FEEDBACK

MLA – FOSTERING PROSPERITY

SEPTEMBER/OCTOBER 2020

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MEAT & LIVESTOCK AUSTRALIA

FEEDBACK

MLA fosters the long-term prosperity of the Australian red meat and livestock industry by delivering world-class research, development and marketing outcomes.

Cover (page 38): MLA's 'The Greatest Butcher on Your Block' campaign celebrated butchers around the country. Pictured are Tasmanian butcher Marcus Vermey, owner of Vermey's Quality Meats, Sandy Bay, with award-winning journalist Jessica Rowe.

Have your say!

We'd love to hear from you

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A NOTE FROM THE MD...

Welcome to the September/ October edition of *Feedback*.

With the ongoing challenges presented by COVID-19, communicating with our broad range of stakeholders is more critical now than ever.

One of the ways we are keeping members up-to-date during this pandemic is through our range of e-newsletters, so I encourage you to sign up at **mla.com.au/enews**

Here is a snapshot of our three most read e-newsletters:

- *Friday Feedback* is distributed every week and includes news, views and advice from MLA. It covers seasonal topics, industry news, weather, producer case studies and on-farm tools.
- *Prices & Markets* is distributed every Thursday and provides in-depth red meat market news, information and analysis to help producers make informed decisions when buying and selling livestock.
- *R&D Round-Up* is a monthly e-newsletter which provides a short and sharp look at the latest research published by MLA, summarising projects in an easy-to-read format. Read more about R&D Round-Up on page 10.

While we will continue to update our members on the latest industry developments primarily through *Friday Feedback* e-newsletter and MLA's social media platforms, I would also like to take this opportunity to answer some 'frequently asked questions'.

Will Red Meat 2020 go ahead this year?

Unfortunately, we have decided to cancel the annual Red Meat event due to the ongoing COVID-19 situation.

MLA's 2020 Annual General Meeting (AGM) – an important component of the Red Meat event schedule – will still take place on 19 November.

Given massive uncertainty around ongoing outbreaks of COVID-19, cancelling the Red Meat event was a regrettable but 'common sense' decision.

We want to ensure red meat producers still have the opportunity to find out how their levies are being invested by MLA, and will more than likely

deliver this information through a series of online events and webinars. By subscribing to *Friday Feedback*, you will be able to easily access the latest details each week.

What is MLA planning to deliver for the rest of the year?

With an emphasis on delivering 'fewer, bigger and bolder' programs of work, we will focus on less projects but larger programs.

This includes Northern Breeding Business (NB2), a new initiative to address the low reproductive performance of breeder herds across northern Australia compared with southern enterprises (page 5), as well as the Sheep Reproduction Strategic Partnership, which resulted from the recently released *Sheep Reproduction RD&E Impact Assessment* (page 7).

What has MLA achieved over the past two months?

New sheep genetics website

MLA recently launched a new Sheep Genetics database search site that offers a range of improved features to make Australian Sheep Breeding Values more accessible and gives producers the ability to customise data to suit their needs. To access the new site, visit **sheepgenetics.org.au**.

Delivering the COVID-19 global response strategy

The volatile nature of COVID-19 continues to influence the demand for red meat across the globe.

MLA is responding to these trends by implementing a global strategy to adapt marketing programs, ensuring red meat remains on plates around the world.

So far, the strategy has focused on:

1. **Food hacks:** To help consumers learn how to cook red meat at home through practical content e.g. how-to videos.
2. **Trust and immunity:** To reinforce the nutritional benefits of Australian red meat at a time when consumers are gravitating towards brands they trust and foods with nutrition benefits.
3. **Digital development:** MLA is moving as many events and seminars online as possible so producers can continue to access new resources and information for their businesses.
4. **Tactical support:** MLA introduced short-term additional financial support measures as part of the the CoMarketing program to support brand owners during this difficult trading environment.
5. **Clear communication:** MLA has adapted communication channels to provide a clear and consistent line of communication with global stakeholders.

Turn to page 40 to take a behind-the-scenes look at how MLA is developing innovative activities to increase red meat sales throughout the pandemic. ■

Have a question for me?

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Spring tips and tools

Producers now have a suite of resources at their fingertips to support seasonal on-farm decision making with the launch of a Spring Hub on MLA's website.

MLA has compiled seasonal tips and tools – such as calculators, fact sheets and links to publications – in the one location, covering key spring management practices specific to production type and region including northern cattle, southern cattle, sheep and goats.

Looking ahead, MLA is also developing a Summer Hub of seasonally-relevant resources. ■

Visit MLA's Spring Hub: **mla.com.au/spring-hub**

Free producer resources

Did you know MLA has developed a range of free resources for producers?

As part of its commitment to adoption and extension across the red meat sector, MLA recently launched a webpage of extension materials and tools which have Creative Commons licences. The Creative Commons licensing system provides globally recognised licences which allow users to print, use, share and build upon copyrighted material such as manuals, fact sheets, online tools and videos.

These materials, such as More Beef from Pastures and Give Goats a Go manuals and videos and MLA's Feed Demand Calculator, can be integrated into learning modules or coursework, used as part of advisory materials or embedded into websites free of charge. ■

To access MLA's Creative Commons webpage visit **mla.com.au/CC** or for more information email CC@mla.com.au

red meat 2020
producer demos • forums • tradeshow • mla agm

Red Meat 2020 cancelled

MLA's annual Red Meat event will not take place this year due to the ongoing COVID-19 situation. The event was scheduled to be held in Toowoomba in November.

MLA's 2020 Annual General Meeting (AGM) – an important component of the Red Meat event schedule – will still take place on 19 November.

Details are still be finalised for how the AGM will be delivered, most likely online. ■

For more information visit **mla.com.au** or subscribe to MLA's weekly e-newsletter, *Friday Feedback*, at **mla.com.au/enews**

MLA on the go

Have you caught up on the latest MLA podcasts?

MLA's new Feedback podcast features interviews with producers, policy makers, celebrity chefs, scientists and everyone in between.

Listen to the most recent episode, to hear interviews with:

- Victorian sheep producer Ricky Luhrs who shares how he's used genetic selection to improve the productivity of his Merinos.
- Queensland beef producer Greg Lawrence on how he's tackling pasture dieback (page 20).
- Olympic athlete Lewis Holland on how he's teamed up with MLA to inspire school kids to greatness.

MLA's other podcast, On the ground, covers the latest from international markets. ■

Subscribe wherever you get your podcasts or visit: **mla.com.au/feedback-podcast** and **mla.com.au/on-the-ground**

Cattle market update

The Australian cattle market finds itself in an unprecedented position, with many diverging factors impacting the industry in addition to COVID-19, according to MLA's most recent cattle industry projections.

On the back of an excellent autumn break for many southern cattle regions and producers' desire to rebuild their herds, renewed optimism swept the domestic cattle market. However, as COVID-19 outbreaks continue to disrupt the local and global marketplace, uncertainty remains.

Some of the main projections are:

- Adult cattle slaughter and beef production are set to fall, but carcase weights are forecast to rise.
- A herd rebuild has been delayed but is still on the horizon, fuelled by improved seasonal conditions.
- Forecast Australian beef exports have been revised higher since the April update. ■

Read the full *Australian cattle industry projections – July update* at **mla.com.au/cattleprojections**

Boost for northern breeder businesses

A strategic research partnership to address breeder efficiency in northern Australia launched in August, with the target of delivering an estimated $20 million in net benefits a year to 250 northern beef enterprises by 2027.

Northern Breeding Business (NB2) is a seven-year on-farm program developed by MLA in association with the North Australia Beef Research Council (NABRC), aimed at increasing calf survival and breeder herd efficiency across the northern beef industry.

It will address the three main threats to the northern beef industry:

- calf loss
- low profitability
- low levels of adoption of proven management practices.

MLA General Manager, Research, Development and Adoption, Michael Crowley, said NB2 will soon begin recruiting northern producers to participate in on-farm research, development, extension and adoption (RDE&A) activities.

"Calf mortality and poor reproductive performance have a major impact on reproductive efficiency and profitability for the northern beef industry.

"Past levy-funded activities have delivered an understanding of these issues and of best management practices, but the uptake of these practices has remained low," Michael said.

"NB2 will extend the current network of research and development, deliver new activities in extension, and promote adoption to directly assist producers in managing measurable improvements in breeder herd efficiency.

"The cost-benefit ratio for the NB2 program has been calculated as a total increase in income for the 250 herds of approximately $20 million over seven years, which equates to a 5:1 return on investment."

NB2 will establish four regionally diverse pilot producer groups of five beef business partners across northern Australia – one in the Kimberley region of WA, one in the NT and two in Queensland – to provide direction and insight to the project.

"It will create customised breeding plans for breeding properties with the assistance of a network of consultants and producer mentors," Michael said.

The process includes:

- on-property assistance and ongoing support from a group of producers in a similar region with common production challenges
- assistance to identify issues which specifically limit the performance of breeder herds, as well as overall productivity
- support to build a customised breeder herd management plan to cost-effectively address the issues identified.

"Although the program focuses on reproductive performance and calf mortality, outcomes will be expected to impact on productivity and sustainability as well – it's expected participants will gain a better understanding of their overall business through the process."

