MEAT & LIVESTOCK AUSTRALIA

meatup FORUM

For the latest in red meat R&D

Naracoorte, 28 June 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

MEAT & LIVESTOCK AUSTRALIA

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.

MeatUp Forum Program: Naracoorte, 28 June 2022

Time	Session	
8.00am	Registration desk opens, tea and coffee available	
8.45am	**Welcome, housekeeping and forum schedule** Pinion Advisory	
9.00am	**MLA welcome and market update** Sarah Strachan, Group Manager Adoption and Commercialisation, Meat & Livestock Australia	
9.30am	**Hold 'em, fold 'em, walk or run? – The Kenny Rogers approach to livestock systems** John Francis, Agrista	
10.20am	Morning tea	
10.50am	**The Australian red meat market risks and opportunities** Matt Dalgleish, Thomas Elder Marketing	
11.35am	**MLA carbon neutral 2030 (CN30) project update** Margaret Jewell, Carbon Neutral 2030 (CN30) Manager, Meat & Livestock Australia	
12.05pm	**Watch a virtual farm tour filmed on farm at South Killanoola featuring interviews with Dean Eastwood and the Seymour family**	
12.30pm	Lunch	
1.30pm	**Red meat eating quality – what producers need to know!** Peter McGilchrist, University of New England	
	Concurrent sessions	
	Room 1	**Room 2**
2.20pm	**Objective measurement informing feedback to improve productivity** Richard Apps, Meat & Livestock Australia	**Turning grass to dollars** Tim Prance, T Prance Rural Consulting
3.00pm	**How to shop for the best sire to accelerate your beef business** Hamish Chandler, Meat & Livestock Australia	**Learn what new traits are available for ram buyers and breeders** Emma McCrabb, Sheep Genetics
3.40pm	Afternoon tea	
4.00pm	**Red meat supply chain panel session** Facilitator – Sarah Strachan, Meat & Livestock Australia Mark Inglis, JBS Ben Davies, Thomas Foods International Peter McGilchrist, University of New England	
4.45pm	**Wrap up** Pinion Advisory	
5.00pm	**Networking, canapes, and drinks** *Featuring a demonstration by MLA Corporate Chef, Julie Ballard*	
7.00pm	Close	

Poll Everywhere

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

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

PollEv.com/pinion

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

Contents

Sessions

Welcome

MLA's MeatUp Forums are held throughout southern Australia to give you the latest in red meat research, development and adoption (RD&A). They are developed by Regional Producer Working Groups that include members from the Southern Australian and Western Australian Livestock Research Councils, in collaboration with the MeatUp Coordinator (Pinion Advisory) and MLA.

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 our MeatUp Forum regional producer working group members from South Australia for their contribution to MeatUp and supporting the development of the program for MeatUp at Naracoorte. The current working group includes:

- Lynton Arney, Finniss
- Allan Piggott, Moorlands
- Amanda Bruhn, Kongorong
- Jo Harvie, Balaklava
- Emily Mellor, Adelaide

Plus, Andrew Morelli, Southern Beef and Sheep Adoption Project Manager, MLA and representatives from the MeatUp Forum project management team (Pinion Advisory).

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

Contact

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

meatup FORUM

MEAT & LIVESTOCK AUSTRALIA

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

196 producers engaged

6 EVENTS

190,286 cattle impacted by MeatUp

517,856 sheep impacted by MeatUp

3,890 goats impacted by MeatUp

7,816,219 hectares of Australian agricultural land impacted by MeatUp

86% SATISFACTION RATING

90% knowledge and skills acquisition increase

86% VALUE RATING

"[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

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

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

MLA welcome and update

Sarah Strachan

Group Manager, Adoption & Commercialisation

sstrachan@mla.com.au

About Sarah

Sarah oversees the delivery and development of the Meat Standards Australia, Livestock Genetics and Producer Adoption programs within MLA. These programs are responsible for converting research into commercial services for businesses along the entire supply chain. This includes providing a diverse range of options for producers to engage with and apply research outcomes into their production systems such as the well-known EDGE Network, Producer Demonstration Sites and Profitable Grazing Systems programs. Sarah has a Bachelor of Rural Science from the University of New England and has worked with MLA for 20 years, spending 18 of these working in the MSA program.

Session summary

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

Relevant tools and resources

- **MLA membership**

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

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

- **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.

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

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

- **Subscribe to MLA e-newsletters**

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

Notes

Hold ‘em, fold ‘em, walk or run? – The Kenny Rogers approach to livestock systems

John Francis

Agrista

john@agrista.com.au

About John

John Francis is a farm business management consultant with over 15 years’ experience in agricultural consultancy and a further 15 years’ experience in production agriculture (agronomy). John holds a Bachelor of Applied Science (Agriculture) and a Certificate IV in Workplace Training and Assessment. John is the owner of Agrista, an agricultural consultancy business based in Wagga Wagga in southern NSW. Agrista provides farm business management advice to farm asset owners and managers, the finance sector, government, industry and the agricultural services sector. John’s expertise generates value for clients by identifying opportunities to improve productivity and profitability.

Session summary

This paper and the associated presentation aim to challenge you to think critically about your livestock production system. While the information here focuses on beef systems, the same principles can be applied to lamb systems. Before you can buy in to what is on offer in this paper, I need your permission to allow me to present you with information that may challenge your existing thinking about your system. The psychology suggests that if I get your permission to challenge you, I will have a greater chance of you accepting my view and therefore a greater chance of me influencing change.

I also need you to think critically about why you have chosen the livestock system that you currently manage. You can do this by writing three reasons that you have chosen your timing of calving, time of lambing and time of sales of trading livestock. This exercise works best if you have no outside assistance with your responses as it is probable that outside assistance will result in bias.

If you don’t know why you do what you do – that’s okay but now is probably a good time to reflect on it.

1. _____

2. _____

3. _____

Now that you have listed your reasons for implementing the livestock system that you manage – think about what evidence you would require to implement a change to your existing livestock system? Peter Boghassian, Assistant Professor of Philosophy at Portland State University, encourages an approach to seek information that could undermine confidence in a particular belief.

Daniel Kahneman, in his book, 'Thinking Fast and Slow', divides the mind into two systems. System 1 is the quick-fire part of the brain that uses certain rules to allow us to respond quickly, intuitively and efficiently. System 2 is slower, more analytical and better at reasoning. Kahneman suggests that the initial attempt to believe something is an automatic operation of System 1. The problem is that System 1 is gullible and biased to believe, while System 2 oversees doubting. The beauty of Boghassian's approach is that the challenge requires thought. This progresses thinking from System 1 to System 2 where doubting is more likely. Each question is an opportunity to revise beliefs and to seek evidence that disconfirms.

A livestock system is made up of a number of component inputs that influence productivity, cost efficiency, profitability and environmental sustainability.

The component inputs that typically have the most influence on a livestock system are:

- Time of lambing/time of calving
- Time of turnoff of trading livestock.

These components, when coupled with the feedbase, result in differences in livestock price (per kilogram and gross) and differences in livestock weight at sale.

If the aim of the design of the livestock production system is to deliver a resource efficient outcome, then the design should consider the resources that it depends on. A livestock system typically depends on the feedbase, human resources, capital and environmental resources. Of these, the feedbase and the matching of feed supply with feed demand is possibly the most critical element in driving production efficiency.

Figure 1 shows two pasture growth curves for south-east South Australia weighted by pasture type. A pasture growth curve shows the average or expected timing of feed supply over the year by providing average daily pasture growth rate for each month of the year. While there are differences in feed supply per month between the two localities resulting in total biomass differences between localities of 3.3 tonnes dry matter per hectare there are also a number of important common features of these curves. The common features are that autumn, winter and spring provide around 12, 30 and 50 percent of total annual feed supply respectively. The other common feature, which is not shown in this graph but is common to many Southern Australian pasture systems is that autumn feed supply is significantly more variable than spring feed supply.

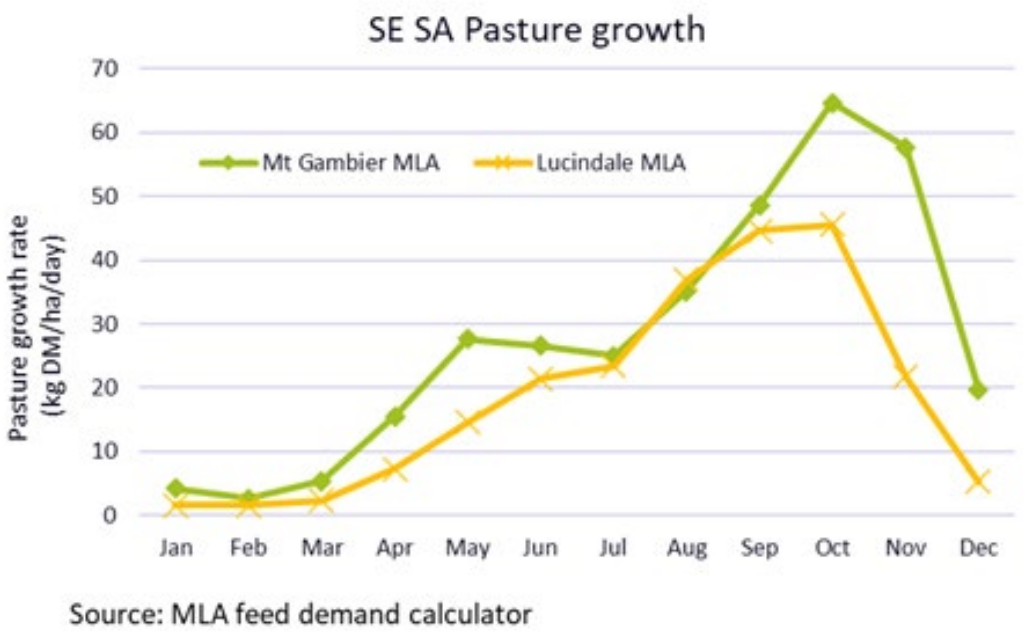

Figure 1: Spring provides 50% of total annual feed

MLA situation analyses have shown that livestock systems that achieve high levels of feed utilisation deliver greater levels of per hectare production which drive higher levels of profitability. These systems produce more meat per hectare thereby driving higher income and delivering cost efficiencies. Consuming a large proportion of the spring feed is critical to achieving high levels of feed utilisation and this is completely dependent on the design of the livestock system.

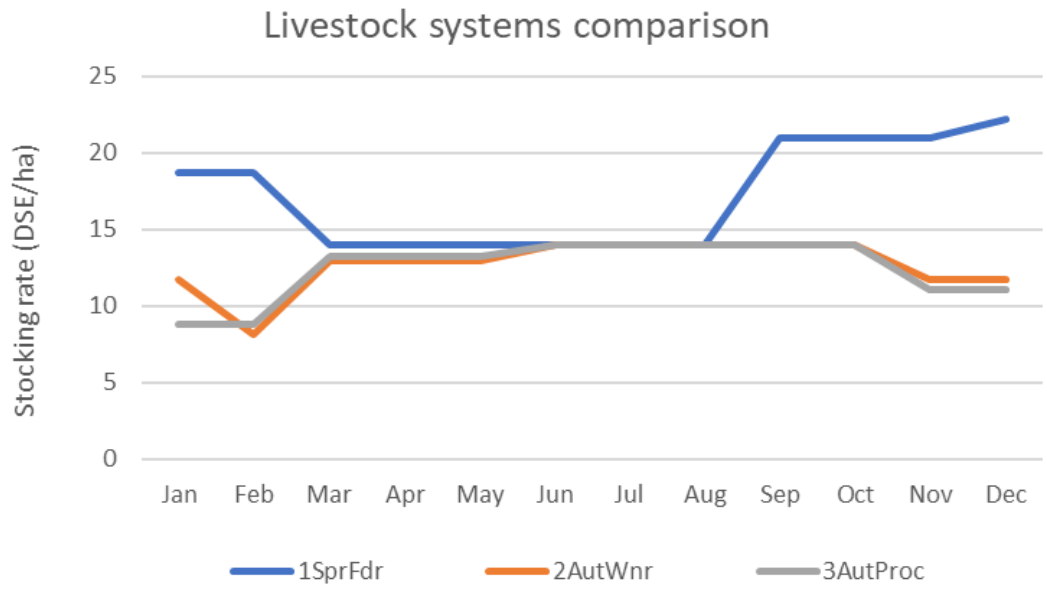

Figure 2: Systems differ in their ability to match feed supply with demand

Figure 2 shows the shape of the feed demand curve for three different livestock systems. The blue line represents a September calving beef herd turning off feeder steers in December at 450kg liveweight per head. The orange line is a March calving herd turning off 320kg weaner steers in January while the grey line is a March calving herd turning off steers at 550 kilograms per head in December.

