but to control the number of flies. Therefore, tolerate low fly burdens for as long as possible and treat when fly numbers get high (>200 flies per animals) or when cattle are significantly irritated. This will reduce the number of treatments required, which reduces cost and puts less selection pressure on development of resistance. There are levels of resistance to the synthetic pyrethroid (SP) chemicals, so it is important to monitor for effectiveness when using and change to a product from a different class if the product used is not controlling flies.

Treatment for buffalo fly includes sprays, pour-ons, ear tags and back rubbers. A combination of methods may be needed to cover the full fly season. Ear tags are convenient because they give an extended period of control (up to 4 months), but they do need to be removed at the end of their effective period to reduce the chances of resistance developing. Ear tags may need to be supplemented with a spray or pour-on at the start or end (or both) of the fly season. The spray or pour-on should be of a different chemical class to the ear tags used. For example, if using SP ear tags, you could supplement it with an organophosphate (OP) spray or an ML pour-on at either end of the ear tag effectiveness period.

As a general rule in parasite control, use products that are only active against the parasites being targeted at the time, rather than broad-spectrum products that act against multiple species. This will ensure you are not inadvertently treating for a parasite you don't have and putting selection pressure for resistance on it. So, if you need buffalo fly control but not worm control, then an ML product may not be the best option. Remember, adult cows may not need worming, but if treated with an ML for buffalo fly, then they are being inadvertently treated for worms too; so a product of another chemical class will be a better option. However, if your program includes a worming treatment of young stock during the buffalo fly season, then an ML product would be fine in this class of stock.

On-farm management prevention could also include promotion of dung beetles and the use of buffalo fly traps to reduce the reliance on chemicals.

Programs – putting it all together

Develop a management calendar to help inform decisions about when to administer treatments. In this calendar, include joining, calving and weaning periods, in addition to pre-joining practices such as vaccinations and bull checks. Overlay these key times and activities with timings of strategic parasite control treatments.

The Beef Cattle Health and Husbandry book includes an example of this type of management calendar which can be used as a template and adjusted to suit the timings of your enterprise.

Use the table in the back of the North Coast LLS [Beef Cattle Health and Husbandry](#) guide as an example and adjust to suit timings of your enterprise. The [MLA Cattle Parasite Atlas](#) also provides a parasite control program for the north coast of NSW.

Key take home messages

- ◆ Check drenches are actually working by doing a faecal egg count reduction test so you are not wasting money on ineffective drenches. This practice can save thousands of dollars in wasted drench product and your time. Different worms may be resistant to different drenches so the best way to combat this is by using two or more actives from different chemical classes at once. This can be done using the pre-prepared combination products for convenience, or by giving multiple products, one after the other.
- ◆ Use combination drenches to delay resistance or combat resistance if present.

Relevant tools and resources

- ◆ **Beef cattle health and husbandry guide for the NSW north coast**

A comprehensive husbandry guide developed by Local Land Services aiming to provide information on cattle health and husbandry for beef producers in the north coast region of NSW.



- ◆ **The cattle parasite atlas – MLA guide**

A regional guide to parasite control in Australia



Virtual farm tour

About the virtual farm tour hosts



Tom Amey

Araucaria

Tom Amey owns and operates a beef production business in the Northern Rivers region of NSW. Tom produces trade yearlings or heifers for the restocker cattle market and runs a 300 breeding cow herd. Through his involvement in the MLA winter forage/managed tropical grass Producer Demonstration Site (PDS), Tom demonstrated the benefits of incorporating winter forage to fill the winter feed gap. The inclusion of annual ryegrass over the winter, oversown into managed sub-tropical pastures, has allowed Tom to maintain a higher stocking rate on his property throughout the winter instead of running less breeding cows or weaning calves earlier.



Ronny Meldrum

Compton Farms

Ronny Meldrum manages his family farm business 'Compton Farms' at Spring Grove. Ronny operates a beef breeding enterprise, with the majority of the cows being Angus with some Charolais x angus. As a host site in the MLA PDS, Compton Farms demonstrated the value of winter forage rye grass by joining heifers at two years of age. By utilising rye grass pastures for young heifers and steers, Ronny is able to finish higher number of animals each year and also utilise the sub-tropical pastures for his cow herd.