NB2 aligns with MLA's focus on delivering 'fewer, bigger and bolder' programs of work, as part of MLA's *Strategic Plan 2025*. The initiative for establishing NB2 came out of MLA's regional consultation framework. ■

NB2's three extension and adoption pillars – herd management, feedbase and environment – aim to deliver:

5% increase
in weaning rate

1% decrease
in herd mortality rate

10kg increase
in sale weight of cattle at the same age

long-term,
sustainable production and profit

Producers interested in participating in NB2 can contact:

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Read the MLA *Strategic Plan 2025* at: **mla.com.au/strategicplan**

RD&A funding applications now open

Matching feed to climate variability, a vaccine for internal parasites in sheep and improving calf survival are in the spotlight in the latest round of MLA research funding.

Applications are now open for researchers to submit preliminary proposals for funding to support on-farm research, development and adoption (RD&A) projects that benefit sheepmeat and grassfed beef producers.

MLA's investment call is aimed at attracting projects from individuals, organisations and project teams which address the RD&A priorities identified for the sheepmeat and grassfed beef industries for 2021–22.

The priorities were determined following extensive consultation with red meat producers through MLA's regional consultation process.

The 2021–22 priorities are:

Driving on-farm practice change to increase whole of life cow productivity for southern beef production systems

Matching feed supply in a variable landscape to a changing climate

A scour worm vaccine for sheep

Breeder herd efficiency and calf survival for northern production systems (NB2 project – see page 5)

MLA General Manager, Research, Development and Adoption, Michael Crowley, said researchers are encouraged to work collaboratively on project proposals and involve producers or producer groups where possible.

"This approach is part of MLA's focus on delivering programs of work that address producer priorities and deliver greater benefits and impacts for the industry," Michael said.

"The development of a vaccine against scour worms, identified as a priority by producers, would be a potential game-changer for Australian sheep producers.

"Internal parasites have the costliest impact of all endemic conditions on profitable sheep production – almost the entire Australian sheep flock is challenged by scour worm infestation.

"For southern beef producers, proposals are sought for developing and delivering extension packages that will result in improvements in reproductive performance throughout a breeder's productive life as a result of adoption of selected management techniques.

"The productivity of the southern beef sector has the potential to improve if management strategies which concentrate on reproductive performance are put in place.

"There's a wealth of information and resources available to producers but practice change leading to improved reproductive outcomes, and the associated productivity gains, remains a significant opportunity."

Researchers are encouraged to develop an adoption pathway within proposed projects suitable for the research outputs. This may consider, but not be limited to MLA adoption programs such as integrated R&D Producer Demonstration Sites (PDS) or Profitable Grazing Systems (PGS).

"Looking at northern beef production systems, proposals are sought through a specific and separate tender process for RD&A activities that directly align with the development of the Northern Breeding Business (NB2) strategic research partnership (see page 5), which came out MLA's 2019–20 investment call," Michael said. ■

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How to apply

A request for tender based on the 2021–22 RD&A priorities for sheepmeat and grassfed beef and a MLA preliminary proposal template can be downloaded from **mla.com.au/investmentcall**

Preliminary proposals should be submitted electronically in Microsoft Word format to MLA at **projectcall@mla.com.au** before 11.59pm AEDT, Friday 2 October 2020

Report card for sheep reproduction research

An independent impact assessment of sheep reproduction research, development and extension (RD&E) in Australia since 2012 has been released.

The *Sheep Reproduction RD&E Impact Assessment* reviewed 120 industry projects and initiatives against the objectives of the *Sheep Reproduction RD&E Investment Plan 2012–2017* (SRRIP) and other industry strategies.

MLA engaged Beattie Consulting Services and Inspiring Excellence to undertake the assessment on behalf of project partners, Australian Wool Innovation (AWI), and Animal Health Australia (AHA), with input from peak industry councils, Sheep Producers Australia (SPA) and Wool Producers Australia (WPA).

Improving sheep reproduction on-farm is a priority for Australian sheep and wool producers. MLA, AWI, AHA, WPA and SPA share a commitment to increasing lamb survivability through industry RD&E and adoption of relevant on-farm management practices.

The assessment provides a thorough impact assessment of RD&E investments, identifies key impact areas, remaining gaps, and makes recommendations for future industry collaborations.

These recommendations will help guide future investments which will occur through the Sheep Reproduction Strategic Partnership (SRSP) to ensure the delivery of the highest impact outcomes for the sheep industry.

MLA is establishing the SRSP with industry partners to help producers profitably and sustainably increase lamb production through increasing weaning rates and lamb survival. ■

Read the *Sheep Reproduction RD&E Impact Assessment* final report: **mla.com.au/sheep-reproduction-assessment**
Bred Well Fed Well **mla.com.au/bredwellfedwell**
Lifetime Ewe Management: **lifetimewool.com.au/LTEM.aspx**

Assessment

Some of the findings from the *Sheep Reproduction RD&E Impact Assessment* were:

New knowledge: Since the inception of the *Sheep Reproduction RD&E Investment Plan* (SRRIP) in 2012, a considerable amount of sheep reproduction R&D has generated new knowledge demonstrating pathways to improve reproductive outcomes. However, there remains a significant opportunity to boost adoption to increase reproduction efficiency on-farm.

Investment: Relative to what was recommended in the SRRIP, the proportion of total expenditure on sheep reproduction has been 83% higher on applied research, 40% lower on development and extension and 55% lower on strategic research.

Reproduction gains: The overall objective of the SRRIP was to achieve an average annual gain of 2% in sheep reproduction rates over the five-year planning period. The assessment found the average annual rate of gain was between 0.6% and 1.5% during that period. However, it found the rate of gain was highly likely to have been negatively influenced by below average seasonal conditions during the SRRIP delivery period.

Program impact: The assessment found that since 2012, the Lifetime Ewe Management program, supported by AWI, has had the most influence on sheep reproduction efficiency, impacting the management of around six million ewes over six years. The Bred Well Fed Well program, supported by MLA, also influenced the management of around 1.6 million ewes over the same period.

MSA keeps delivering high farm gate returns

Australia's globally recognised eating quality grading program Meat Standards Australia (MSA) delivered an estimated $172 million in additional farm gate returns to beef producers in 2019–20.

The latest MSA *Annual Outcomes* report, released in August, shows a record 3.8 million cattle were MSA graded in 2019–20, an 8% increase in the number of cattle compared to 2018–19, representing 46% of the national adult cattle slaughter.

In 2019–20, 4.3 million sheep followed MSA pathways, a 5% increase from 2018–19, with 64% of these going into MSA trademarked brands. It's estimated 57% of the national lamb slaughter was processed through MSA licensed processors.

MLA's Group Manager for Adoption and Commercialisation, Sarah Strachan (pictured), said the program's latest data demonstrated the value MSA continues to deliver to producers and Australia's red meat industry.

"In 2019–20, the average price differential for young non-feedlot MSA cattle was 27 cents per kilogram hot standard carcase weight, compared to the same non-MSA graded cattle," Sarah said.

"Non-feedlot cattle represented 38% of MSA graded cattle, and feedlot cattle represented 62% of MSA graded cattle. The increase in the proportion of feedlot cattle is reflective of the drought conditions in recent years and the subsequent high levels of cattle on feed."

Sarah said the commitment of producers to adopting on-farm practices to achieve outstanding eating quality in their livestock saw the national average compliance to MSA minimum requirements for beef lift to 94.2%, up from 93.8% in 2018–19.

"This commitment is also reflected in the national MSA Index, which increased to a record 58.03, an increase of 0.55 index points on the previous year," she said.

"The MSA Index is a single number and standard national measure of the predicted eating quality of a carcase. It provides meaningful producer feedback to benchmark performance and reflects the impact of on-farm actions on eating quality.

"The benefits of the MSA program continue to attract producers, with 2,900 beef and sheepmeat producers becoming MSA registered in 2019–20."

Sarah said the Eating Quality Graded (EQG) cipher, released in 2017 to provide brand owners with an opportunity to market product according to consumer eating quality outcomes as an alternative to dentition-based ciphers, has continued to have strong adoption.

"As at June 2020, brand owners and processors who represent 50% of MSA graded beef have adopted the EQG cipher for both domestic and international markets," Sarah said.

"There are now 195 beef and sheepmeat brands licensed to use the MSA trademark." ■

Tips for MSA compliance

SA and WA beef producers targeting MSA are heading into what is historically the most challenging time of the year for MSA compliance.

According to the *2019 Australian Beef Eating Quality Insights* report, average MSA non-compliance for SA producers throughout 2017–19 was 7%, peaking in December 2017 at 12% as a result of high pH, which is meat pH greater than 5.70. For WA producers in the same period, average MSA non-compliance was 4.5% and also peaked in December 2017 at 9% as a result of high pH.

To address issues of non-compliance to pH, producers need to maximise the amount of glycogen at the point of slaughter by optimising nutrition and minimising stress.

On-farm strategies to achieve this include:

- ensure cattle are achieving growth rates of at least 0.9kg/day
- provide a high-energy ration for at least 30 days before slaughter
- muster and handle stock as quietly and efficiently as possible
- familiarise animals to handling and train stock persons in handling skills
- maintain animals in their social groups – don't mix mobs within 14 days of dispatch
- ensure livestock have access to water at all times prior to consignment.