The systems have been compared on the basis that they are all running the same mid-winter stocking rate (14 DSE per hectare). The key difference between the spring and winter calving systems is the shape of the feed demand curve. The spring calving system has the lowest energy demand in mid-winter, the highest in spring and the next highest in autumn. The autumn calving herd energy demands peak in winter, decline in spring and are lowest in autumn.

It could rightly be argued that neither of these curves has ideally matched feed and energy supply with energy demand. The spring calving herd requires significant energy in January and February while the autumn calving herds require little. On the flip side, the autumn calving herd utilises very little spring feed while the spring calving herd utilises far more of it. The question therefore with a spring calving herd becomes: is the cost of energy deficiency in the months of January and February greater than the benefit of high feed utilisation in spring? The short answer is that the value of the additional utilisation of spring feed seems to significantly outweigh the cost of the summer energy deficit.

The following metrics are provided to demonstrate how an apparent simple difference in the shape of a feed demand curve drives differences in production and profitability. It is provided to encourage deeper thought on the differences between systems.

Table 1 shows that the spring calving feeder system utilises 49% of feed grown while the autumn calving weaner and processor systems achieve utilisation levels of 37% and 36% respectively.

Table 2 shows that in order to lift feed utilisation levels to a similar level as the spring calving feeder system the autumn systems need to run a mid-winter stocking rate that is 30% higher than the spring calving system. Even if this was possible the levels of per hectare production in the autumn calving systems do not exceed those of the spring calving system.

Table 1: Mid-winter stocking rate, spring to autumn 1:1. Some production systems allow for better per hectare production

System	1SprFdr	2AutWnr	3AutProc
Calve	Sep	Mar	Mar
Age at turnoff (mth)	16	11	22
Str wt at turnoff (kg lwt/hd)	448	320.5	554.8
Str price at turnoff ($/kg lwt)	$5.50	$6.50	$5.50
Gross profit ($/DSE)	$104.19	$102.91	$107.63
Enterprise expenses ($/DSE)	$10.00	$14.00	$14.00
Overhead expenses ($/DSE)	$25.00	$33.72	$34.43
Operating profit ($/DSE)	$69.19	$55.20	$59.20
Operating profit ($/ha)	$1,190	$700	$737
Operating profit ($/ha/100mm)	$159	$93	$98
CoP ($/kg lwt)	$1.64	$2.54	$2.23
Price received ($/kg lwt sold)	$4.98	$5.59	$5.04
Production (kg beef/DSE)	21.3	18.8	21.7
Production (kg beef/ha)	367	238	270
Production (kg beef/ha/100mm)	48.9	31.8	36.0
Average ann stocking rate (DSE/ha)	17.2	12.7	12.5
Mid winter stocking rate (DSE/ha)	14.0	14.0	14.0
Feed utilisation	49%	37%	36%

Table 2: Mid-winter stocking rate, spring to autumn 1:1.3. It is near impossible to optimise feed utilisation with some systems

System	1SprFdr	2AutWnr	3AutProc
Calve	Sep	Mar	Mar
Age at turnoff (mth)	16	11	22
Str wt at turnoff (kg lwt/hd)	448	320.5	554.8
Str price at turnoff ($/kg lwt)	$5.50	$6.50	$5.50
Gross profit ($/DSE)	$104.19	$102.90	$107.75
Enterprise expenses ($/DSE)	$10.00	$14.00	$14.00
Overhead expenses ($/DSE)	$25.00	$26.26	$26.74
Operating profit ($/DSE)	$69.19	$62.64	$67.02
Operating profit ($/ha)	$1,190	$1,022	$1,073
Operating profit ($/ha/100mm)	$159	$136	$143
CoP ($/kg lwt)	$1.64	$2.14	$1.88
Price received ($/kg lwt sold)	$4.98	$5.58	$5.04
Production (kg beef/DSE)	21.3	18.8	21.7
Production (kg beef/ha)	367	307	348
Production (kg beef/ha/100mm)	48.9	41.0	46.4
Average ann stocking rate (DSE/ha)	17.2	16.3	16.0
Mid winter stocking rate (DSE/ha)	14.0	18.0	18.0
Feed utilisation	49%	47%	46%

It is naive to expect that the evidence presented in this paper will deliver a change in behaviour because psychology and cognitive bias plays a significant role in behaviour change. Cognitive biases are adaptive judgement mechanisms that result in faster decisions (System 1 thinking), but they can sometimes lead to inaccurate and irrational judgements. Being aware of these biases is a great start in a journey of self-discovery. The ambiguity effect, and loss aversion are just two of many biases that could potentially affect decisions around livestock systems implementation.

The ambiguity effect is the avoidance of options that appear to be ambiguous or that are missing information. The dislike of uncertainty means that a certain option with a known outcome is chosen over an option with an uncertain outcome. It is possible that producers prefer a system with low feed utilisation but with a known return when compared with a system with higher feed utilisation but ambiguity around the management factors that drive success.

Loss aversion – the pleasure from gain is considered half as powerful as the pain experienced from loss. It is possible that the fear of the impact of a spring drought, which occurs in the minority of years, to a spring calving system delivers more pain than the pleasure experienced from the higher profitability which occurs across the majority of years.

It is possible to improve decisions involving livestock systems by increasing awareness of these biases and increasing knowledge about processes to assist in delivering success and understanding factors that can influence decision outcomes.

Key take home messages

- Livestock production systems are critical to driving feed utilisation and thus productivity
- Productivity is an output of the system
- Knowing your biases will help to improve decision making in all areas of farm management

Relevant tools and resources

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

- **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 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

- **Gra$$ to Dollars**
  Based on the highly successful Prograze® course, Gra$$ to Dollars is delivered over nine on farm coaching sessions, including one, individual coaching session.

  The program aims to develop skills and understanding in:

  - Pasture assessment
  - Sheep and cattle profit drivers
  - Feed budgeting
  - Increasing profit from a permanent pasture system

- **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. An producers manual is available online. Each module provides tools and information to enable southern beef producers to increase productivity and profit while minimising risk.

- **Business Essentials**

  Supported learning package covering the fundamentals of managing the business side of a livestock enterprise.

Notes

The Australian red meat market risks and opportunities

Matt Dalgleish

Thomas Elder Marketing

Matthew.Dalgleish@thomaseldermarkets.com.au

About Matt

A graduate of economics and education, Matt started trading equities in the late 1980s. Matt moved across to trading currencies at a major Australian bank once university was completed. Making the transition into agricultural market analysis was an exciting opportunity, enabling Matt to use his data analysis and forecasting skills to provide commentary and strategic advice to the agricultural industry, particularly within the livestock sector. Matt has become a prominent agricultural market analyst, often quoted in the agricultural press and sought after for his independent, data-driven assessment of agricultural markets.

Session summary

This session will focus on the demand and supply factors currently influencing the Australian beef and sheepmeat markets from a domestic and global perspective. A summary of a selection of factors that will be covered during the presentation are listed below.

Tight supply

A rebuild is underway in both the cattle and sheep industry, although the pace of the rebuild has been more pronounced in sheep markets.

- The December 2021 sheep turnoff ratio (STR) came in at 9.5% and the annual average is at 9.2%. The June 2021 quarter saw it reach an all-time record low of 8.9%.
- An STR below 14% signals a rebuild to the flock is underway. During the 2010/11 wet season rebuild the STR averaged 12% (refer to figure 1).
- MLA are targeting 74.3 million head in 2022, which is a gain of nearly 5% on 2021 flock levels, this rebuild momentum is broadly consistent with the current STR levels.

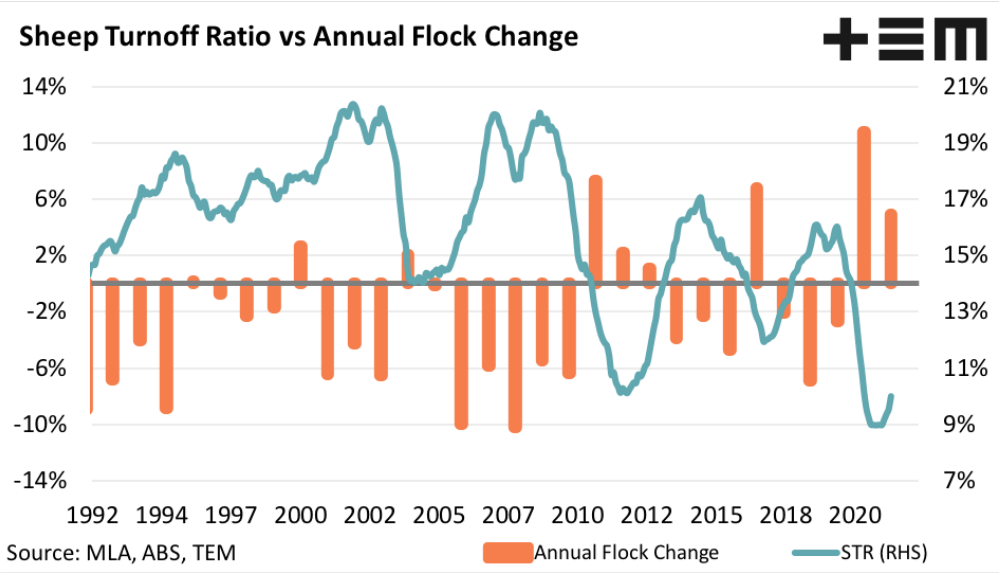

Figure 1: Sheep turnoff ratio versus annual flock change

- The December quarter 2021 Female Slaughter Ratio (FSR) is at 43.4%, down from 44.4% in quarter three. This brings the annual average FSR to 45.3%.
- 47% is the thresh hold between herd rebuild and liquidation (refer to figure 2).
- The current FSR levels are not yet indicative of the very strong rebuild MLA are forecasting in 2021/22. We would need to see an FSR towards the low 40% area to get momentum behind a herd rebuild.

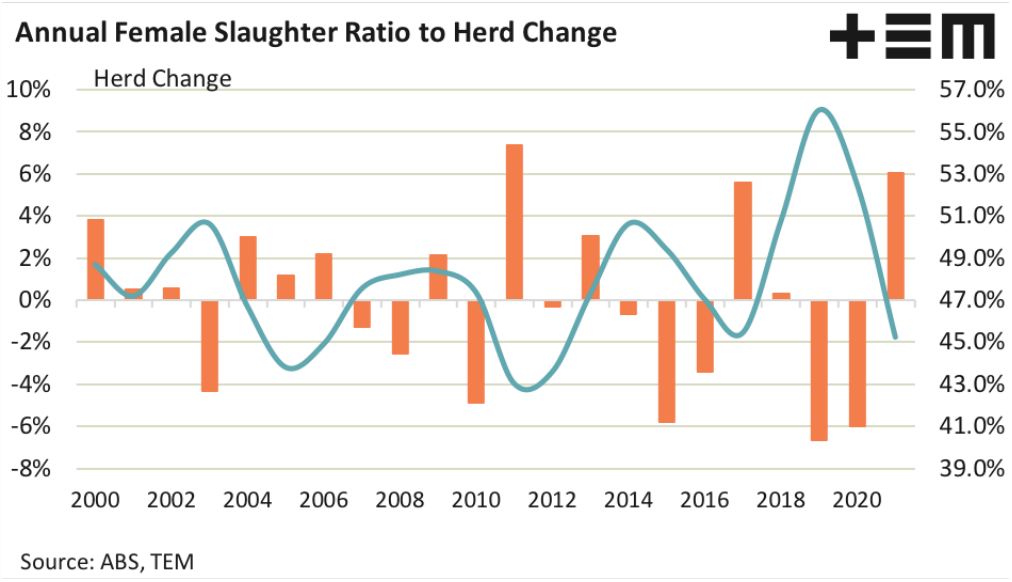

Figure 2: Annual female slaughter ratio to herd change

Beef processor headwinds

Beef processor margins are recovering from their worst level on record. February 2022 saw margins at $272 per head loss, which brings the annual average margin to a $308 loss for the 2022 season.

Current losses are beyond historically extreme levels (refer to figure 3), and the tight supply environment means that it is unlikely that beef processors will see relief soon, suggesting a risk of processor closure and industry rationalisation.