Joe Leven

Cabra Glebe

Joe Leven manages his family farm Cabra Glebe at Doubtful Creek (via Casino), NSW. Joe runs a self-replacing, predominantly hereford beef breeding enterprise. At Cabra Glebe for the MLA PDS, cows on winter forage crops were measured at different intervals over the winter. The main finding was that the cows grazed on winter forages had increased fertility levels, and the stocking rate increased by almost 50% of the winter forage paddocks compared to the sub-tropical.



John Gibson

Medlyn

John Gibson owns and manages 'Medlyn' at South Gundurimba, northern NSW. John operates an angus stud, producing stud bulls and self-replacing heifers. During his involvement in the winter forage and managed tropical grasses PDS, John demonstrated the benefit of incorporating rye grass into his feedbase system. The rye grass pastures allowed for the stocking rate to be doubled in the trial (2.1 breeders/ha compared to 1 breeder/ha on other parts of the property).

My take home messages and actions

Reflect on the presenters 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 and key messages	Actions – Things I could do to implement ideas



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

When was the target set?

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

Will the CN30 target restrict productivity?

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

What progress has been made to date?

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

Why is the baseline year for the target 2005?

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

Will all farms have to become carbon neutral?

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

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

The term carbon neutral encompasses the 3 key greenhouse gases, carbon dioxide (CO₂), nitrous oxide (N₂O) and methane (CH₄).

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

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

What carbon farming practices are eligible to earn carbon credits?

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

What is a carbon credit?

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

What is carbon off-setting?

Carbon offsets refer to the purchase of carbon credits to compensate for emissions a business produces. Landholders and producers can generate credits through recognised carbon farming projects to sell as offsets to third parties

who do not have the capacity to reduce emissions within their business - like airlines or offices. Producers may also purchase offsets to achieve a carbon neutral status for their own enterprise or product.

What is carbon in-setting?

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

Where should I start?

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

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

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

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



Pasture Principles

Building skills in pasture management

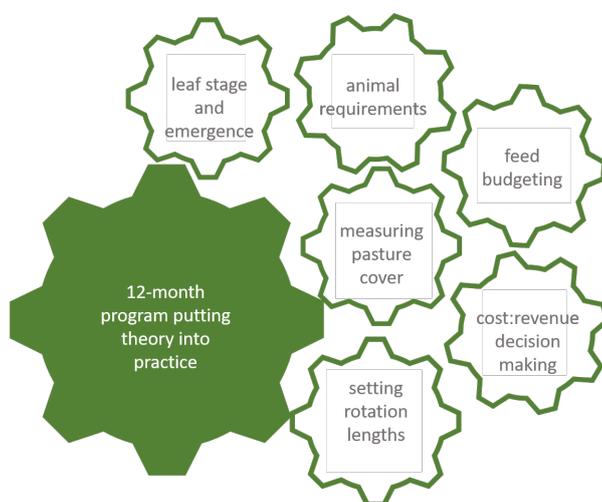
A 12-month program designed to build livestock producer's skills in pasture management. delivered across southern Australia in 2023.

Pasture management is the fundamental skill that determines the profitability of pasture based grazing systems as the key driver of stocking rate.

Pasture Principles developed by Pinion Advisory, provides a group training environment for farmers to learn the guiding principles of pasture management that will allow them to work confidently regardless of the season or system.

The program is suitable for producers involved in the sheep, beef and dairy industries. Groups are delivered across New South Wales, Victoria, South Australia and Tasmania.

Pasture Principles is a 7-session program including theory and on-farm coaching sessions delivered within a 12-month period, with sessions aligned with key seasonal pasture management timeframes.



“Our entire team undertook the Pasture Principles program. From this we implemented a new grazing management plan, only possible with the new skills we obtained from Pasture Principles. Pasture Principles provided us with one of the most critical turning points in our business productivity and profitability in the last decade.” *Frank Archer, Landfall Angus.*



Want to participate in Pasture Principles?

Delivery locations will be determined based on interest. The commercial cost for this course is \$2500 ex GST per farm business. However, with the support of MLA's Profitable Grazing Systems program, this course is discounted for producers.