For more information about MSA and to read the MSA *Annual Outcomes 2019–20* report, visit **mla.com.au/msa**

Six ways to tap into new myMSA features

The refreshed myMSA website is now live, giving MSA-registered producers access to a range of new features to help improve MSA compliance and eating quality performance.

Here are six ways producers can benefit from the new features.

1. It's more user-friendly

The new look myMSA makes it easier for producers to access and analyse carcase feedback. It's mobile-friendly so is accessible on mobile devices and tablets as well as desktop computers.

New features include:

- an easier navigation with the left-hand menu
- help prompts on every page
- a more sophisticated benchmarking page
- easy-to-read feedback reports.

2. Better benchmarking

The updated myMSA benchmarking feature allows producers to quickly analyse how their cattle compare to other MSA-graded cattle in terms of compliance and eating quality performance.

The tool gives producers the option to benchmark either their most recent cattle consignment or all cattle graded over a time period, on a national, state, or regional basis.

Producers can select carcase filters such as the use of hormonal growth promotants (HGPs), feed type (grass or grain), sex and ossification to compare cattle with cattle from similar production systems. The data will update in real time and show how your cattle compare on MSA Index, compliance and carcase attributes to all other cattle with the filters that have been applied.

Tip: Use this information to assess cattle performance compared to industry averages for MSA, to identify areas for improvement.

3. Easy access to MSA feedback reports

Producers can access MSA carcase feedback reports by logging in to the myMSA platform and selecting 'Beef' and then the 'Reports' option on the left-hand menu bar.

All consignments processed under the MSA account number will be listed on the page by date, plant and number of head within the consignment.

Producers can select the 'Reports' button on the right-hand side of the page to access – and download – carcase feedback, MSA non-compliance, MSA graphs and company specification non-compliance reports.

Producers can also select multiple consignments to see all their data across the selected time period. 'Over time reports' are available at the bottom of the page.

Producers can view reports in a list view, as well as by a calendar and filter view. Use the 'View by Filter' page to create reports by filtering on consignment details and carcase attributes.

Tip: When selecting a report to view, the report will open within a new tab, so it's important to disable any web browser pop-up blockers for the myMSA site.

4. Access the Opportunity Index

In the past, carcases which didn't meet the MSA minimum specifications for pH (<5.71), rib fat (minimum 3mm) or adequate fat coverage, didn't receive an MSA Index score.

The Opportunity Index now allows producers to see what the MSA Index would have been in non-compliant carcases if they had met the minimum specifications.

5. Complete MSA Vendor Declarations online

MSA Vendor Declarations can be completed electronically by logging into myMSA or the LPA Service Centre (**lpa.nlis.com.au**) using a PIC, LPA user ID and LPA password.

Within myMSA, after selecting 'MSA Declaration Online', producers will be redirected to the LPA Service Centre and prompted to select the forms to include as part of the consignment, including an option for MSA.

6. Order MSA Vendor Declaration books

Hard copy MSA Vendor Declaration books can be ordered online through myMSA – log in to mymsa.com.au and select 'MSA Declarations & Order Items' on the left-hand menu bar – or by contacting MSA Enquiries on 1800 111 672.

As part of MLA's Accelerated Adoption Initiative, there's no cost for MSA Vendor Declaration books until 30 June 2021.

Tip: Producers consigning MSA eligible sheep aren't required to complete an MSA Vendor Declaration, just include your four-digit MSA number in Part A – Question 7 on the National Vendor Declaration (Sheep and Lambs). ■

To access myMSA, visit **mymsa.com.au** and log in using your unique four-digit MSA number and password.

Serving up bite-sized R&D

MLA's latest e-newsletter, *R&D Round Up*, presents a short, sharp look at the latest research and development (R&D) outcomes for the red meat industry.

The monthly e-newsletter summarises technical projects in an easy to read format, so readers can stay up-to-date with new ways to improve business profitability and productivity and then delve deeper into topics which interest them. ■

Stay up to date with all the latest red meat R&D by subscribing at: **mla.com.au/rd-round-up**

Here's a snapshot of some the projects featured in *R&D Round-Up* recently:

Future farming: MLA is supporting a program to help producers develop new entrepreneurial skills to solve critical industry challenges and advance their businesses.

View from above: Research has found that drones can assist producers to improve land and livestock management in northern Australia.

Lamb survival: MLA has completed a review of the causes and impacts of difficult births (dystocia) in ewes to inform effective on-farm management strategies. Read more about this research on page 26.

Feedlot health: Research has shown that a remote early disease identification system can identify Bovine Respiratory Disease in feedlot cattle based on their daily behaviours. Read more about this research on page 32.

Polled test: A new genetic test has been developed which can remove the need for dehorning cattle.

X marks the spot: Multi-energy X-ray Absorptiometry (MEXA) technology has identified intramuscular fat percentage and shear force as the key drivers of eating quality in lamb.

A new twist on an old favourite: A new type of meat pie has been developed for people who have chewing and swallowing difficulties, offering the opportunity to grow red meat consumption in a niche market.

Cutting edge: A new spray marking system aims to simplify automated beef boning and optimise meat yield of cuts.

Food for thought: MLA has partnered with CSIRO to reduce methane production from grainfed cattle by 98% using an alternative diet.

Stronger links: A scoping study has been completed to strengthen Indonesian red meat supply chain authenticity and traceability systems to address food fraud.

ON FARM

RESEARCH IN ACTION

Image: Simon Freeman Photography

ANIMAL HEALTH

Managing phosphorus deficiencies in northern herds

Phosphorus (P) deficiency is a serious nutritional issue for many northern Australian cattle herds and can cause major losses in productivity and profitability.

To help northern beef producers identify and combat P deficiency in their herds, MLA has developed a new brochure: *Why do cattle need phosphorus? A guide for northern beef producers*.

The easy-to-read, eight-page brochure includes advice on how to identify a P deficiency, what the impact is and how to develop a P supplementation plan on extensive grazing properties.

MLA Program Manager – Research and Development Grassfed Beef, Dr Nigel Tomkins, said some beef producers may not realise their herd is P deficient and may not be aware of the benefits of P supplementation.

"Cattle need P for almost every vital function of the body. It's used for building bones and teeth, metabolising fat, carbohydrates and protein, producing milk and influencing feed intake," Nigel said.

"Deficiencies often arise in northern Australian production systems because most soils here have lower available P compared with southern Australia. This means there's often insufficient P in the pasture to meet animal requirements.

"The cattle which have the highest P requirements are growing stock, late-pregnancy heifers and cows, and lactating cows."

Nigel said the new brochure contains the latest research findings into P and highlights the benefits of supplementing cattle with P.

"The brochure summarises the key points of the second edition of the longstanding MLA manual *Phosphorus management of beef cattle in northern Australia*, published in 2012," Nigel said.

"MLA has placed a high level of importance on P research over the years. Supplementation throughout the year to animals that need P the most has been proven to boost productivity and reproductive performance in northern beef herds." ■

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For more information on phosphorus and to download a copy of *Why do cattle need phosphorus? A guide for northern beef producers*, visit: **mla.com.au/phosphorus**

Consult your local agriculture department for advice on the best way to test for phosphorus deficiency or consider joining MLA's P Challenge in 2021 (details available in late 2020).

Benefits of phosphorus supplementation

15–30% **increase** in weaning rates

6–12% **increase** in birth weights

Up to **130kg** **increase** in breeder cow live weights

P is for p

Strategic phosphorus (P) supplementation has allowed Queensland beef producers Rob and Ainsley McArthur to boost the productivity and profitability of their entire business.

About 12 years ago, the couple recorded low conception rates in their breeder herd, as well as low growth rates across their commercial herd.

They decided to dig deeper to identify the cause and found an unexpected problem.

Their region isn't typically associated with low soil phosphorus levels, but given their herd's performance, the McArthurs decided not to rule out P deficiency.

"It wasn't until we got our specific property lot numbers assessed with the Queensland Department of Agriculture and Fisheries for land and soil types and completed Near Infrared Reflectance Spectroscopy (NIRS) faecal monitoring for an indication of diet quality, that we learned areas of our property were P deficient," Rob said.

"Despite paddocks on creek flats showing adequate P levels in NIRS results, these paddocks weren't enough to offset P deficiencies on the balance of our land types.

"Learning about the different land types of our property enabled us to take a targeted approach."

Supplementation strategy

To ensure P supplementation was cost-effective, Rob and Ainsley set specific production goals. Initially, these were:

roductivity and profitability

- target weights for yearling heifers and steers
- conception rate targets within the breeding herd.

"We attended the 'Better management of phosphorus nutrition of grazing cattle' workshop run by QAAFI (Queensland Alliance for Agriculture and Food Innovation), we referred to the MLA P manual and spoke to FutureBeef extension officers to learn what the P requirements of different livestock classes were," Ainsley said.

Rob and Ainsley identified that the peak P requirement coincided with the highest production phase – during the wet season, when energy and protein weren't limiting.

"We ramp up the P supplementation in the growing season, making it *ad lib* until the pasture's growth slows and starts to hay off," Rob said.