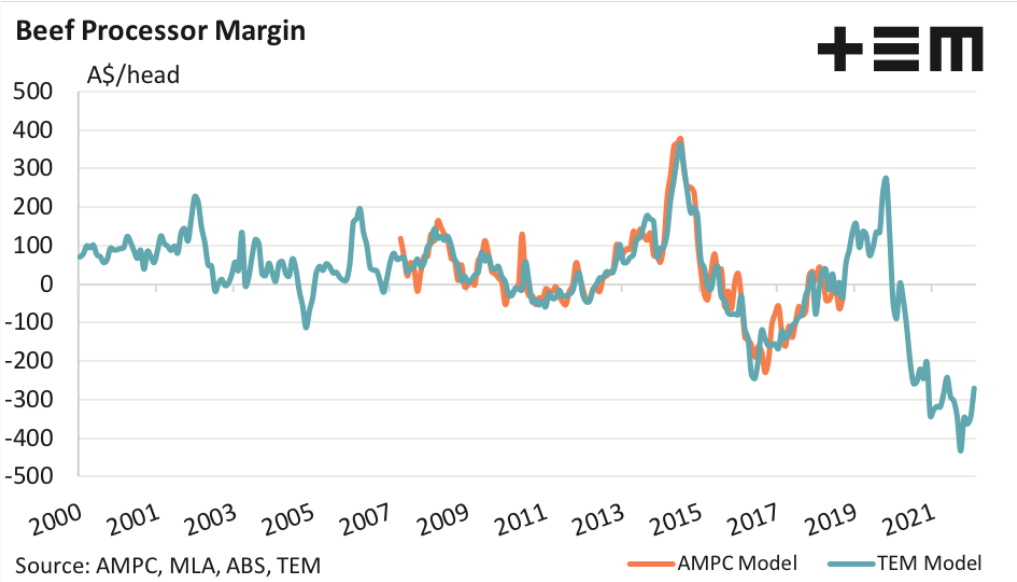

Figure 3: Beef processor margins

Australian premiums to global beef

Australian cattle prices have managed to sustain price premiums compared to their US counterparts. This is reflective of the different supply conditions in each country. Climatic factors also continue to support the Australian producer as the herd rebuild is underway. The question will be how long can this situation last?

Uncharacteristically high annual slaughter rates in Australia during 2014/15 was driving the wider than normal discount spread to the US (refer to figure 4). Similarly, the very low levels of slaughter that Australia is currently experiencing is forcing domestic prices to sit at premium spreads that are around 100 US cents (130 AU cents) higher than would be expected, based on current US cattle prices and the normal historic relationship that exists between the two price series.

Indeed, the annual average price spread in US cents/kg has fluctuated between a 39 US cent to 81 US cent discount for 27 of the last 32 years. Drought conditions beginning in 2013 saw the spread discount widen beyond 100 US cents, reaching nearly 170 US cents on an annual average basis in 2014, before moving to a 123 US cent discount in 2015.

In 2020 the spread between Australian Heavy Steers and US Choice Fed Steers moved to a very marginal 1.5 US cent premium as an annual average. In 2021 the premium has widened further to hit an annual average of nearly 39 US cents (around 52 AU cents). Current spreads sit at an annual average premium of nearly 20 US cents.

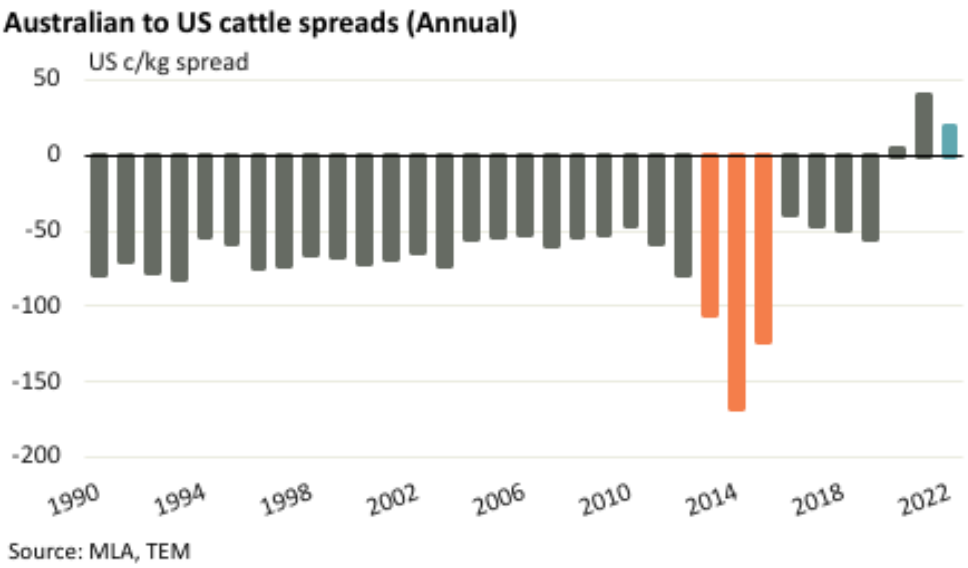

Figure 4: Australian to US cattle spreads (annual)

Global sheep picture favours producer

Australia and NZ are the dominant suppliers to the global sheepmeat market. The sheep flock of the top ten exporting nations are at record lows and the Kiwis are continuing to select beef and dairy over sheep in their enterprise mix (refer to figure 5). This presents a great opportunity for the Australian sheep producer to benefit from increasing demand for sheep meat from several trade destinations. Although, strong price signals could encourage the Kiwis to reconsider sheep again.

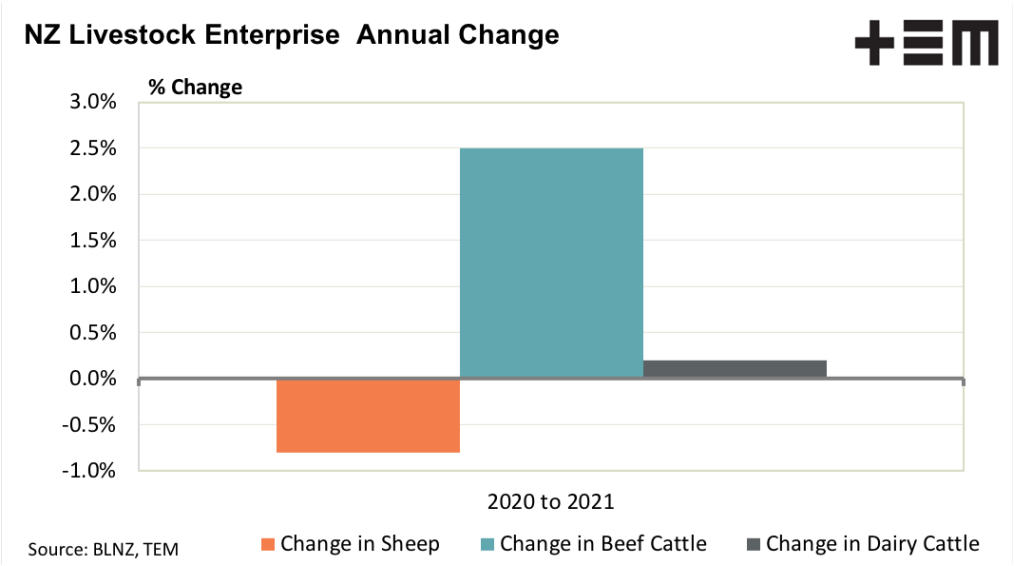

Figure 5: NZ livestock exchange annual change

Exceptionally strong demand for sheepmeat from the USA

During 2021 lamb and mutton exports from Australia to the USA saw unseasonal strength during the middle of the season suggesting a changing dynamic in the demand landscape in America. 2022 has begun in an equally strong fashion for Australian lamb exports.

The growth seen in demand in the USA for sheepmeat (refer to figure 6), along with a re-emergence of the Middle East consumer, access to the UK (post Brexit) and increased demand for sheepmeat from the south east Asian region places the Australian sheep meat producer in an enviable position. The potential of trade into India is also another possible boost for the sheep meat producer into the next decade.

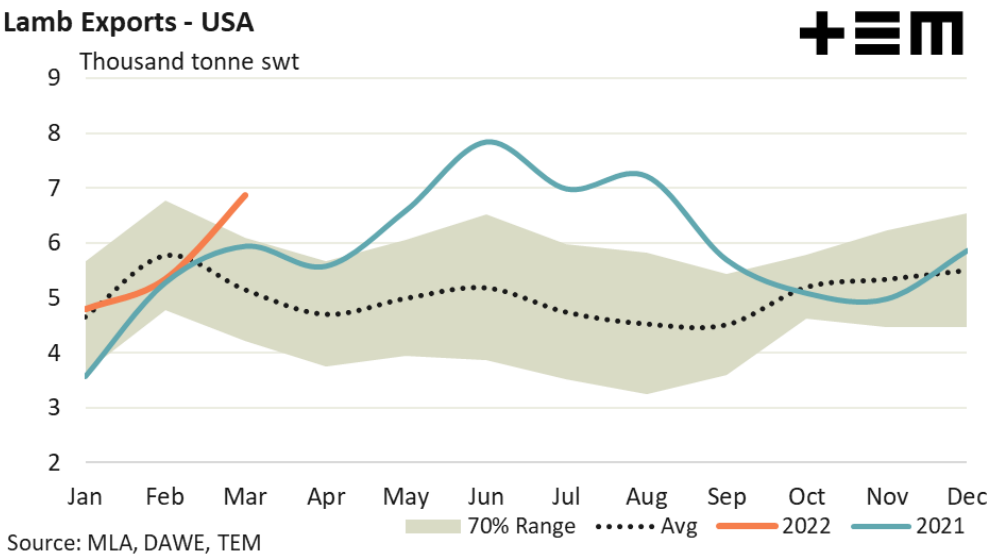

Figure 6: Lamb exports to the USA

US beef – friend or foe?

The USA are unique to us in the beef export trade in that they are a competitor of ours into Asia, yet they are also a customer for Australian beef.

The market share of US beef import flows over the past five years highlights a new competitor to Australia has emerged with Brazil (refer to figure 7) staging a meteoric rise in market share from 5% of the US trade in 2017 to 25%, so far in 2022. The growth in Brazilian access to US beef markets appears to have "cut the lunch" of the Aussies and the Kiwis.

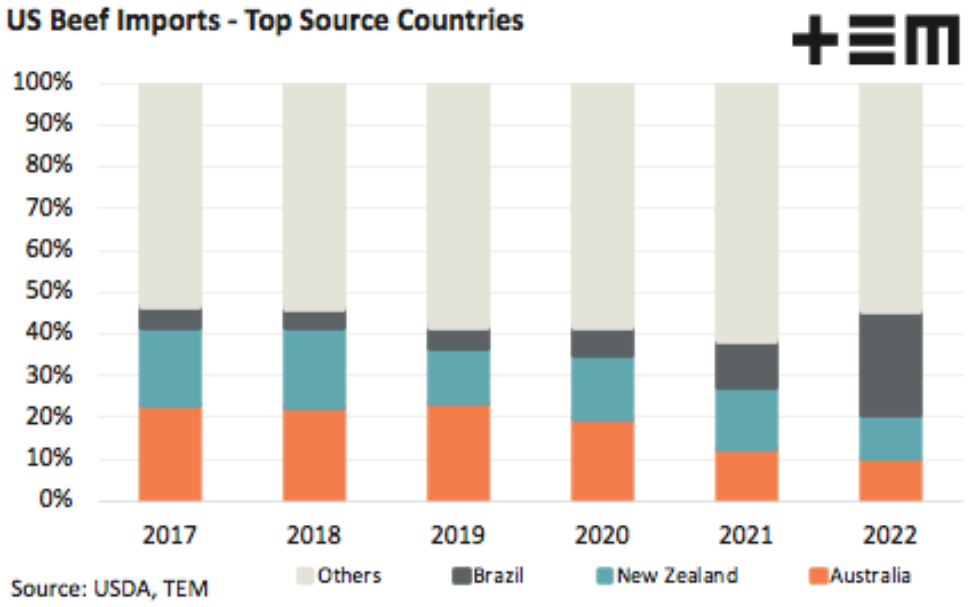

Figure 7: US beef imports – top source countries

On the beef export side of the equation, the USA have been experiencing an increase to demand from South Korea (refer to figure 8). Since 2017 South Korean market share of US beef exports has risen from 17% to 25%, eclipsing Japan as the number one destination for US beef in 2022. Over the same time frame increased South Korean demand for Aussie beef exports have seen their market share lift from 15% in 2017 to nearly 19% this year.