- \$1750 ex GST** per farm business (*maximum of three people, must be an owner, partner or full-time employee of the participating farm business*)
- \$800 ex GST** per additional person from a participating farm business
- \$2500 ex GST** per person from an agribusiness*

*For more information on agribusiness training packages, please contact us

For more information on New South Wales groups in 2023 please contact Pinion Advisory: pastureprinciples@pinionadvisory.com or T: 1300 746 466



HEIFERS *for* PROFIT

RURAL INDUSTRIES SKILL TRAINING

HEIFERS FOR PROFIT
GETTING HEIFER MANAGEMENT RIGHT



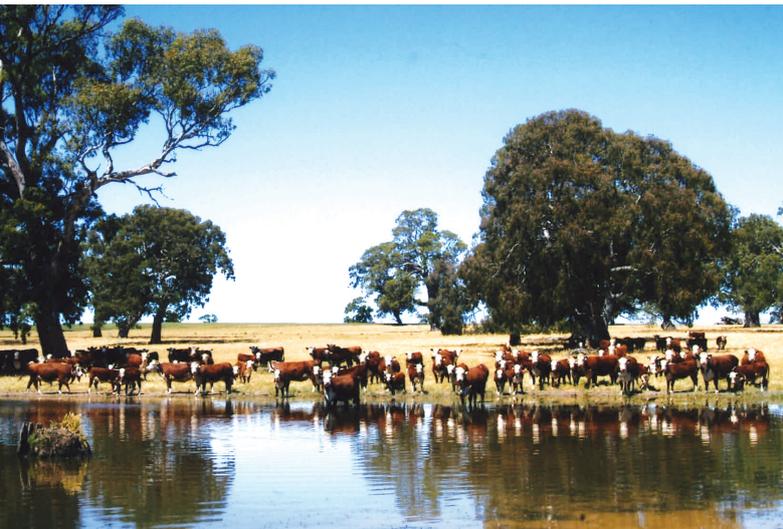
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TOID: 4198

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Hamilton VIC 3300



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

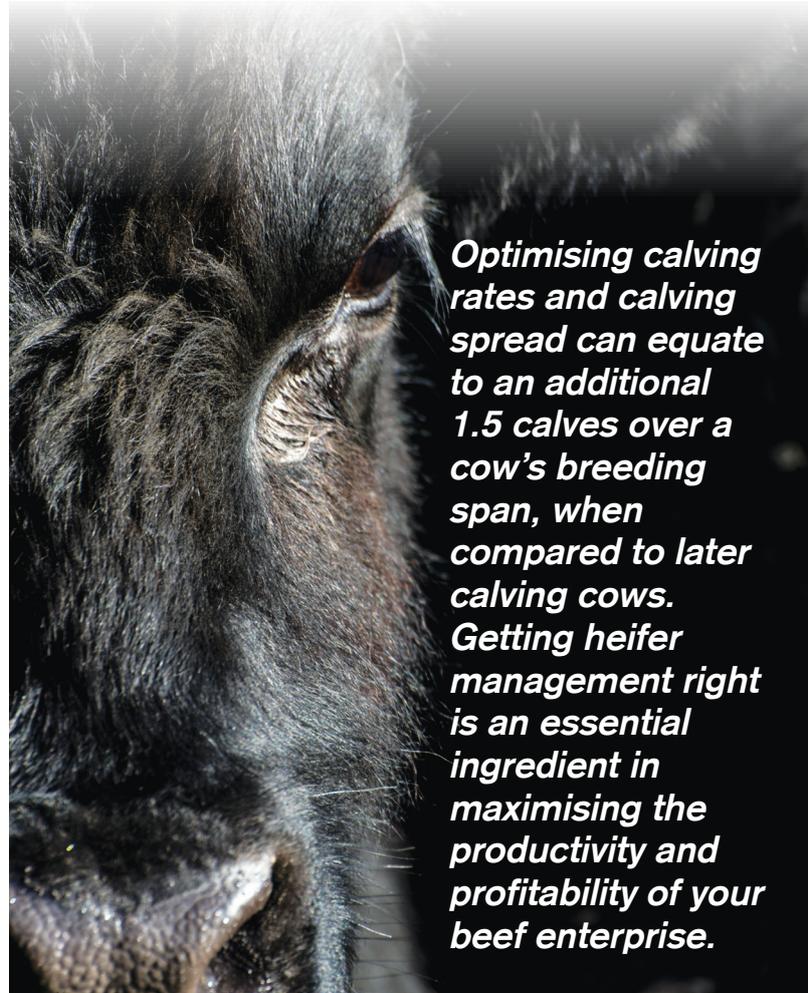
COURSE INVESTMENT

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?