However, helping the cattle to meet their P requirement through supplementation was a challenging task.

"We persisted, and it really came down to trial and error," Ainsley said.

"The supplement needed to be palatable, easy to deliver during the wet season and cost-effective."

Eventually, the McArthurs settled on a winning combination which they've been using for more than three years now.

"We mix hydrous di-calcium phosphate (DCP) with copra meal, which acts as an attractant to get the cattle to eat it," Rob said.

Growing season results

As a result of implementing a P supplementation program, Rob and Ainsley have:

- improved body condition across their herd
- improved conception rates in their breeder herd
- increased heifer growth rates
- increased the percentage of heifers reaching target joining weights.

"As soon as we got the P intake correct, we saw the results within the growing season," Rob said.

"P supplementation has also helped with the performance of our agistment cattle – it helps them adapt to the nutrition and improves overall animal performance on our coastal country."

According to Rob and Ainsley, measuring everything is key to seeing results.

"We know how much the copra meal and DCP is per tonne, we know how many kilograms are delivered to each paddock and how many grams per head the cattle are eating," Ainsley said. ■

Rob and Ainsley McArthur ramp up P supplementation in the growing season to get the best results.

LESSONS LEARNED

- > Persistence combined with trial and error will pay off.
- > Conduct specific land-type mapping – don't rely on generic maps.
- > Monitor and measure so phosphorus inputs generate a positive return.

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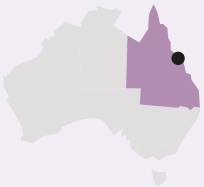
MLA's phosphorus hub, including a new guide on phosphorus supplementation: **mla.com.au/phosphorus**

The FutureBeef website contains phosphorus resources including a webinar series on phosphorus supplementation – visit **futurebeef.com.au** and search 'phosphorus'

SNAPSHOT: **Rob and Ainsley McArthur,** 'Mystery Park', St Lawrence, Queensland



Area: 12,000ha

Enterprise: Cattle breeding, backgrounding and agistment

Livestock: 4,500 tropically adapted composite cattle

Pasture: Black speargrass, pangola, signal, Rhodes grass and stylo

Soil: Coastal eucalypt, predominantly silty loam and clay interspersed with fertile creek flats

Rainfall: 1,050mm

REPRODUCTIVE EFFICIENCY

How to optimise ewe performance in containment

Producers have new guidelines to help optimise the health and reproductive performance of ewes during containment feeding, while also minimising costs.

Dr Susan Robertson of CSU Wagga Wagga, who led the MLA-supported project, said containment feeding ewes allows producers to hold on to valuable breeding stock during periods of inadequate pasture.

While the results of the practice are generally good, she said producers often receive conflicting advice about the best way to manage ewes in containment, which can result in poor performance.

"The aim of this project was to examine the research and provide evidence-based guidelines to manage ewe reproduction and health in containment, so producers can avoid unnecessary costs and reduce the risk of a poor result," Dr Robertson said.

Best practice management

Dr Robertson said containment feeding ewes is no different to any other livestock containment or lot feeding program – a successful approach starts with site selection, pen design and good water.

After that, other considerations to optimise reproduction rates are:

- animal health
- feed management of ewes and rams
- ram percentages and
- condition score.

"The main health issues for containment-fed ewes are acidosis due to eating a grain-based diet, pregnancy toxaemia and shy feeders," Dr Robertson said.

"Managing acidosis means introducing new feed sources gradually. Roughage is also critical.

"Avoiding pregnancy toxaemia requires feeding to maintenance requirements and avoiding time off feed during late pregnancy. This includes when releasing ewes from containment.

"Shy feeders are an issue in any containment situation, so make sure you monitor regularly and remove them."

Filling the gaps

As well as developing management guidelines, Dr Robertson said the project aimed to identify knowledge gaps. One of the key findings was that ewe reproduction in containment has not been well-researched.

She said producers' and consultants' observations are that generally, reproductive rates are not reduced in containment.

"However, we know there's a large range in performance. I've heard of pregnancy rates in containment ranging from less than 50%, up to 97%.

"Research is needed to identify best practices and help reduce risks."

MLA will continue to research on-farm feeding systems through specific programs, while the recently established Sheep Reproduction Strategic Partnership will focus more broadly on improving ewe and lamb survival. ■

Dr Susan Robertson
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Look out for the new containment feeding guidelines on MLA's website later this year: **mla.com.au**

NSW Department of Primary Industries resources: **dpi.nsw.gov.au/animals-and-livestock/sheep/feed-nutrition**

RESEARCH IN REVIEW

PROJECT NAME
Optimising ewe reproductive performance in containment areas

RESEARCH ORGANISATIONS
Graham Centre for Agricultural Innovation (CSU Wagga Wagga and NSW Department of Primary Industries)

FUNDING ORGANISATIONS
MLA

GOAL
Evaluate the scientific literature to provide evidence-based guidelines for producers to manage ewe reproduction and health when containment fed, and identify any gaps in knowledge.

DURATION
April–June 2020

KEY FINDINGS TO DATE

- There is limited information available about which practices improve reproduction.
- Acidosis, pregnancy toxaemia and shy feeding need to be carefully managed.
- Ewes must be monitored for condition and health.
- More research is needed to determine optimal mob size and feeding methods.

Ewe containment serves up benefits

With two summers of joining up to 13,000 Merino ewes in containment behind him, NSW producer Derk Meurs is confident his approach is maintaining the reproductive efficiency of his flock.

Derk manages the prime lamb-focused property, 'The Pinnacles', at Wagga Wagga for Moulamein-based Merino producers Ian and Camilla Shippen.

Along with his wife Fiona, daughters Sabrina, Nicole and Kristina and two casual staff members, Derk oversees 13,000 Merino ewes. Maiden ewes are joined to White Suffolk rams and mature ewes to Poll Dorsets.

They introduced containment feeding in December 2018, following three years of below-average rainfall and minimal ground cover.

"We decided containment feeding was the best option to save our country, reduce labour costs and maintain ewe condition," Derk said.

Derk uses 1.6–2ha pens and recommends a maximum of 700 ewes/pen. While he has fed as many as 1,500 ewes in a pen, he said large mobs can increase the occurrence of shy feeders.

Before constructing the lot, Derk attended an information day on drought lotting and spoke to other producers for their insights on constructing drought lots.

Derk Meurs and his daughter Sabrina in their containment yard at 'The Pinnacles'.

Pen design was based around tree placement, so each pen had adequate shade.

Derk took slope into consideration and also incorporated a laneway for easy feeding and 4m concrete water troughs, which are cleaned every third day.

Feeding

Last summer, ewes were shorn, vaccinated with 6-in-1 and drenched in September/early October, then fed in containment from early December 2019 to March 2020.

The induction ration was 200g/day/head of barley, trailed on the ground. This was steadily increased over two weeks. A small amount of bentonite was also added at the start of feeding, to manage acidosis.

The full ration was 4kg/week/head, increasing to around 6kg/week/head pre-lambing.

Grain was fed six days a week, with cereal straw, salt and lime provided *ad lib*. A magnesium supplement (Causmag) and protein-rich canola pellets were included as ewes approached lambing.

Derk fed ewes early in the morning when it was cool, as he suspects afternoon feeding may have contributed to increased acidosis.

"If you feed later in the day when it's hot, they won't come and eat until it cools down, at which point they gorge themselves," he said.

Ewe management

Derk condition-scored the ewes every two weeks. The tail was drafted out and fed in grazing paddocks.

Last year, mature ewes in containment were joined on 1 December and maiden ewes were joined a month later.

Rams were used at 1% for both groups of ewes, with fresh rams swapped in every two weeks.

Industry best practice is 2% rams for maiden ewes, however when Derk used this rate in 2018 he found there was too much fighting among the rams.

At scanning, mobs were separated and fed as singles and twins, and ewes were vaccinated again.

"We removed the ewes from the containment lot at least a month before lambing to minimise the risk of nutritional issues causing pregnancy toxaemia," Derk said.

"This year the ewes from the drought lot recorded a slightly higher lambing percentage, ranging from 112–130%, compared to ewes in the paddock at 110–125%." ■

SNAPSHOT:

Derk Meurs, 'The Pinnacles', Wagga Wagga, NSW

Area:
5,000ha

Enterprise:
First-cross lambs and wool

Livestock:
13,000 Merino ewes

Pasture:
1,200ha of lucerne and 3,800ha of native pasture

Soil:
Granite to red loam

Rainfall:
580mm

Sabrina Meurs
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LESSONS LEARNED

- Avoid using too many rams in containment yards.
- Remove the tail end of ewes regularly to maintain flock welfare and health.
- Feed early in the morning before it gets hot.

Take a long-term view of stocking rates

Long-term research into wet season spelling and moderate stocking rates has shed light on how these practices should be balanced to improve on-farm productivity.

Since 2012, researchers from the Queensland Department of Agriculture and Fisheries (DAF) have studied the effects of spelling and stocking rates on pastures in MLA/DAF-funded grazing trials on 'Wambiana Station', Charters Towers.

The spelling project, which is located within the longer-term Wambiana grazing trial, used 20m x 20m fenced areas for wet season spelling. After spelling, these plots were opened up and grazed using the same stocking rates as the rest of the paddock.