However, the biggest change in the market share of US beef exports has been China. Prior to the trade deal negotiated by the Trump administration the trade in US beef to China was negligible at around 1% of total US beef exports. In 2019 Chinese market share of US beef exports sat at 4%, after the first year of the trade deal in 2020 this lifted to 16%. So far in 2022, US beef exports to China are running at 17% of the total US beef export trade.

In 2019 China was in the thick of their African Swine Fever epidemic and were sourcing meat protein aggressively. That year China was Australia's biggest market for beef exports (refer to figure 9) holding over 24% of the market share from Australia. As of 2022 the Chinese share of the beef export trade from Australia has slipped to 19%.

The US-China trade deal came to an end in December 2021 but the market share of US beef export volumes in China are managing to hold their gains. Australia competing with the USA for our top three beef export markets of Japan, South Korea and China appears set to stay.

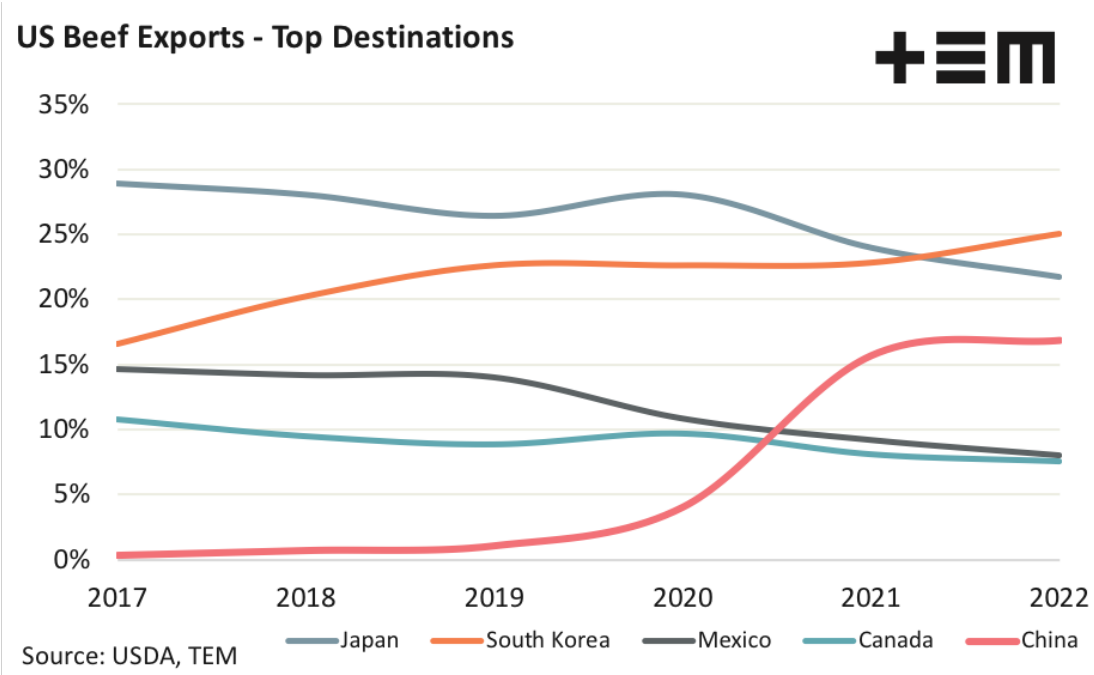

Figure 8: US beef exports – top destinations

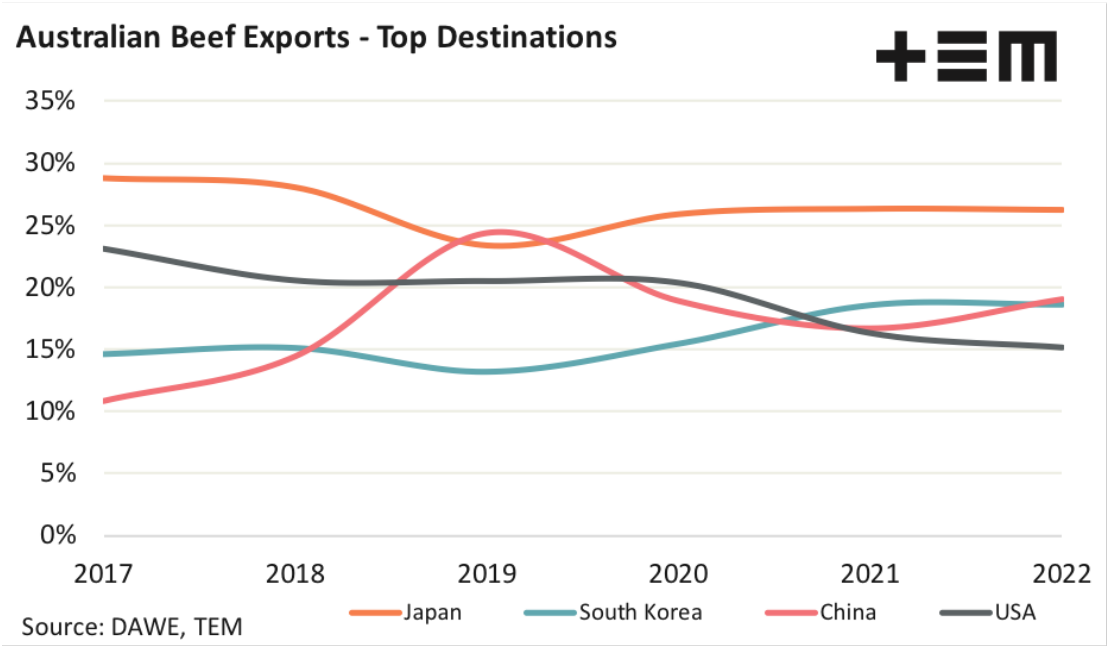

Figure 9: Australian beef exports – top destinations

Key take home messages

- Sheep producers are showing stronger intent to rebuild the flock than cattle producers are to rebuild the herd.
- Outlook for sheep meat is robust.
- Some competitive dark clouds facing the beef sector.

Relevant tools and resources

- **The MLA Cattle and Sheep Industry Outlooks**
  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.

- **MIDAS Site**
  Meat and Livestock Australia's statistics database has information on livestock pricing, production and trade from Australian and around the world.

- **MLA Interactive Market Tool**
  Interactive market information tools allows you to customize the latest data to suit your needs from the comprehensive warehouse of saleyard, over-the-hook, slaughter throughput, skins and feeder information. All saleyard reports include audio commentary from your local market reporter.

Notes

Update and insights into Meat & Livestock Australia's Carbon Neutral by 2030 (CN30) program

Margaret Jewell

CN30 Manager, MLA

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About Margaret

Margaret is MLA's Carbon Neutral by 2030 (CN30) Manager and works with stakeholders to invest in technologies and products that will enable the red meat industry to reduce greenhouse gas emissions and store more carbon in the landscape.

Margaret is an Agricultural Scientist with a PhD in plant genetics and experience working as an agricultural consultant within the red meat industry in Queensland. She began her role with MLA in December, 2019.

She is committed to supporting producers to overcome the barriers to adopting practices that result in reduced emissions, and to bringing to market the technologies that will enable industry to make big leaps towards the CN30 goal.

Session summary

The Australian red meat industry has set a target to be carbon neutral by 2030 (CN30). This means that by 2030, Australian beef, lamb and goat production, including lotfeeding 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 industry can be at the forefront of carbon neutrality.

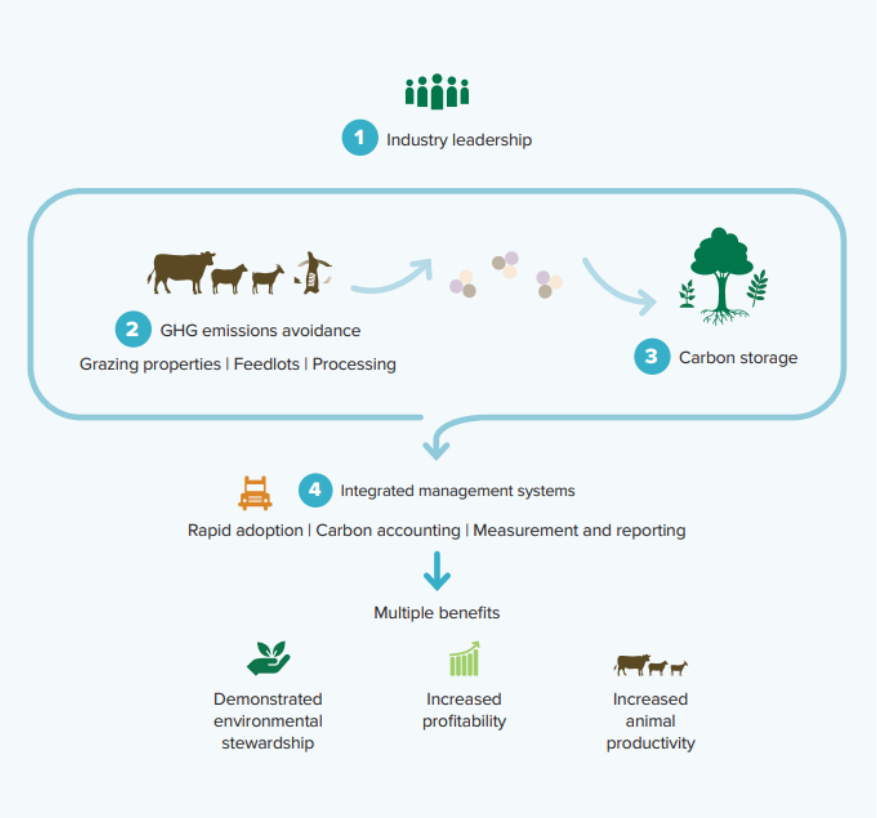
MLA's investment into CN30 research, development (R&D) and adoption aims to enable and empower the red meat industry to achieve the CN30 target, with a focus on reducing emissions while maintaining productivity gains.

The CN30 update for the Naracoorte MeatUp Forum will introduce CN30, an update on progress and current research that is relevant to the southeast region, and a look at the pipeline of activities for the next five years.

Relevant tools and resources

- **CN30 catalogue for producers**
  This catalogue contains a list of products and services producers can use today or in the near future to make productivity-led emissions reductions and improvements in carbon storage on-farm.

The catalogue reflects the four work areas under the Australian red meat industry's Carbon Neutral by 2030 Roadmap (available at mla.com.au/cn30). These areas are illustrated below:



- **Carbon Neutral 2030**

  An overview of the Carbon Neutral 2030 target, including core activities and associated R&D reports

- **MLA CN30 roadmap publication**

- **Making Australia's red meat industry carbon neutral by 2030 (video)**

Notes

Virtual Farm Tour – CC Seymour & Co, South Killanoola

About South Killanoola

South Killanoola is a 3,200ha property located at Bool Lagoon in the southeast of South Australia and is owned by the Seymour family. South Killanoola has been in the Seymour family for over 170 years with the Seymour's being one of the oldest farming families in the region.

The property consists of three main enterprises, a self-replacing composite flock producing prime lamb, Hampshire Down stud, Hereford and Angus cattle herd and a dryland and irrigated share farm cropping business.

Session summary

The virtual farm tour will take you on farm to explore South Killanoola with interviews with manager Dean Eastwood along with Robert and Digby Seymour.

The virtual farm tour segments:

- 900hd Hereford and Angus cattle operation
- Hampshire Down stud, and self-replacing composite flock enterprise
- Technology implementation
- Feedbase and rotational grazing methods
- Dung beetle project
- Succession planning
- Dryland and irrigated cropping overview.

Relevant tools and resources

- **Lambs Alive**

  Lambs Alive is a training program to help lift production rates and yield more profit and better welfare for the animals and you.

  The focus of the coaching program is on implementing the practical applications that will have the biggest impact on your farm.

- **MLA Producer Demonstration Site - Reproductive health and management practices for beef heifers**

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

  Contact:

  - Elke Hocking elkehocking@gmail.com
  - Alana McEwan amcewan@mla.com.au

- **Sign up to the PDS mailing list here:**

- **Bred Well Fed Well – Sheep**

  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.

- **Bred Well Fed Well - Cattle**

  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.

- **MacKillop Farm Management Group**

  MacKillop Farm Management Group (MFMG) collaborates to deliver research and drive adoption for the benefit of members and the broadacre cropping and livestock industry across the Limestone Coast, western Victoria and beyond. MFMG work to ensure members can access cutting edge knowledge about their farming systems, based on research into industry leading practices conducted locally. A network of hyper-local trial sites provides members with research results that benefit their businesses.

Notes

Red meat eating quality – What producers need to know!