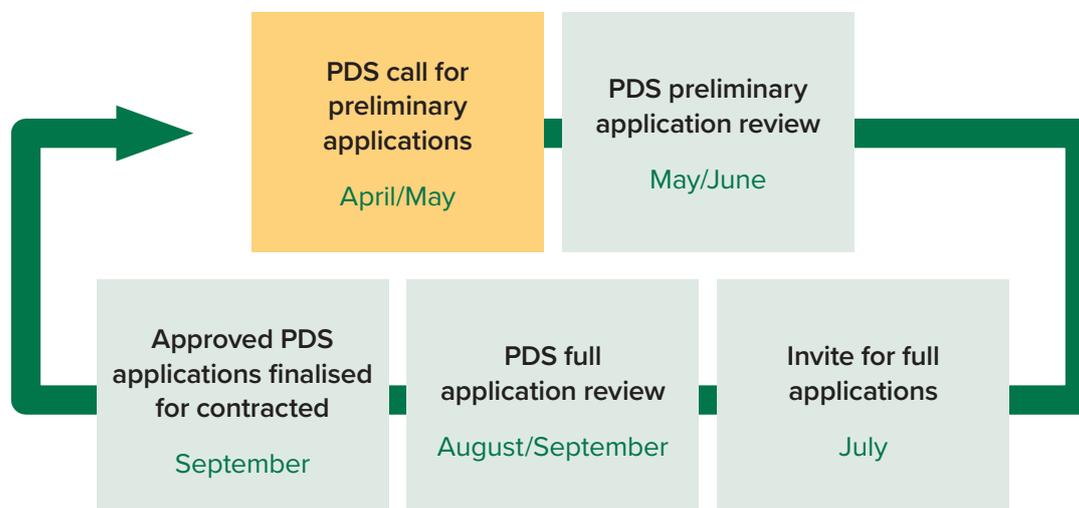
There are two primary funding streams that aim to increase the rate of adoption of on-farm management practices and technologies in PDS projects: levy and co-contributor.

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:

Alana McEwan	MLA Project Manager, Productivity and Market Insights	(07) 3620 5227 amcewan@mla.com.au
Russell Pattinson	PDS Coordinator	0419 872 684 miracledog@bigpond.com
Maria Thompson	PDS Coordinator	0411 961 545 maria@agstarprojects.com.au

► Visit mla.com.au/pds

paraboss



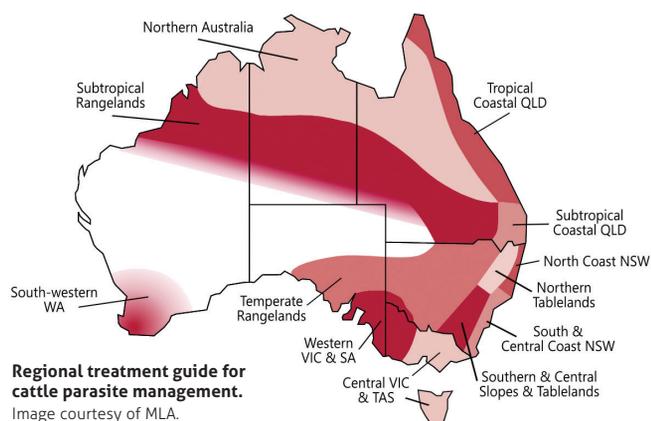
Integrated parasite management for **cattle**

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

This online resource offers regionalised and seasonal tactics to reduce the impact of flies, ticks, worms and lice in any grassfed beef, feedlot or dairy herd.

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

Tried and tested by producers, see how ParaBoss for cattle can benefit your business. Visit paraboss.com.au.



tickboss

wormboss

liceboss

flyboss

This ParaBoss update has been developed and funded by Meat & Livestock Australia, the University of New England and Queensland Department of Agriculture and Fisheries, with technical guidance and endorsement by technical experts.

paraboss.com.au



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.



More information

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

To find an EDGE event near you: mla.com.au/events

To request an EDGE event in your area, send an email to: edgenetwork@mla.com.au

Business EDGE has been developed by Meat & Livestock Australia

Better your business



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

Become an MLA member today

MLA membership is **free** to levy-paying producers of grass or grainfed cattle, sheep, lambs or goats. To become an MLA member call **1800 023 100**, visit mla.com.au/membership or scan the QR code.



www.mla.com.au/meatup