DAF senior scientist Paul Jones and his team are using these trials to determine the impacts of grazing and spelling and develop strategies to manage pastures and reduce the impact of drought.

To date, the trial has demonstrated:

- stocking rates greatly affect the survival and regrowth potential of the more productive grasses
- high stocking rates amplify the damaging effects of drought, while moderate stocking significantly reduces the impact of drought
- wet season spelling is beneficial and improves survival of better grasses, but should not be prioritised over managing stocking rates.

"The greatest learning from this trial has been that stocking rates are more important than spelling treatments in pasture management," Paul said.

"We observed the impacts of this on desert bluegrass, a cornerstone pasture for beef production in northern Australia.

"Under moderate stocking rates, desert bluegrass tussocks had a far higher survival rate and were more vigorous than those which were subjected to high stocking rates.

"With the drought we still had high plant mortality rates, but this was amplified by heavy stocking rates."

Pasture recovery

After severe drought, pasture recovery is also more dependent on stocking rates than spelling.

In the trials, areas which were grazed at high rates were observed to have little or no rejuvenation, while there was some pasture recovery with moderate grazing.

"You have to stock your country with the long term in mind," Paul said.

"Paying attention to stocking rates is going to be highly beneficial to the country going forward and will show you what your long-term carrying capacity is for viable feed management."

In regard to spelling, Paul said although drought had affected the results, they had encountered some surprising findings.

"We were really surprised by the growth of desert bluegrass seedlings in the spelled patches," Paul said.

"Although most seedlings died due to the drought conditions, spelling allowed some seedlings to survive. However, this only occurred under moderate stocking.

"Established desert bluegrass plants are very tough, and while they have been stressed by the drought, hopefully we will have some for the future.

"We've also seen that spelling is beneficial in simply giving pastures a rest and helps overgrazed patches recover and evens paddocks up again with overall ground coverage." ■

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Nine steps for wet season spelling

Monitoring stock and grazing rates is important to achieve effective spelling. Here are nine other tips for success:

1. Spell pastures as much as possible, without placing undue grazing pressure on areas which are not being spelled.
2. Prioritise which areas to spell based on pasture condition and the time since the last spell, but remember all paddocks will occasionally need rest.
3. Spell paddocks after 1 December in ordinary seasons, or earlier in exceptionally wet years. Ideally, paddocks should be spelled immediately following rainfall of 50mm or more.
4. The best results will be achieved if paddocks are spelled for the entire wet season, but this isn't always realistic. As a rule of thumb, the longer the spell, the better.
5. Closely monitor paddocks which are being grazed – if these are being over-utilised, progressively open spelled paddocks to reduce grazing pressure.
6. Paddocks should be opened up based on their spelling priority levels, starting with low-priority paddocks.
7. Stocking rate is of greater importance than wet season spelling because of its effects on land condition, so always ensure stocking rates remain at or below long-term carrying capacity.
8. Although it takes second place to stocking rate, wet season spelling is nevertheless essential to maintain or improve pasture condition.
9. Good fence lines and water access are important for spelling – developing infrastructure creates opportunities to spell more areas.

Spelling for success

Michael (pictured above left with his son Hugh) and Michelle Lyons have turned their first-hand experience of a long-term grazing trial on their family's Charters Towers station into an opportunity to improve pasture management in a highly variable climate.

The Queensland government first leased part of 'Wambiana Station' from Michael's parents in 1997 to test and develop sustainable, profitable strategies to manage rainfall variability in extensive grazing enterprises. These trials continue to be run by the Queensland Department of Agriculture and Fisheries (DAF) – see story opposite.

"We've taken the results from the trials and put them into practice in a rotational grazing strategy," Michael said.

The Lyons family use rotational grazing to spell paddocks more successfully. Combined with carefully adjusting stocking rates to match their seasons, this allows them to better look after desirable grasses. As a result, they only use about 30% of their property at any one time.

"We move the cattle through paddocks quickly in the wet season to ensure they only lightly graze the better grasses, giving them time to recover before grazing again in the dry season.

"This rations out the feed, ensuring the pastures left behind are in good condition and ready to respond to the coming wet season."

Michael said wet season spelling is also a crucial tool to achieve animal production targets and set up pastures for the dry season.

"By the time we get to the dry season, we know how much grass we have to work with. "From this we can determine our dry season plan and whether we'll need to adjust our stock numbers to match the feed available."

Infrastructure is key

Michael said effective spelling and rotational grazing requires the right infrastructure.

"We found we needed to spread our water points across the property to allow better grazing distribution and forage utilisation," he said.

"Now our cattle don't need to walk more than 1.5km to get a drink of water.

"This ensures we can spell the country we want to, rather than moving to paddocks based on whether or not there is surface water available."

The Lyons family also invested in fencing so cattle can be moved away from their preferred areas to graze paddocks more evenly, and to help manage riparian country during the wet season.

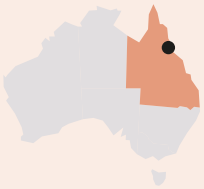
Michael said sound knowledge and confidence were important factors in changing their management practices to spell country more effectively.

"We've actively sought training in grazing strategies through programs such as MLA's EDGE courses and RCS Grazing for Profit," Michael said.

"We've also recently started to use MaiaGrazing, an online grazing chart, to record our grazing and deliver information on how our paddocks are yielding, plus give us early indications on how we are tracking relative to our carrying capacity benchmarks." ■

SNAPSHOT:

Michael and Michelle Lyons, 'Wambiana Station', Charters Towers, Queensland



Area:
23,200ha

Enterprise:
Beef cattle and educational tourism

Livestock:
3,000 Brahmans

Pasture:
Desert bluegrass, buffel, black speargrass, stylos and desmanthus

Soil:
River loams, grey cracking clays, sand ridges

Rainfall:
650mm

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Wambiana Station **wambianastation.com.au**

MLA's EDGE programs: **mla.com.au/edge**

LESSONS LEARNED

- Spread out water points.
- Seek training and learn from other producers.
- Determine a dry season plan based on spelling results.

GENETICS

How to choose a sire when you can't attend a sale

The impacts of COVID-19 mean many producers may not be able to attend bull and ram sales this buying season – especially if they need to travel interstate.

However, this doesn't mean the quality of sire selections needs to be impacted.

Bulls and rams are a mobile delivery system for genes and accessing breeding values will provide information on the genetic merit of different sires on offer.

What can't be seen in an animal is just as important as what can be, and with breeding values available pre-sale, producers can do most of the research before a sale to identify the sires which are right for their business.

Here are some tips to invest wisely in new genetics, even if you can't head to a sale:

1. Use breeding values (Estimated Breeding Values for cattle and Australian Sheep Breeding Values for sheep) to filter the sale catalogue and shortlist sires which meet your breeding objectives.
2. Request photos, videos and additional information from breeders well before sale day to check physical elements of each sire on your shortlist, such as their structure and temperament.
3. Use this additional information to equip your agent (or whoever will be representing you at the sale) with your prioritised list of sires, taking into account the number of sires required and budget.

Quick guides to get started with genetics

To help producers get started with genetics, MLA's genetics hub, **genetics.mla.com.au**, has free short videos on understanding breeding values, breeding objectives and indexes, which lead to choosing a sire for more productive and profitable results.

The videos are tailored for different enterprises – tropical bulls, temperate bulls, prime lamb rams and Merino rams. Topics for each include:

- Getting started with breeding values
- Using breeding values to select for traits
- Using breeding values to find bulls or rams on genetic service websites including BREEDPLAN, LAMBPLAN and MERINOSELECT
- Putting breeding values into practice when shopping for a high-performing sire. ■

Clara Bradford
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To access the how-to videos and for more information on how genetics can accelerate your herd's or flock's productivity, visit **genetics.mla.com.au**

For a guide to shopping for a high-performing sire, visit **mla.com.au/sire-handy-guide**

Tune in to select traits

MLA has launched a range of resources to help commercial beef and sheep producers target specific traits identified in their breeding objectives when buying bulls and rams.