Peter McGilchrist

University of New England

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About Peter

Peter is Associate Professor of meat science at UNE and president of the Australian ICMJ association. His research revolves around ensuring global consumer satisfaction of Australian red meat covering all aspects of beef and sheep supply-chains focusing on critical control points which affect the eating quality of meat from genetics, to on-farm management, processing and through to the consumer. Peter grew up on a beef cattle property in North-West NSW and has a passion for educating the next generation.

Session summary

Fast facts

- Dark cutting beef costs Australian beef producers in excess of $55 million annually – this will increase when supply of cattle increases and deductions are increased again
- Dark cutting is caused by low muscle sugar (glycogen) at the time of slaughter
- Dark cutting can be reduced by having high energy intakes for more than 2 weeks pre-slaughter
- Reducing time in lairage, increasing lot size, ensuring no mixing/drafting of mobs of cattle and calm handling will reduce dark cutting
- Minimising stress and exercise is paramount for preserving muscle glycogen pre-slaughter
- Very hot, very cold & periods of variable weather increase the incidence of dark cutting
- Heifers and mixed mobs are at higher risk of dark cutting so minimise their time in lairage
- Select for more muscular animals as they have a reduced incidence of dark cutting
- Maximising the time between slaughter & MSA grading reduces incidence of dark cutting (>20hrs)

Introduction

High pH, dark cutting meat can be prevented – and it's worth it for producers! Discounts of up to $1/kg can be applied for each carcase determined to be a dark cutter. Research conducted by the Beef CRC and MLA has identified steps producers can take to reduce the incidence of dark cutting.

Dark cutting reduces meat quality

Dark cutting beef, also called dark, firm, dry beef has a negative impact on meat quality. Dark cutting beef is of poor quality because it has:

- Reduced tenderness
- An increased water holding capacity, resulting in water being absorbed during chewing, generating a perception of dryness
- Increased rate of microbial spoilage due to the high pH creating conditions conducive to spoilage
- A variable rate of cooking relative to normal beef and as a result generally undercooked
- Course texture

Consumers use meat colour as the primary indicator of meat quality, which is why they prefer bright cherry-red coloured beef.

Cause of 'dark cutting'

Dark cutting beef is defined by Meat Standards Australia (MSA) as meat with an ultimate pH (pHu) greater than 5.7. Some company specifications also class AUSmeat meat colour greater than 3 as dark cutting. The major determinant of pHu is the concentration of muscle glycogen (muscle sugar) at slaughter. In the muscle post-mortem, glycogen forms lactic acid. Lactic acid lowers the pH of the muscle from a pH of around 7, which is standard in a living animal, down to a pHu of around 5.4- 5.7 within 24 hours. However, if there is an insufficient muscle glycogen at slaughter, there is limited formation of lactic acid, resulting in a high pHu and dark meat.

Strategies to ensure adequate nutrition prior to shipment

Cattle need to be gaining more than 0.8kg per day to absolutely ensure muscle glycogen concentration is maximised before leaving the paddock. This can be done by:

- Grazing high quality green vegetative pasture with an energy level around 10.5MJ/kg dry matter or higher and 10 to 20cm in length
- Feed lotting cattle which ensures the consumption of high energy grain-based diets
- Supplementary feed cattle in the weeks prior to slaughter with grain-based pellets or similar to complement available dry pastures but be sure to avoid acidosis (grain poisoning)
- Locking away a consignment paddock which cattle can graze in the week prior to slaughter

Preparing cattle correctly for sale

Don't decide to sell cattle the day before. Correct preparation minimises the risk of dark cutting. It is recommended that cattle are:

- Gaining more than 0.8kg per day in the weeks prior to slaughter
- Directly consigned to minimise the number of 'new' environments prior to slaughter
- Drafted for slaughter 2 or 3 weeks prior to trucking to allow the re-establishment of pecking order
- Yard weaned or feedlot finished so cattle are well adapted to human contact and changes in environment
- Mustered carefully with no vigorous exercise or use of electric prodders, minimal stress & minimal use of dogs
- Manage heifers as they are a high risk group of cattle – minimise time in lairage & maximise time to grading
- Consign in mobs of ≥ 60 head where possible to reduce individual animal stress
- More muscular animals have higher concentrations of glycogen and a lower susceptibility to stress
- Ensure cattle are not magnesium deficient. Lush green feed with high water content can cause deficiency. Supplementing with Mg oxide powder at a rate of 1% or other Mg supplements for four days prior to marketing can help to reduce the impact of stress on muscle glycogen.
- Not transported during very hot, very cold or stormy weather
- Provided access to clean fresh water as thirst and dehydration exacerbate the impacts of stress

Impact of season

Season has a large effect on the rate of dark cutting. Dark cutting is worst in 'grass fed' cattle at the start and end of the green flush when the feed is very high in moisture content or 'hays off'. This feed causes high rumen passage rates or contains reduced amounts of metabolisable energy. Even though cattle may look finished, low pasture-energy levels in the weeks before slaughter reduce glycogen levels in muscle, increasing the rate of dark cutting. It is important to note that fat cover does not necessarily indicate high muscle glycogen.

How do your cattle perform?

To make changes to a system, producers must know what the current incidence of dark cutting is in their cattle. Changes can then be implemented to reduce dark cutting:

- STEP 1: Review the performance of cattle sent to slaughter in the past. All carcases graded by Meat Standards Australia (MSA) will have a pH and meat colour measurement recorded on the MSA feedback and bench marking system that producers can access via MyMSA.
- STEP 2: Calculate the financial losses incurred due to dark cutting in each year, month and lot.
- STEP 3: Assess your current on-farm management and handling practices plus the nutrition of all slaughter cattle. Identify which of the above points need some work. Prioritise the practices that are having the biggest impact in your system and correct them first, then work through the rest following a carefully constructed action plan.
- STEP 4: Convey your action plan with your agent or cattle buyer. Increased communication about the issue is positive. Both producers and processors can play an equally important role in reducing dark cutting.

- STEP 5: Monitor your improvements by comparing new feedback sheets with historical ones, plus evaluate the improvements to your bottom line.

Key take home messages

- With rising retail prices for red meat, it is more important than ever to deliver high standards of meat quality
- Red Meat needs to deliver the consumer "value" which differs greatly for each individual
- Current research is improving the accuracy of carcase trait measurement, improving the accuracy of MSA beef & lamb eating quality predictions
- Using all the tools available (genetics, nutrition, management) will ensure continual improvement across the value chain

Relevant tools and resources

- **Dark Cutting Tips & Tools**

  Dark cutting factsheet for southern cattle.

- **Bred Well Fed Well – Cattle**

  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.

- **Bred Well Fed Well – Sheep**

  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.

- **Meat the Market**

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

- **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.

- **Lifting Lamb Survival**

  Lifting Lamb Survival combines practical group workshops with on-farm one-on-one coaching to develop strategic lambing plans.

  The Lifting Lamb Survival PGS gives producers the skills to:

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

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

- **Pasture Principles**

  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.

  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

- **MSA Meat Science Course**

  This course explains the scientific factors affecting the eating quality of red meat, from production through to consumer with a focus on beef and sheepmeat.

  The topics covered throughout the course include meat eating quality attributes, biochemistry and muscle structure, growth and development of body tissue, fat partitioning and fatty acid composition, pre-slaughter nutrition, production influences on eating quality, processing impacts on eating quality, marbling and eating quality, chilling, ageing and packaging methods, cook methods and eating quality, and grading systems.

  Facilitated by Dr Graham Gardner from Murdoch University and Dr Peter McGilchrist from the University of New England, the five-day course is suitable for processors, producers, lot feeders, stock agents, traders and industry consultants.

Notes

Objective measurement informing feedback to improve productivity

Richard Apps

Program Manager – Objective Measurement, Meat & Livestock Australia

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About Richard

Richard Apps comes from a family beef business in northern NSW. He holds a Bachelor of Rural Science from the University of New England. Richard commenced his career in beef seedstock society management before moving to central Queensland, where he worked on genetic evaluation and breeding program development and provided technical advice for the northern Australian beef seedstock industry.

Richard joined Meat & Livestock Australia in 2002, where he has worked across sheep and beef genetics, extension, on-farm R&D and currently manages the objective measurement program.

Session summary

MLA investments support a range of developing technologies to deliver improved measurement of carcase value characteristics. These technologies focus on both objective measurement of established grading characteristics and developing new ways to improve the description of carcase value and grading efficiency.

True carcase value is important to all participants in red meat value chains because the value that can be achieved from consumers determines the amount of money that can be shared among the value chain participants. True carcase value can be described as the accumulated value from the saleable weight of cuts multiplied by their value (what consumers are willing to pay).

Willingness to pay is strongly linked to perceived quality. Consumer research across domestic and international markets for both beef and lamb show a very similar result. As illustrated in Figure 1 below, using MSA 3 star as the base level, consumers repeatedly indicate they are willing to pay 50% for beef that fails to grade 3 star, whereas they indicate they are willing to pay 150% for 4 star and 200%+ for beef that grades 5 star. Lamb consumers respond similarly.

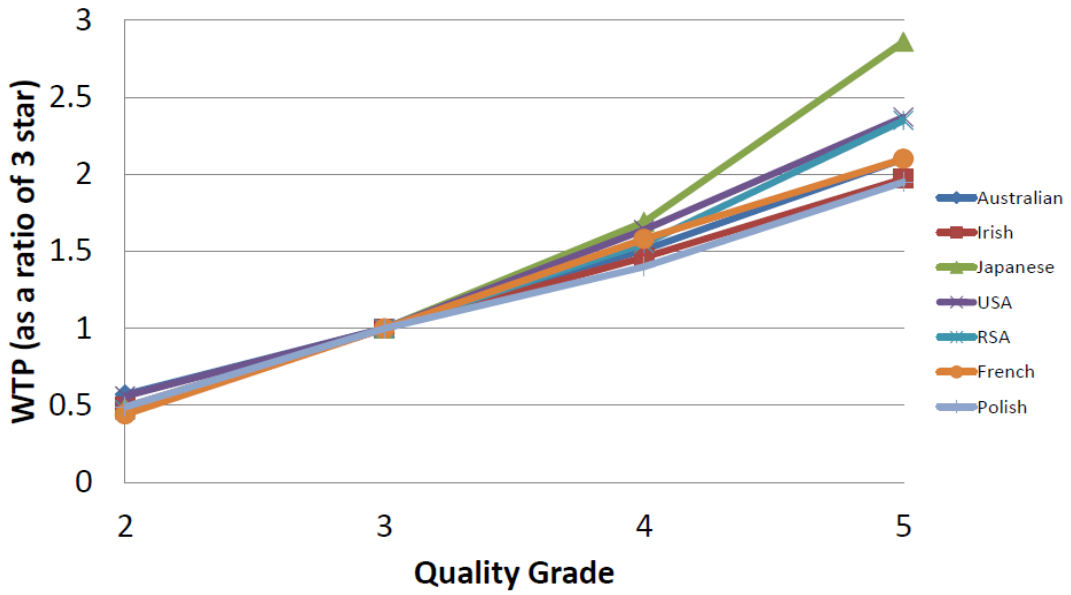

Figure 1: Consumer willingness to pay (WTP) is strongly associated with beef MSA grade

Technologies currently being investigated can be grouped into two focus areas: those that describe eating quality traits and those that describe carcase yield traits, the combination of which are key to improving the description of carcase value.

The technologies that focus on eating quality traits include a number of devices, with varying configurations, to image the ribeye grading cut surface, and from that image output the grade for a number of traits simultaneously. More novel applications such as needle probes to measure IMF% in uncut carcases and spectral imaging to verify grassfed brands are among the diverse technologies under development.

Technologies to describe carcase lean meat yield and thereby enabling prediction of retail cut weights focus on applications of x-ray and surface imaging.

The value of yield is often hard to identify but both research and commercial data illustrate that there are significant differences that impact on the true carcase value. In lamb, carcases of a similar weight but different fat scores have been shown to have an 8% difference in saleable meat yield which resulted in a 2.7kg difference in saleable weight.

Excess fat is a cost to both lamb producers and processors. For producers the carcase weight gained in excess fat is inefficient in that it takes approximately four times as much feed to put on a kilo of fat compared to a kilo of lean meat. At processing, compared to an industry average type carcase (e.g. 23kg, FS3) heavy fat carcases can increase boning times by 40%.

There is also significant carcase value variation in beef. Processor data comparing the wholesale value of steers has shown over $600 variation in carcase value within mobs from the same vendor. Similarly, progeny testing programs have illustrated that the average value of progeny of individual sires can vary by over $600.

The well-known quote “Feedback is the breakfast of champions” should be embraced, not feared. The more we know about the true value of the livestock produced the more opportunities there are to refine genetics and management to create more value.

Key take home messages

- New objective measures = new carcase value feedback
- Use ASBVs, EBVs and Indexes to improve both lean meat yield (LMY) and eating quality (EQ) (balance is essential)
- Use carcase feedback to benchmark and improve performance
- Develop management systems to capture genetic potential
- Develop your processor relationships.

Relevant tools and resources

- **Sheep Genetics**

  Australia's national breeding evaluation service for sheep and goat breeders and buyers.

- **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.

- **Meat Standards Australia (MSA)**

  Meat Standards Australia (MSA) was developed by the Australian red meat industry improve the eating quality consistency of beef and sheepmeat.

- **Livestock Data Link**

  Livestock Data Link (LDL) is an online application that facilitates improved information sharing in the supply chain. LDL enables feedback to be received, analysed, and compared to other results in an efficient way. Your consignment performance can also be linked to supporting materials to help to understand what management practices could be considered to improve performance. The overall objective of LDL is to assist in optimising supply chain performance through turning complex information into simple decision making through analysis and reporting.

  LDL currently offers two modules – carcase compliance and animal health information.

Notes

How to shop for the best sire to accelerate your beef business

Hamish Chandler

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About Hamish

Hamish has worked in agriculture since completing a Rural Science degree in 1995, including 5 years as part of the BREEDPLAN team which conducts Australia's national genetic evaluation for beef cattle. He has owned and operated farming businesses in the New England region of NSW since 1998, focusing on sheep breeding and cattle trading enterprises.

Hamish started with MLA as part of the Livestock Genetics team in 2009. In 2016 he took on the role of Program Manager - Livestock Genetics. This role sees Hamish managing MLA's investment in genetics R&D and oversight of the genetic evaluation programs for both beef and sheep.

Session summary

Driving genetic progress

As livestock breeders we all have something in common, we are all hoping that next generation of progeny that we breed will be better than the last. How big this improvement is going to be, or the response to selection, can be explained by explained by four key components. Geneticists refer to this as the Breeders Equation:

$$\textbf{Response} = \frac{\textbf{selection intensity} \times \textbf{selection accuracy}}{\textbf{generation interval}} \text{ Variation}$$

But what does this really mean in practical terms, and how do we use this to make faster progress in our beef breeding enterprises?

- **Selection intensity** is referring to the proportion of animals that we choose to retain to breed from and how much better the group we have chosen to breed from is, in comparison to all of the available candidates. For commercial beef breeders the biggest impact you can have in this area is by selecting the best bull team you can.
- **Selection accuracy** relates to how often we make the right choice when we are choosing what we think are the best animals to breed from. Having more information about the genes that animal carries means that we are effectively making the right choice more often. To do this, we need to be able to account for the impact of non-genetic environmental factors, such as the animal's age, feed availability or the age of its mother.

- **Generation interval** or generation length has an impact because it influences how quickly we are bringing new genes into our herd to create change. Bringing new bulls into the team on a regular basis allows us to bring in better genetics and make progress, as long as we are choosing the right ones!
- **Variation** is needed to generate genetic progress. More variation in the group that we are choosing from means bigger differences in performance of the traits of interest and therefore higher rates of gain. Are you happy to choose bulls from one herd where there is a little bit of variation, from within the one breed where there is much more variation, or from multiple breeds where variation is maximised?

Out of all of these components the major focus of MLA's Livestock Genetics research program has been selection accuracy. The most important tools available to improve selection accuracy are BREEDPLAN EBVs.

The development and inclusion of genomics, or DNA testing, allows higher accuracies meaning we make the right choice more often. But it also means this can be done earlier in life allowing for shorter generation intervals and also allows us to identify variation for hard to measure traits.

Linking genetics to profitability

We all have our own motivations for the decisions that we make about which animals we choose to breed from. However, as we are running businesses, one of the primary motivations should be how does the selection of animals improve the profitability of our business?

In general terms the profitability of my business is determined by how much I am producing and the price received for that product, less the cost of production. BREEDPLAN EBVs allow us to target traits in each of these categories and directly link bull selection through to our profit drivers. Current examples of this are;

- Productivity – Days to calving, 600 day weight, carcase weight
- Price received – intra muscular fat
- Cost of production – mature cow weight, net feed intake, calving ease

Clearly the balance of importance for these trait groups will vary across different businesses with different production systems. Additionally, it is very difficult to make a decision on which bulls best suit your business when there is such a wide range of traits that influence profitability. This is the role of selection indexes. Indexes are developed using the relative economic value of each trait that is relevant to a particular production system and provide the most efficient way of making genetic progress towards greater profitability.

Consumer demand

If we start thinking further about what influences the price we receive for our product, we need to consider changing consumer demands and what expectations might be put on our industry over coming years. What do we think is going to be demanded of us in another 20 years' time? Breeding livestock is a medium to long term proposition. 20 years might sound like it is a long way off, but when we consider that the generation interval for beef cattle is around 5 years we only have 4 generations to make the genetic change needed to keep meeting consumer needs.

We know that the global population will continue to grow. Based on UN Department of Economics and Social Affairs statistics, in 20 years time we expect that there will be an extra 1.3 billion people to feed. It is reasonable to expect that demand for our product will continue to grow.

We will also expect to see cost of production and land prices continue to increase, meaning we will keep being pushed to produce more from less. Continuing selection pressure for productivity traits will clearly be important.

Over the last 20 years the price gap between red meat and chicken and pork has consistently grown. This trend is not expected to change. This does mean continued pressure for us to continue improving value perceptions to justify the premium for red meat. This means that that our emphasis on quality traits such as Intra Muscular Fat will grow in importance.

However, there are emerging areas of concern for consumers that will start to impact on our price received over coming years. Health perceptions and environmental and animal welfare concerns are some of the factors cited by consumers who are reducing red meat consumption. More than half of consumers surveyed say that they would think more positively of the red meat industry if methane emissions were reduced to zero.

Genetic selection can play a role in contributing to these targets. There are now projects in place, or in the process of being initiated, to enable the development of Methane EBVs that will allow breeders to select for lower methane emission while continuing to improve other traits.

Future Direction

MLA's most recent call for new R&D project proposals through the National Livestock Genetics Consortium for the 2022 financial year sought to find projects to address these developing areas of interest. The priorities for the call included:

- Carbon neutrality through all aspects of genetics with a focus on northern beef
- Sustainability including structure, welfare, resilience traits
- Cost and speed of genotyping

A number of projects that address these priorities are now being progressed to build on existing work.

What does this mean for genetic selection on farm?

Continued focus on traits that influence:

- Productivity – reproduction, growth, yield
- Price received – intra muscular fat/marbling
- Cost of production – mature size, feed intake, calving ease

Increasing focus on sustainability traits;

- Methane
- Feed efficiency

New focus on welfare traits;

- Resilience
- Disease and parasite resistance
- Heat tolerance
- Cow/calf survival traits
- Structural traits

Key take home messages

- What are your profit drivers? What are your drivers going to be in another 20 years? Will you still have a social licence to operate?
- It is essential that beef producers know what the key drivers for their businesses are, and include this in bull selection.
- Using EBVs for bull selection gives us greater accuracy, meaning we make the right choice more often.
- EBVs are already available for traits that influence productivity, quality of product and cost of production.
- New R&D has a focus on developing EBVs for sustainability, welfare and resilience.

Relevant tools and resources

- **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 flock.

- **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.

- **BREEDPLAN Search**

  BREEDPLAN search enables producers to access and search EBV databases for individual cattle breeds. Visit BREEDPLAN Search here.

- **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.

- **Visit the MLA table during the MeatUp Forum to explore genetics related resources.**

Notes

Turning Gra$$ to Dollars

Tim Prance

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About Tim

Tim has 48 years' experience farm consulting in pasture production and management along with soil, plant and animal nutrition, across both dryland and irrigated farms in SA, Victoria and Tasmania.

Tim is passionate about promoting the efficient use of our most valuable resource, pasture, for meat, wool and milk production. For the past 12 years he has managed his own business focusing on livestock management from permanent pastures in south-eastern Australia. He has recently updated the PROGRAZE® course for MLA, which has been renamed Gra$$ to Dollars.

Session summary

Under Australian dryland pasture systems rainfall limits productivity, or does it?

An average dryland farm with phalaris/ryegrass/sub clover pastures is producing the following kg/ha dry matter per year.

- Mt Gambier 10,000kg/ha
- Naracoorte 7,000kg/ha
- Keith 6,000kg/ha

If our rainfall is efficiently utilised by optimising pasture leaf area index and soil nutrition, research has shown 45kg pasture dry matter/ha can be produced for every mm growing season rainfall (less 70mm evaporation).

Therefore, the following pasture productivity targets are possible:

- Mt Gambier 22,000kg/ha
- Naracoorte 16,000kg/ha
- Keith 13,000kg/ha

So, the issue is not lack of rainfall, or its distribution, but learning how to more efficiently manage the rain falling on our paddocks.

We have no control over how much rain we receive or when we receive it, but we have total control over the management of our soils, pasture and livestock.

We can't direct the wind, but we can adjust the sails

Pasture and livestock management is about adjusting the sails. I am not aiming to provide all the answers in this presentation, but to encourage you to concentrate on the most important factors under your control.

These are:

- Pasture density
- Soil fertility
- Grazing management

Pasture density

Increasing clover density in June from a low 50 plants/m2 to 1,000 plants/m2 will result in 10x more kg/ha pasture. Likewise, early winter pasture production (kg/ha dry matter/day) from perennial grasses will approximately double for each additional 20% of the ground covered with either a growing leaf or an active bud, so if you have 70% perennial grass cover in late autumn, you will be producing 4x as much pasture in early winter compared to a paddock only 30% perennial grass cover.

Bare ground produces no pasture, regardless of rainfall. The MLA Pasture Paramedic Tool can be used to objectively assess your pasture condition (density and composition) in spring or autumn before deciding whether you need to renovate, oversow or manipulate with grazing and/or fertiliser.

Soil fertility

Increasing soil Colwell P from 18 to 35mg/kg at Hamilton resulted in 30% extra pasture production in winter (under grazing and with several different stocking rates).

Increasing soil Colwell P also increased the perennial ryegrass and sub clover content of the pasture and significantly increased pasture digestibility (ME or metabolisable energy content).

Pasture productivity

During the 1990,s 100 farmers from Victoria, SA and Tasmania participated in a pasture productivity program coordinated by the Grassland Society of Victoria, called 'Grassland's Productivity Program' or GPP, where they compared the economic benefits of a paddock sized productive pasture system with their normal farm practice. In most paddocks the extra productivity came from applying adequate P, S and K fertiliser. The following average stocking rates were recorded over a three-year period*. These differences are the averages from all the farms within each growing season and were significantly different.

- 6 month growing season (eg Keith) carried 16 dse**/ha/year (utilising about 6,400kg/pasture dm)
- 7 month growing season (eg Naracoorte) carried 19 dse/ha/year (utilising about 7,600kg/pasture dm)
- 8 month growing season (eg Mt Gambier) carried 23 dse/ha/year (utilising about 9,200kg/pasture dm)

** Saul GR, Kearney GA (2002) Potential carrying capacity of grazed pastures in southern Australia. Wool Technology and Sheep Breeding 50, 492–498.*

*** dse = ME requirements of a 50kg dry sheep in condition score 2.5*

The return on investment for the second and third years in the productive pasture paddocks for the 200 paired paddocks shown above averaged $1.67 for each extra $1 spent, with all livestock enterprises responding.

These results were replicated in South Australia between 1998 to 2002 when nearly 70 farmers participated in a similar program called PPP (Pasture Productivity Program).

Grazing management

Results from the GPP/PPP paddocks were largely achieved without any change in grazing management because the livestock feed demand mostly matched pasture growth. (i.e. ewes were lambing in July and/or there was a mix of trading and fattening stock.)

Grazing management is a tool you can use to

- Improve productivity by maintaining optimum leaf area for best pasture growth
- Create a feed wedge for winter following the seasonal break
- Protect ground cover when pastures are dry
- Improve pasture utilisation
- Improve pasture quality (digestibility and ME content)
- Manage weeds
- Allocate different pasture quality (and pasture availability) to different livestock classes.