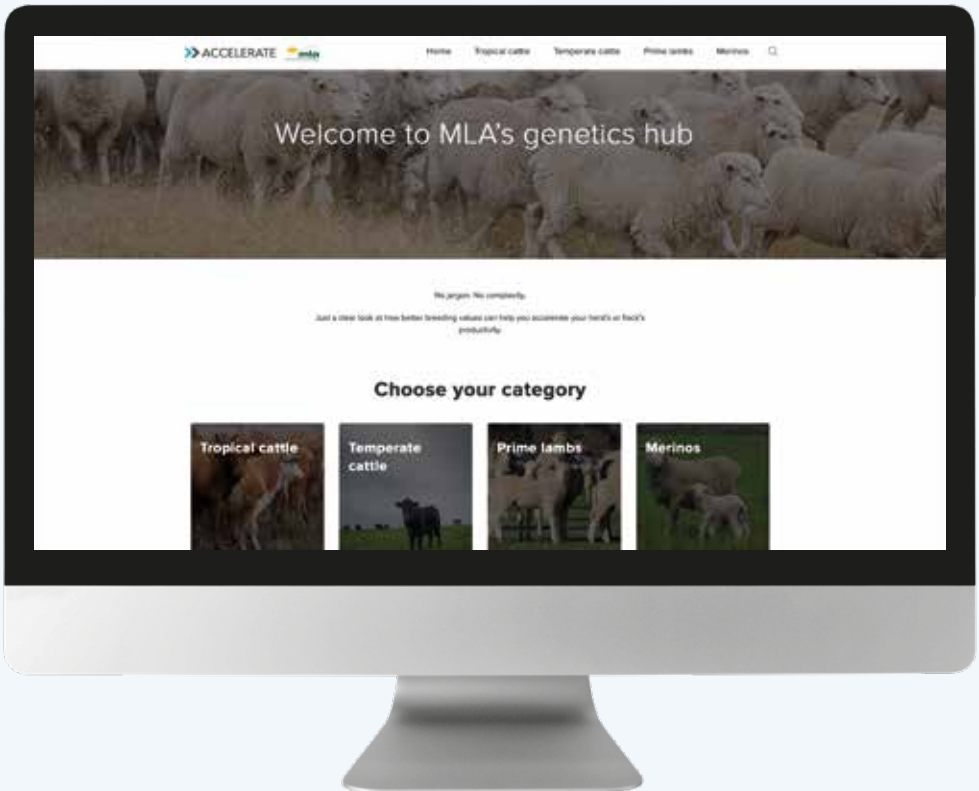
New videos explaining some of the most popular traits for cattle and sheep are now live on MLA's online genetics hub, **genetics.mla.com.au**.

The videos add to the genetics hub's one-stop-shop of tools and resources, aimed at demystifying genetics and breeding values.

The videos detail the traits producers can use to target their breeding objectives and select sires to achieve those objectives.

Sheep producers: the videos cover traits including animal health and welfare, reproduction, carcase, growth and wool.

Beef producers: traits covered include fertility and calving ease, carcase traits and growth rates.



Three steps to better bull buying

For SA producer Scott Harlock, the work to achieve genetic gain in his herd begins long before he purchases a new sire.

While he knows there's merit in visual inspections, Scott does his homework before he heads to bull sales to make sure he's investing in the right genetics for his production goals.

The value of this research was reinforced to Scott when he attended a MLA Bred Well Fed Well workshop four years ago. He came home with a clear direction of how to select bulls which will work most successfully in his business.

"I didn't really use Estimated Breeding Values (EBVs) a lot until I attended Bred Well Fed Well," Scott said.

"There I learned to centre on the key traits I wanted to bring to my operation.

"Using tools like BREEDPLAN and Bred Well Fed Well, and really paying attention to the genetic merit of an animal, is helping us meet our long-term goal of achieving a fertile, easy-calving herd with a great temperament," he said.

Scott follows three steps to prepare for buying bulls each year.

1. Match production goals with EBVs

His first tip is to know what you want to get out of a sale, and then match selections to your business goals.

"Before we go to a sale, we work out what our requirements are during the period of weaning," Scott said.

"We review what's working best for us and areas where we'd like to see improvements.

"We then use Hereford BREEDPLAN to work out the best EBVs to target our key traits."

Scott said it's important for producers to know their individual priorities when selecting sires, as each business will have different genetic requirements.

His top criteria are:

- EBV for 400-day weight in the top 20% of the breed
- EBV for gestation length and milk in the top 35% of the breed
- Mature Cow Weight EBV to be less than the 600-day weight.

"Depending on where you are and what you're running, your focus EBVs will be different," Scott said.

SA producer Scott Harlock uses genetic selection to breed more consistent lines of Hereford cattle.

2. Shortlist sires

Once he's set and prioritised EBVs, Scott shortlists sires based on these parameters as well as other factors such as calving ease and retail beef yields.

This means he doesn't have to sort through 90 bulls when he heads to sales.

"By the time we get there we've got a short list of 10–12 bulls we're interested in.

"We'll cull this down to around 6–7 animals and then rank what's left to match our budget."

3. Visual back-up

Once he's at the sale, Scott's final step is to visually inspect his top picks to make sure they're physically up to standard.

"We want to make sure our shortlisted bulls are well put together, have a strong gait and a good temperament," Scott said.

"By that stage, everything else you're looking for in a sire should already have been determined."

As a result of using EBVs to focus his decisions for buying bulls, Scott's seeing improvements in his herd.

"Over the past four years I've started to see a more consistent style of cow and calf. Milking ability has improved and a stronger structure is coming up through the herd.

"This means I can cull harder on the older cows, resulting in a younger herd which leads to the opportunity for new genetics to come through." ■

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MLA Bred Well Fed Well workshops
mla.com.au/bredwellfedwell

MLA's genetics hub
genetics.mla.com.au

SNAPSHOT: **Scott Harlock,** Bool Lagoon, SA

Area:	**Enterprise:**	**Livestock:**	**Pasture:**	**Soil:**	**Rainfall:**
970ha	Commercial cattle and sheep	240 Hereford cows, 1,550 first-cross ewes	Improved pasture mix of fescues and phalaris	Sandy loam	630mm

Legumes in the mix help

When pasture dieback devastated 70% of one of their Central Queensland properties, beef producers Greg and Vicki Lawrence turned to legumes to help fill the gap in their feedbase – and they've even tapped into production benefits along the way.

Pasture dieback was first identified at their property, 'Kendah', Wowan, in December 2016.

The dieback spread rapidly after rain in March 2017, decimating the Lawrences' well-established pastures.

"After the parent grass died, any grass seed that came up would grow a couple of inches, then turn yellow and red and die," Greg said.

What is pasture dieback?

Pasture dieback is a condition causing death of patches of pasture across a range of sown and native grasses. It's prevalent across northern, central and south-east Queensland and has also been reported in northern NSW.

Symptoms include:

- vivid yellowing and/or reddening of leaves
- as the condition progresses, plants die in patches less than 1m in diameter to paddock scale (up to hundreds of hectares)
- reduction in root system and grass density.

"It was heartbreaking to watch."

Pasture dieback impacted 400ha of grass country on the 590ha property and prompted a complete rethink of the family's on-farm management program.

Legume mix

Greg was unsure if re-sowing buffel grass would have an impact on combating pasture loss and weed emergence, so he decided to plough an affected paddock and plant wheat to provide supplementary feed for cattle.

Through October 2017, Greg ploughed more paddocks and planted a mix of legumes including butterfly pea, caatinga stylo, Progardes desmanthus, burgundy bean and lablab.

"The butterfly pea had already worked in some paddocks so I knew it would work. The burgundy bean has similar characteristics so I presumed it would grow.

"Lablab was a relatively quick cover crop, which meant we would definitely have a feedbase to fall back on if the other plantings didn't work.

"We planted the legumes like a crop and we've had brilliant results so far. We ploughed, waited till it rained, planted and sprayed with herbicide to combat the weeds.

"Today, 75% of the property has been planted to legumes."

Production benefits

Greg and Vicki are EU-accredited producers. They breed Droughtmaster/Charbray cross cattle and sell directly to Teys Australia's Rockhampton facility.

Cattle are rotationally grazed and usually finished on home-grown wheat and sorghum in grain feeders in the paddock.

Since the successful establishment of the legumes, Greg's started turning off cattle without any grain finishing.

"The cattle love the legumes and we haven't had any issues with bloat," Greg said.

"We sold two-year-old bullocks straight off the legumes last year.

"They would normally have a dressed weight of 370–390kg with grain finishing but they dressed 345kg straight off the legumes, without grain

LESSONS LEARNED

- It's important to improve the microbial health of soil.
- Plant legumes as a crop so it's cost-effective – legume seeds are too expensive to waste.
- Do your research and talk to other producers and advisors (such as Department of Agriculture and Fisheries agronomists) for their insights.

Pasture dieback hit this paddock at 'Kendah' in March 2018. Greg planted a legume mix and here's how it looked in July 2020, after being baled in April 2020, yielding 25 round bales/ha.

SNAPSHOT: Greg and Vicki Lawrence, 'Kendah', Wowan and 'Balcarres', Gogango, Queensland

Area: 590ha at Wowan, 1,388ha at Gogango

Enterprise: EU accredited beef producers

Livestock: Droughtmaster/ Charbray cattle

Pasture: American and Gayndah buffel grass

Soil: Belah softwood scrub

Rainfall: 700mm

tackle pasture dieback

finishing, which is a great result."

While the legumes filled the gap through summer, looking ahead Greg would like to include a drought-tolerant grass to provide a good body of grass for winter.

"The caatinga stylo holds its leaf in winter, but most of the other legumes drop their leaf in winter. They're also more summer active and don't provide a standover body of feed like buffel grass does.

"I would like to get my American and Gayndah buffel grass back if I can – they keep their nutritional value for a lot longer than any of the other grasses seem to.

"In the paddocks where we've planted legumes, whatever grass grows there is pretty good.

"Pasture dieback is still there but instead of having a heap of weeds growing, we've got legumes growing instead." ■

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Pasture dieback resources
mla.com.au/dieback

Queensland: **futurebeef.com.au/knowledge-centre/pasture-dieback**

NSW: **dpi.nsw.gov.au** and search 'pasture dieback'

Producers who are concerned they have pasture dieback on their property should contact the Queensland Department of Agriculture and Fisheries customer call centre on 132 523, or in NSW, the Exotic Plant Pest hotline on 1800 084 881.