Pasture utilisation

Using a DSE based system for measuring grazing productivity, assuming one dse consumes 400kg pasture/year, these are the pasture utilisation calculations

- Mt Gambier 14dse/ha will utilise approximately 5,600kg/ha pasture = 56% of the pasture ***
- Naracoorte 10dse/ha will utilise approximately 4,000kg/ha pasture = 57% of the pasture
- Keith 8dse/ha will utilise approximately 3,200kg/ha pasture = 53% of the pasture

**** assuming 10,000kg/ha annual pasture production at Mt Gambier, 7,000kg/ha at Naracoorte and 6,000kg/ha at Keith*

Generally, annual pasture utilisation over a whole farm is unlikely to be higher than 55-60%, unless grazing management is very intensive for the whole year, so how does a grazier in the south-east improve stocking rates without significantly improving pasture supply or adversely affecting individual animal performance?

The additional dse/ha carried in the GPP/PPP farms above were the result of a combination of:

- Additional pasture productivity (and pasture quality due to improved soil fertility)
- A better match between the pasture supply and feed demand, resulting in higher use of spring pasture which then resulted in improved pasture quality over summer and the following winter
- Carrying more livestock/ha, without a noticeable decline in individual animal performance.

Use it or lose it!

Pasture utilisation is proportional to pasture quality. Very high pasture utilisation (90%) is possible in a high-quality green legume dominant pasture (> 12 MJ ME/kg DM*) but could be as low as 30% on low quality annual grass dominant dry feed (< 5 MJ ME/kg DM). ** megajoules metabolisable energy per kg pasture dry matter*

There is no point in carrying more than 2-3t/ha dry feed into summer, as the performance of any ruminant animal will be significantly less on dry pasture containing 5 MJ ME/kg DM (and also low protein) compared to a green pasture containing 12 MJ ME/kg DM (and adequate protein).

Therefore, the aim of good grazing management will be to utilise as much of the pasture as possible while still green, by matching livestock feed demand to pasture growth, which will enable more livestock to be carried in winter with less supplementary feeding.

In some paddocks the pasture growth curve can be expanded by growing a perennial pasture such as phalaris, cocksfoot, tall fescue, lucerne or kikuyu.

DSE ratings

Unfortunately, using a dse rating to measure pasture utilisation is very 'rubbery' because the DSE is an estimate of livestock ME (metabolisable energy) **requirements**, rather than their actual ME intake, which should be calculated using CSIRO GrazFeed® (as used in the LifeTime Ewe tables). For more information go to www.hzn.com.au/grazfeed.php

The DSE system doesn't consider the timing of livestock pasture demand relative to the pasture growth production curve, nor does it take into account animals taking energy 'off their backs' or putting it back on. However, if you adjust the dse rating of every mob every month, it can put you in a rough 'ballpark' over a 12-month period.

An **alternative to using a DSE rating** is to download the MLA Feed Demand Calculator (visit https://elearning.mla.com.au/tools-calculators/). **The MLA Feed Demand calculator** can be used to calculate your farm pasture utilisation based on their actual pasture intake using GrazFeed® estimates of the kg/ha pasture on offer for each pasture class on your farm, along with the estimated pasture ME. Once you insert the default monthly pasture growth (and ME) for your district (or actuals for your farm if you have them), the Feed Demand Calculator will produce a feed supply graph for your farm and compare this to your livestock feed demand.

From this, you can calculate your pasture utilisation and easily see where the troughs and peaks are, then take appropriate action, for example, by:

- Increasing pasture productivity, for example by improving pasture density, including a perennial grass/legume or improving soil fertility (or all three). The impact of winter pasture feed gaps by planting lucerne or kikuyu can be identified by using the Feed Demand Calculator.
- Changing feed demand by adjusting time of calving or lambing, or the time of sale, or by keeping wethers or trading cattle.
- Changing grazing management – for example deferred grazing in autumn/early winter.

Livestock paddock grazing recording

App based farm management programs are available that can be accessed offline from a smart phone/tablet, with changes synchronised to an online office computer.

These programs can be used to calculate kg pasture utilised or total DSE grazing days/paddock, depending on the method used to enter the pasture intake per head. They are a very powerful way of measuring differences in productivity between paddocks, enabling you to dig deeper as to why – soil fertility? pasture composition? pasture density in late autumn/early winter?

Key take home messages

- Focus on the pasture management factors under your control, pasture density, soil fertility and grazing management.
- Use it or lose it. There is no point carrying more than 2-3 t/ha dry feed into summer. Sheep/cattle performance will be significantly less on dry pasture containing 5 MJ ME/kg DM compared to a green pasture containing 12 MJ ME/kg DM.
- Grazing management is an important tool you can use to manage pastures and livestock but is not a recipe to guarantee success.
- There are many excellent pasture management resources on the MLA website in the Feedbase Hub.

Relevant tools and resources

- **Gra$$ to Dollars**

Gra$$ to Dollars is a training package (as part of the MLA Profitable Grazing Systems program) 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.

Contact Tim Prance for more information about Gra$$ to Dollars.

- **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 farmers 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

Contact Pinion Advisory for more information about Pasture Principles.

- **MLA Phosphorus Tool**

  The soil phosphorus tool or ‘Five Easy Steps’ allows producers and advisors to understand the value of soil testing and how to use soil test information to plan fertilizer and livestock investments. It is designed as a framework for understanding and planning the use of phosphorus (P) fertilisers.

  The tool is intended to assist producers in determining suitable levels of P-fertilisation of temperate pastures grazed by sheep and beef cattle on acid soils in southern Australia. However, fertilizer decisions are made by the user – not the tool.

- **Predicted livestock daily pasture intake**

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

- **Pasture growth estimates**

  A series of pasture growth rate (kg/ha/day) tables and graphs for regions across Australia.

  The data set was compiled for the Meat and Livestock Australia Feed Demand Calculator using validated curves from research sites, data presented in GrassGro, and with input from experienced research and extension professionals.

- **Pasture Paramedic**

  Pasture Paramedic is a decision-making tool that allows rapid assessment of pasture condition in the high rainfall zones of southern Australia.

  The tool is used in the paddock to measure the quality and quantity of available pastures and identify requirements for pasture renovation or rejuvenation.

- **How do I improve my pasture utilisation?**

  Pasture utilisation is how you manage the daily balance between what pasture is being produced and what is removed by animals and pasture decay. High levels of utilisation will maximise animal production per hectare, but if utilisation is too high and ground cover declines too far, soil health will be damaged and nutrient recycling will be compromised, meaning pastures are slower to respond or recover after grazing or dry periods.

- **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

- **MLA 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.

- **The toolbox**

  MLA's new eLearning platform, The toolbox, is a collection of digital resources for red meat producers that features training courses, tips, tools and calculators, such as the MLA Feed Demand Calculator for example. Visit elearning.mla.com.au.

Notes

Profitable Grazing Systems
your pathway to success

Australian Government | National Landcare Program
LANDSCAPE SOUTH AUSTRALIA LIMESTONE COAST

This project is supported by the Limestone Coast Landscape Board, through funding from the Australian Government's National Landcare Program.

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Gra$$ to Dollars

based on the highly successful Prograze® course

Limestone Coast
Commencing **Winter 2022** occuring monthly until **Autumn 2023**

Venues: Two courses in Mid and Lower Limestone Coast
Price: TBC approx. $1,800 per business ex GST

With the support of MLA's Profitable Grazing Systems program (PGS), the participation cost for red meat producers has been subsidised. The Limestone Coast Landscape Board is also providing financial assistance to make this course possible.

Program overview

Applicable to all permanent pastures in the Limestone Coast (both annual and perennial) the program takes 11-12 months. During this time each participant will be encouraged to take messages from the program and apply to their own farm, review the success (and failures), observe what has worked/ not worked and discuss this with other participants to work through possible solutions.

What you will learn

- How much can an animal eat, how to measure this and how to determine if this is adequate?
- How much pasture can you grow and how to improve this?
- How to turn the maximum amount of pasture profitability into meat and/or wool?

This package is delivered over 8 half day on-farm sessions accompanied by half a day of individual coaching.

Each half day session will include a theory session and a paddock inspection to assess pasture feed on offer, feed quality, and animal performance from pasture, grazing management and feed budgeting planning. Each business/ participant will receive a comprehensive workbook.

For a detailed course structure see next page

Deliverers

This will be delivered by:

- **Tim Prance**
  T Prance Rural Consulting

Places will be limited. Register your interest during the Meat Up Forum at the MLA desk or by contacting

Tim Prance – T Prance Rural Consulting 0427 812 655

Gra$$ to Dollars

based on the highly successful Prograze® course

Course session outline

SESSION 1

Profit, production and sustainability, and pasture assessment principles

Managing water and making $$. Link between sustainability and profit. Visual pasture assessment – why and how? An introduction the terms of pasture quantity (herbage mass) and quality (digestibility and how to measure visually).

SESSION 2

Livestock production from pasture

A detailed look at pasture quality and quantity and how these both interact with sustainability, water use, animal intake and subsequent animal production. Animal intake – how much can they eat? How much should they eat? The relationship of digestibility with energy, fibre and protein.

SESSION 3

Pasture production

Managing pastures for best production and persistence. Managing weeds by grazing. Pasture benchmarks for sustainability and animal production - matching pasture quality and quantity with livestock and soil requirements. The importance of legumes in pasture. Grazing management for specific pasture species – perennial grasses, lucerne, clovers and medics and annual grasses. Management of pastures in winter, spring summer and autumn.

SESSION 4

Grazing management

Different grazing systems. Set stocking, rotational grazing, techno grazing, cell grazing. Grazing to leaf stage, building a winter feed wedge. Paddock subdivision. Grazing of sheep and cattle for worm control, and other animal health issues. Maintenance of ground cover.

SESSION 5

Feed budgeting

Grazing plans incorporating flexibility and sustainability. Setting stocking rate, managing grazing intensity and grazing duration. Preparing and monitoring a feed budget. Matching feed demand to pasture growth.

SESSION 6

Sheep profit drivers

Critical management stages over the breeding year – joining, mid and late pregnancy, lambing and lactation. Condition score targets to maximise productivity and reduce supplementary feed and animal health costs.

SESSION 7

Cattle profit drivers

Critical management stages over the breeding year – joining, mid and late pregnancy, calving and lactation. Condition score targets to maximise productivity and reduce supplementary feed and animal health costs.

SESSION 8

Individual on-farm coaching session

What has worked and what hasn't and why? What can be done?

SESSION 9

Production targeting, tools and course wrap up

Setting production targets for both livestock and pastures. Using a computer program (GrazFeed®) to predict livestock production from pastures, and to calculate supplementary feed requirements. Paddock, grazing and stock recording programs and other tools and calculators.

The session order can be changed to suit the season and region/group. If no members of the group are running cattle sessions, 6 and 7 will focus on sheep profit drivers.

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Sheep genetics evolution: new traits and improved breeding values

Emma McCrabb

Senior Development Officer, Sheep Genetics, Meat and Livestock Australia

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About Emma

Emma is the Senior Development Officer in the Sheep Genetics team. Sheep Genetics, a part of Meat & Livestock Australia, delivers the national genetic valuation for the Australian sheep industry as Australian Sheep Breeding Values (ASBVs). Emma has been with MLA for over three years, and previously worked as the MERINOSELECT Development Officer, where she acted as the central contact for Merino and Dohne ram breeders on all things ASBVs.

In her current role, she is responsible for the development and extension of genetic tools to the wider sheep industry, including the use of genomics and integration of new traits. She completed a Bachelor of Agriculture/Bachelor of Business at the University of New England in 2018. Emma developed a passion for the sheep industry, growing up on commercial Merino property near Booroorban, in south western NSW, and is now based in Armidale, NSW.

Session summary

Australian Sheep Breeding Values (ASBVs) are an important tool to assist sheep and goat producers in accelerating productivity using genetics.

ASBVs allow producers to select for and improve key production traits such as reproduction while putting pressure on important health and welfare traits.

ASBVs describe an animal's genetic merit for different traits by accounting for the non-genetic factors that influence performance. This includes how the animal has been fed, its age and whether it was born a single or twin. In this way, breeding values provide information on the genes that a sire or dam will pass on to its progeny.

Sheep Genetics, a part of Meat & Livestock Australia (MLA), deliver the genetic evaluation for the Australian Sheep and Goat industry through MERINOSELECT, LAMBPLAN and KIDPLAN (delivered as Estimated Breeding Values) evaluations. These evaluations allow producers to compare and benchmark the genetic merit of animals from flocks across Australia, to better inform selection and purchase decisions.

Selection indexes combine important ASBV traits into one number and are a useful way to rank animals quickly and easily. It's also important to consider the individual ASBVs that make up the index to ensure the animal meets your breeding objective, alongside structural and type assessment.

How are producers using ASBVs?

ASBVs have given producers the power to influence traits such as reproductive rate, growth, fleece and health characteristics, and manage the antagonistic relationships that exist between some of these traits.

Seed-stock breeders have shown that by measuring the traits of interest, they can manage these correlations, and make gains in important traits simultaneously.

A good example is the way Merino breeders have been able to manage the antagonistic relationship between breech wrinkle and fleece weight to make gains in both traits.

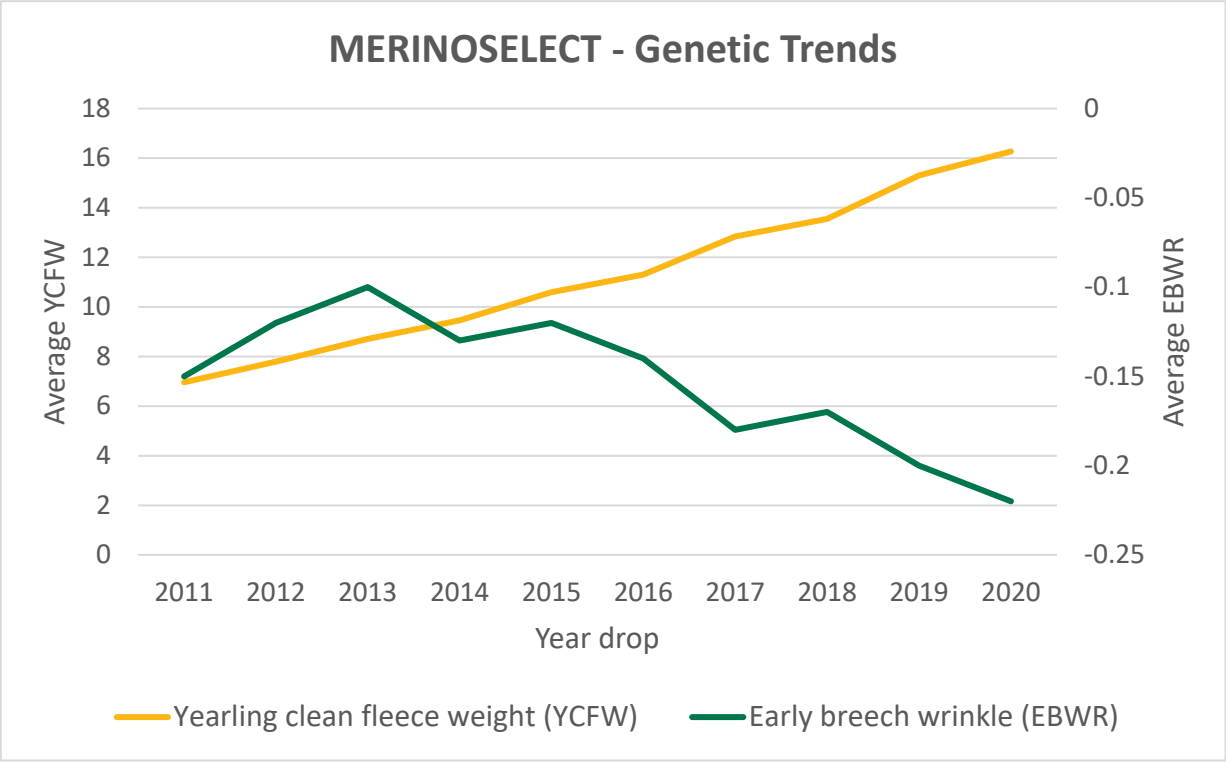

Figure 1: MERINOSELECT trend for breech wrinkle and clean fleece weight 2011-2020

Figure one depicts the MERINOSELECT average and trend for breech wrinkle and clean fleece weight ASBVs overtime. It shows the progress MERINOSELECT breeders have made in improving fleece weight (YCFW), while reducing breech wrinkle (EBWR), or breeding for a plainer breech.

The way the industry is balancing wrinkle and fleece weight shows the power of recording and selection to meet breeding objectives.

What is a breeding objective?

Breeding objectives define a flock or herd's breeding goals and are an important tool when making selection decisions. Objectives include consideration of profit drivers, climatic constraints and health and welfare considerations. These components can then be matched to ASBV traits, and selection indexes.

For example, if regular drenching is required to manage worm burdens, your breeding objective may include reducing worm egg count (WEC) to genetically improve worm burdens and reduce the costs to your production system.

As producers make gains over time, it's important to benchmark against current industry, through the use of percentile band tables. This information allows you to set the desired direction and a set a target to achieve over the next five years.

Sheep Genetics provides a suite of traits that can be incorporated into this breeding objectives. These range from growth and wool, to eating quality (such as intramuscular fat or IMF), health and reproduction.

What about new traits?

Sheep Genetics has released a series of traits that break down the components of reproduction for Merino and Maternal breeders. Previously, the ASBV used to select for improved reproduction was a single trait – Number of Lambs Weaned (NLW). However, many events occur throughout the reproductive cycle, from joining through pregnancy to lambing and then weaning, so using only NLW can mask the true extent of lamb losses and how these occur. Now Merino and Maternal breeders have access to component traits for reproduction, allowing for more targeted genetic gain.

The new traits include:

- **Conception (CON)** – Did the ewe conceive? Sires with higher CON will produce daughters that have a higher conception rate.
- **Litter size (LS)** – How many lambs were born? Sires with higher LS will produce daughters that give birth to more lambs.
- **Ewe rearing ability (ERA)** – How successfully did the ewe rear her litter? Sires with higher ERA will produce daughters that rear more of their litter.
- **Weaning rate (WR)** – The number of lambs weaned per ewe joined. This trait is derived from the component traits above and will replace the previous NLW trait.

These additional traits give breeders the ability to target specific parts of the reproduction cycle.

Tools for commercial producers

For commercial producers, genetic progress over time can be assessed through sire team tracking, or tools like Flock Profile, which provide an indication of the average genetic merit of the flock or herd.

Ram team tracking is an option for producers who are using rams with breeding values. It provides a genetic benchmark over time by averaging the ASBVs of the sire team each year. This provides an estimate of genetic progress, and can assist in selection and purchasing decisions by providing a breeding value benchmark.

Flock Profiling is available to Merino producers and provides a genetic benchmark of where your flock sits compared to MERINOSELECT, expressed as ASBVs. The results include average ASBVs for a suite of key Merino production and welfare traits, including fleece weight, growth and breech wrinkle. The test itself involves genotyping 20 randomly selected animals, and the results are used to inform ram purchasing decisions.

Many producers are tapping into the benefits of better genetics by buying rams from breeders using ASBVs. Producers who pursue genetic progress find themselves accelerating the performance of their flocks in such a way that their initial investment more than pays for itself.

Key take home messages

- Breeding values describe the genetic merit an animal will pass on to its progeny. These breeding values are an important tool to assist producers in meeting their breeding objective.
- There are new reproduction traits that allow Merino and maternal producers to target and improve specific components of reproduction.
- There are many tools available to commercial producers to help benchmark themselves in breeding value terms, including Flock Profile testing and ram team tracking.

Relevant tools and resources

- **Sheep Genetics – Search for rams to buy**

  Australia's national breeding evaluation service for sheep and goat breeders and buyers.

- **MLA Genetics Hub**

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

- **Flock profile**

  The flock profile gives average breeding values of a flock for important traits. These numbers are the average estimate for your flock and reflect the genetic merit of your ram team used five to seven years ago. A flock profile also shows where a flock sits compared to other Merino flocks in the analysis.

Notes

Panel - Red meat supply chain

About the panel

Ben Davies

Assistant Livestock Manager, Thomas Foods International

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With over 20 years' experience in the livestock industry buying cattle, sheep and goats for processing and lot feeding, Ben has developed strong relationships with producers and agents across many regions. Since 2016, Ben has been Assistant Livestock Manager with Thomas Foods focusing on buying livestock throughout Victoria and Southern NSW along with helping to coordinate livestock into Southern Cross feedlot and TFI's three processing plants.

Mark Inglis

Farm Assurance and Supply Chain Manager, JBS

Mark.inglis@jbssa.com.au

From cattle in the Kimberly, to sheep properties across Victoria and the establishment of a 900 sow free range pig breeding operation, Mark has extensive experience in commercial livestock operations across Australia. Prior to joining JBS he spent six years working for MLA/MSA with producers, stock agents, saleyards, feedlots and livestock buyers to gain a greater understanding of the pathways into both the cattle and sheep MSA programs.

Currently his role with JBS sees him managing both the lamb and beef farm assurance programs which link customers and consumers to supplying producers, overseeing the MSA component of the JBS Southern business, lamb, beef, coordinating and implementing R&D programs specific to JBS lamb, beef and running producer educational programs across both the beef and lamb supply chains.

Peter McGilchrist

University of New England

peter.mcgilchrist@une.edu.au

Peter is Associate Professor of meat science at UNE and president of the Australian ICMJ association. His research revolves around ensuring global consumer satisfaction of Australian red meat covering all aspects of beef and sheep supply-chains focusing on critical control points which affect the eating quality of meat from genetics, to on-farm management, processing and through to the consumer. Peter grew up on a beef cattle property in North-West NSW and has a passion for educating the next generation.

Sarah Strachan

Group Manager, Adoption & Commercialisation

sstrachan@mla.com.au

Sarah oversees the delivery and development of the Meat Standards Australia, Livestock Genetics and Producer Adoption programs within MLA. These programs are responsible for converting research into commercial services for businesses along the entire supply chain. This includes providing a diverse range of options for producers to engage with and apply research outcomes into their production systems such as the well-known EDGE Network, Producer Demonstration Sites and Profitable Grazing Systems programs. Sarah has a Bachelor of Rural Science qualification from the University of New England and has worked with MLA for 20 years, spending 18 of these working in the MSA program.

Session summary

The objective of the panel session is to bridge what the producers have heard throughout the day from the other sessions, and connect this to what the customer wants – from processor to end user/consumer. This panel session will give producers an appreciation of specifications, and role of sustainability, and branded programs and the purpose and drivers behind these requirements to meet the needs of the end user.

Notes

My take home messages and actions

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

Session	Action - Things I could do to implement ideas

Pasture Principles

Building skills in pasture management

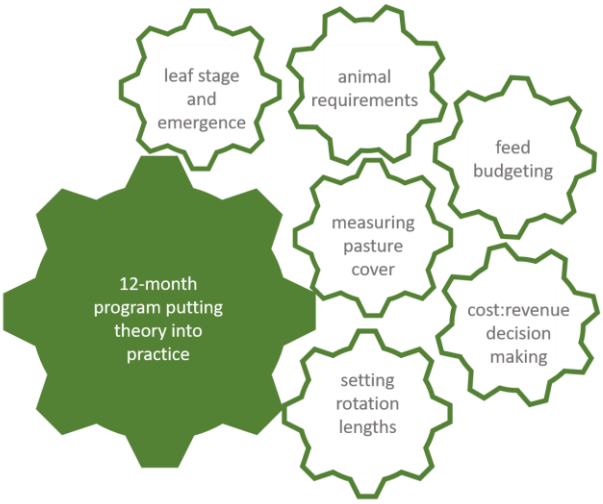
A 12-month program designed to build livestock producer's skills in pasture management, being delivered in South Australia, Victoria, New South Wales and Tasmania in 2022

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.

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.*

Pasture Principles has been attended by **>300** participants from **>100** businesses

out of 10, they rated the program **9.4** for content **9.2** for value

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 please contact Pinion Advisory: pastureprinciples@pinionadvisory.com or T: 1300 746 466

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

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pinion ADVISORY

MEAT & LIVESTOCK AUSTRALIA mla EDGE NETWORK

Business EDGE

Know your business, grow your business

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

Events near you

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

Adelaide	Clare	Penola
20–21 July 2022	30–31 August 2022	11–12 October 2022

To register contact Royce Pitchford **M:** 0429 305 915 **E:** rpitchford@pinionadvisory.com

Business EDGE has been developed by Meat & Livestock Australia

Better your business

MEAT & LIVESTOCK AUSTRALIA

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

TRAINING OPPORTUNITIES

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

Profitable Grazing Systems
mla.com.au/pgs

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

Producer Demonstration Site
mla.com.au/pds

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

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

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

bredwell fedwell
mla.com.au/bredwellfedwell

RESOURCES

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

The toolbox
elearning.mla.com.au

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

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

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

mla.com.au/seasonal-hubs

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

mla.com.au/feedbase-hub

PUBLICATIONS

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

mla.com.au/feedback

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

mla.com.au/enews

Become an MLA member today

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

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

www.mla.com.au/meatup

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