Listen to an interview with Greg Lawrence on MLA's Feedback podcast:
mla.com.au/feedback-podcast

New projects target pasture dieback

Six new MLA-funded projects focused on pasture dieback will soon get underway, to investigate options for remote sensing and detection, diagnostic analysis of pathogenic organisms present in affected pastures and effective management solutions.

This research will help to improve understanding of the recurring nature of pasture dieback so red meat producers can develop more resilient management systems, similar to drought management.

While pasture dieback R&D is ongoing, producers in affected regions are being encouraged to undertake good farm hygiene and biosecurity practices around the movement of stock, equipment and materials.

Central Queensland beef producer Greg Lawrence.

BUSINESS MANAGEMENT

Benefits beyond weed con

Diversifying into goats to help manage weeds has delivered significant environmental and financial benefits to NSW producers Bill and Jacqui Perrottet.

Bill and Jacqui manage a 1,760ha mixed grazing business near Guyra in the New England region.

Goats account for approximately 5% of the total livestock units (dry sheep equivalent) managed by the Perrottets, running alongside beef, wool, dual-purpose sheep and cattle trading enterprises.

While goats are far from the primary income generator in the Perrottets' business, they have provided a useful supplement to the income of the other livestock enterprises without significantly increasing the demands on feed.

Weed control

The Perrottets diversified into goats in 2001 to manage woody weeds and thistles, including blackberries, nodding thistle and Scotch thistle. These weeds thrive in their high-rainfall zone and can increase at a rapid rate without suitable control.

Bill said the goats didn't compete excessively for the conventional pasture base with other livestock, but they increased the total business return in the process.

"The pasture is consumed by the goats but the proportion of total intake appears to be minimal. This means the goats are rarely competing with other livestock for feed resources," he said.

In fact, the weeds appear to be preferentially grazed by the goats over the pasture.

"Woody weed infestations accounted for up to 50% of total ground cover on some areas of the farm 20 years ago. Today, that's down to 2% in the same areas," Bill said.

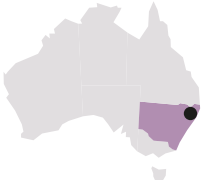
Bred for resilience

One of the biggest challenges faced by the Perrottets in introducing goats to their business was managing the impact of altitude and the high-rainfall climate.

To combat this, the couple developed their own rainfall-tolerant breed of

Goats aren't commonplace in the New England region of NSW, but producer Bill Perrottet said they not only provide weed control, but also deliver economic benefits to his grazing enterprise.

SNAPSHOT: **Bill and Jacqui Perrottet,** Guyra, NSW



Area:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
1,760ha	Goats, beef, wool, dual-purpose sheep and cattle trading enterprises	Goats, black baldy cattle herd, Merino ewes joined to Merino and Dorset rams	Fescue white clover	Red and black basalt	900mm

trol

goat called Urandangie Brown, a mix of Australian rangeland goats and the Boer breed. They have not introduced any new genetics for 10 years.

"We select bucks from our own breeding herd based on yearling live weight, foot structure and resilience to internal parasites.

"Our aim is to have a very low-maintenance herd that can manage the conditions – and right now, they're looking magnificent with 590mm of rain recorded to early August this year."

Economic benefits

When assessed at the whole-business level, Bill said there was no marginal overhead cost in managing goats as the additional operational time is conducted with existing labour.

"In fact, since introducing goats, our herbicide costs have decreased significantly and they now represent less than 1% of the total overhead cost base of the business," Bill said.

Bill worked with consultant John Francis, Holmes Sackett, to better understand the economic contribution of goats in their enterprise.

They calculated the total marginal benefit of the goat enterprise as $29,800/year, demonstrating that goats can generate reasonable returns for businesses even though their margins may be lower than alternative enterprises.

Bill, who has experience managing goats in a rangeland environment, said while there are additional challenges managing goats in a high-rainfall environment, the financial benefits (when the primary motivation is reducing costs and increasing the effectiveness of weed control) can still offset the challenges. ■

LESSONS LEARNED

- Goats provide a useful supplement to the income of other livestock enterprises without significantly increasing the demands on feed.
- Goat grazing habits mean they're more likely to preferentially graze weeds over pasture.
- Goats rarely compete with other livestock species for feed resources.

Bill and Jacqui Perrottet
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MLA delivers a range of workshops, tools and other resources for goat producers to equip them with the latest best-practice knowledge gathered from research to improve their businesses. For more information visit: **mla.com.au/goats**

New R&D to improve goat parasite control

A new MLA research project is looking to strengthen the wellbeing of the goat industry by prioritising the need for sustainable internal parasite control through informed off-label drench use.

Internal parasites continue to be a major problem for goat producers. Goats do not develop an age resistance to worms to the extent that occurs with sheep and cattle, and there are relatively few effective drenching products registered for use in goats.

Project leader Dr Emma Doyle, from the University of New England, said the project aims to provide veterinarians with relevant, science-based advice so they can guide goat producers in making best practice decisions regarding use of drenches.

"The results of this project will present producers with viable, effective and accessible options when tackling worm control in goats, building overall industry confidence around goat health and immunity," Dr Doyle said.

"It looks to highlight the importance of recognising what products are working and what aren't and where drench resistance may be a factor, ultimately influencing levels of productivity and sustainability."

The project concludes in early 2021. Results will be provided to veterinarians and Paraboss to inform advice for producers on best practice approaches to drenching and worm control.

Emily Litzow
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Down the track

In this new series, *Feedback* catches up with producers who have been profiled in the past, to see how their business is evolving in response to new challenges and opportunities.

Looking back

In 2017, NSW beef producer Stuart Tait embarked on an MLA-supported Nuffield Scholarship to learn more about dual-purpose cropping. He's used the knowledge gained on his travels to sharpen his focus on grazing management and benchmarking and, as a result, intensify production on his family's property.


Checking out the global feedbase

Stuart Tait shared his Nuffield Scholarship insights in the February/March 2018 edition of Feedback.

Stuart Tait
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Watch Stuart's 'Good Meat' video at:
goodmeat.com.au/producers

Nuffield Australia Farming Scholarships
nuffield.com.au

Read Stuart's original case study from the February/March 2018 edition of *Feedback* at
mla.com.au/feedback

Looking ahead

Adaptation is the name of the game for Stuart Tait, who changed tack along his Nuffield Farming Scholarship journey to gain more from the experience.

The Nuffield program provides recipients with a scholarship to travel overseas and study an agricultural topic of their choice.

Stuart's original research topic was dual-purpose cropping and beef cattle, but once he began travelling he quickly realised Australia's expertise in this area was already world-leading. So, he broadened his focus to look at whole finishing and forage-based beef systems.

This opened his eyes to new grazing management options and enterprise mixes, as well as how to analyse a business through internal benchmarking and data collection. These strategies now form part of the business Stuart runs with his wife Isabel and parents John and Joanna.

"Nuffield wasn't something where I came back and just tipped the whole business upside down," Stuart said.

"The real value was having the time away from the business and interacting with a lot of very smart people.

"When you're not elbow-deep working in it day to day, you start to think about your business from a different perspective."

Strategic grazing

Stuart used the scholarship to visit dairy farms in England, Ireland and New Zealand. He was struck by how these producers measured, monitored and managed their grass resources to maximise utilisation.

He drew on these principles to find balance in his beef business through rotational grazing. He subdivided paddocks, increased mob size and began to move stock more frequently.

Stuart said a benefit has been getting a better handle on what feed is available so it can be better managed.

The chance to take a closer look at how producers around the world structure their enterprises prompted Stuart to ramp up productivity.

The Taits have increased their cropping area as well as livestock numbers – by growing more


Isabel, Henry and Stuart Tait.

grazing crops, they're effectively 'stacking' their enterprises.

Stuart said he now has a better understanding of what constitutes an acceptable return on assets.

The Taits conduct internal and external benchmarking to understand the profitability of their enterprises and to identify opportunities to improve overall business performance.

This has resulted in refocusing their cattle enterprise. When they realised beef breeding was their least profitable enterprise, they intensified their focus on trade cattle.

Breeding still has its place in the Taits' business, to utilise some hilly country which isn't well suited to running trade steers. The breeding enterprise also provides stability from a risk perspective.

Market uncertainty

An excellent start to the season this year reinforced the Taits' decision to intensify production and they've capitalised on the seasonal opportunity to purchase steers, despite record-high prices.

"We've spent a lot of money on buying cattle and with that comes greater risk – there are also market uncertainties with coronavirus and so on," Stuart said.

"But we thought – here's an opportunity, let's go hard."

Against the backdrop of COVID-19, global politics, drought recovery and restocking, Stuart said he's given up guessing what the market will do.

"The beef market has, in our opinion, never been harder to track or predict.

"There have never been this many variables pulling the market in so many different directions.

"We've tried to eliminate some of this risk with forward contracts, but we've really struggled to find them. Forward contracts are something I'd like to see more of, from a risk management point of view."

Sharing the true story of beef production

Stuart is a passionate advocate for the beef industry, with representative roles with the NSW Grasslands Society and the Grasslands Society of Southern Australia.

He's also shared his family's beef production story as part of MLA's Good Meat initiative to educate the community about animal welfare, environmental sustainability, health and nutrition.

He believes it's important for producers to tell their story firsthand, to demonstrate their commitment to best practice and continual improvement.

"The squeaky wheel gets the oil, and there are a lot of squeaky wheels saying things about the red meat industry which aren't positive.

"There are a lot of great businesses which have something to offer by opening up and showing others what they're doing – as an industry, we need to share our stories and get the truth across." ■

SNAPSHOT:

Stuart and Isabel Tait, John and Joanna Tait,
Mandurama, NSW

Area:
2,000ha

Enterprise:
Cropping and cattle

Livestock:
550 Angus breeders and 700–1,350 trade steers

Pasture:
Phalaris, sub-clover, cocksfoot, tall fescue, Italian ryegrass and dual-purpose grazing crops, summer hybrid forages

Soil:
Red basalt clays and alluvial loams

Rainfall:
750–800mm

Below: The Tait family have intensified their focus on trade cattle.

REPRODUCTIVE EFFICIENCY

Looking deeper into dystocia

Dystocia – or birth injury – is a major cause of lamb and ewe mortality, but producers can improve survival through strategic management.

A new MLA-funded study has revealed birth injury plays a far greater role in lamb mortality than previously realised.

Dr Caroline Jacobson from Murdoch University collaborated on the review of Australian lamb survival studies conducted since 1990.

"More than 75% of lamb deaths associated with dystocia have no external evidence that most producers would recognise as dystocia injury, such as a swollen head or neck," Dr Jacobson said.

"Their birth injuries were only found by careful post-mortem examination of the brain and spinal cord."

Dystocia is a significant animal welfare issue and comes with considerable financial costs.

"Ewe and lamb deaths related to dystocia are estimated to reduce farm income by $16 per ewe," Dr Jacobson said.

Best practice management

Although there are still many unknowns around how best to reduce dystocia, Dr Jacobson said strategies already recommended to improve lamb survival are beneficial, with good management beginning long before lambing.

"When selecting rams, it's a good idea to discuss with ram breeders how the Australian Sheep Breeding Values (ASBV) for birth weight and lambing ease will complement your ewe type and age," Dr Jacobson said.

"Traditionally, dystocia has been seen as a problem in single-born lambs with large birth weight, but it's actually a significant contributor to lamb deaths across all litter sizes.

"The ideal lamb birth weight varies between breeds and birth types, with dystocia risk increased for lambs with very low or very high birth weight," Dr Jacobson said.

As well as sourcing genetics which contribute to increased lamb survival, it's important to condition-score ewes.

"Maiden ewes, in particular, should be managed to reach weight and condition score targets at mating to avoid having ewes that are undersized at lambing."

Scanning pregnant ewes is another crucial strategy to increase survival.

"Separating single and twin-bearing ewes enables differential management to avoid ewes being too fat or too thin at lambing. Ewes need to be well-nourished but not fat."

Working with an animal health advisor or veterinarian so ewes have appropriate mineral supplements in late pregnancy can help reduce dystocia caused by nutritional, metabolic and hormonal imbalances.

Dr Jacobson also recommends checking pastures for oestrogenic clovers and managing ewes' exposure to these paddocks, as it can impact their hormone levels.

"Paddocks for lambing should contain adequate shelter, especially for twins and triplets, and good feed if possible," she said.

Minimise disturbance during lambing, such as when supplementary feeding or from other sheep by reducing mob size for twins and triplets. ■

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Read a summary of this project at **mla.com.au/maternal-dystocia-review**

RESEARCH IN REVIEW

PROJECT NAME
A review of maternal dystocia

RESEARCH ORGANISATIONS
Murdoch University, David Masters, NSW Department of Primary Industries, Massey University (NZ), John Young, UWA

FUNDING ORGANISATIONS
MLA

GOAL
1. Determine risk factors for dystocia in the Australian sheep flock
2. Estimate economic impact of dystocia
3. Identify opportunities to reduce the impact of dystocia in Australian sheep production systems
4. Identify gaps and propose new R&D priorities to reduce the impacts of dystocia

BUDGET
$34,323 (plus in-kind contributions to total project value $89,054)

DURATION
23 February – 1 May 2020

KEY FINDINGS TO DATE
- Dystocia is a significant animal welfare issue and comes with considerable financial costs.
- Strategies already recommended to improve lamb survival are beneficial to reduce dystocia, with good management beginning long before lambing.

Best practice boosts survival

WA Merino producer Lynley Anderson has been working hard to improve lamb survival for years, but she didn't realise the strategies she was using were also reducing dystocia in her flock.

A recent MLA-funded study (see story opposite) showed dystocia, or difficulties during birth, is a major contributor to lamb and ewe mortality – responsible for at least 50% of lamb deaths.

Murdoch University researchers conducted autopsies on lambs in Lynley's flocks as part of a separate lamb survival project and the results of those studies helped inform the dystocia study.

"Autopsies on our lambs confirmed we have very low levels of dystocia," Lynley said.

"The research validates what we have been doing since 2002, which was very gratifying."

Lynley's on-farm strategies include ensuring ewes are a condition score of 3 or better at joining and maintaining this right through to lambing.

"We've always scanned ewes and separated twins and singles so we can manage them separately," she said.

"We reduce mob size at lambing, with the twins going into mobs of about 200 and the singles into mobs of 300."

One of the major benefits of scanning and managing singles and twins separately has now been shown to be reduced levels of dystocia and improved lamb survival rates, yet adoption of this practice remains low.

Only about 30% of Australian ewe flocks are being managed separately based on the number of lambs ewes are carrying.

Genetic selection

The dystocia research shows it may be possible to select against dystocia using indicator traits including lambing ease and lamb size, weight and conformation at birth, along with other lamb survival and ewe rearing ability traits.

Reproductive performance is a priority for Lynley across her stud and commercial flocks.

She generates Australian Sheep Breeding Values (ASBVs) for birth weight and lambing ease in her Merino stud flock, and culls any ewes in the Merino stud flock, commercial Merino flock or her small Poll Dorset stud which fail to rear a lamb.

"Our aim is to make sure we're not increasing birth weight. We want a medium-sized lamb at birth, but one that grows quickly. That's long been the aim in non-Merino breeds, but now we want it in Merinos as well.

"Culling ewes which fail to rear a lamb is a good practice to introduce, as is only using rams with good ASBVs for lamb survival traits, along with scanning ewes and managing according to pregnancy status needs." ■

SNAPSHOT:

Lynley Anderson,
Kojonup, WA

Area:
2,400ha owned and leased

Enterprise:
Sheep and cropping (50:50); Poll Merino stud; Poll Dorset stud

Livestock:
7,000 Merinos

Pasture:
Stubbles, mixed clover, ryegrass

Soil:
Gravel loam

Rainfall:
475mm

Lynley Anderson
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LESSONS LEARNED

- Scan ewes and manage for litter size.
- Select for birth weight and lambing ease.
- Cull ewes that fail to rear a lamb.

Below: WA sheep producer Lynley Anderson.

TECHNOLOGY

Working with an eye in the sky

Using satellite imagery to look at pastures offers northern cattle producers more than just an accurate measurement of biomass.

Two experts in this field – rangeland management advisor Col Paton and agricultural remote sensing specialist Phil Tickle – have developed a tool that enables more accurate and efficient forage budgeting.

"Using images from a satellite, calibrated to your property, gives you more accurate information on pasture yield variability and changes in the types of ground cover as the season progresses," Col said.

Col and Phil will coach producers in a new training package, Satellite Assisted Forage Budgeting, delivered through MLA's Profitable Grazing Systems (PGS) producer-training platform.

Why use satellite forage budgeting?

While a simple forage budget takes pasture data and determines how long the feed on offer will last with current stock numbers, satellite imagery takes forecasting to the next level.

"Combining local knowledge, simple mobile apps and satellite imagery will significantly reduce the time required to gather field data for pasture budgets and will improve decision-making," Phil said.

Satellite assisted forage budgeting offers three major benefits:

1. Improved planning
Pasture yields and quality can change rapidly and vary across paddocks, but satellite imagery picks up those changes. Updates are provided every five days, with real-time information on how much feed is in each paddock, rather than a prediction based on growth from previous years. Sustainable stock numbers can be determined at the end of the growing season, which reduces the risk of feed shortages. Monitoring pasture status and ground cover weekly through the dry season supports early decision making if conditions change.

2. Greater consistency and accuracy
Once calibrated, the satellite imagery accurately quantifies the spatial variability of pasture yields and feed in paddocks, with less time spent manually verifying data on the ground. Calibrating requires collecting manual yield cuts and estimations from the paddock which are then used to improve the accuracy of predictions from the satellite imagery. By targeting on-ground pasture assessments, users can save time and be confident the satellite is picking up precisely what is in the paddock. Station staff can change each year, but the data from the imagery is consistent.

3. More efficient use of time
Users can assess information on paddocks even when they can't access the whole paddock. For example, managers can do end-of-growing season forage budgets and plan the year's stock allocation in paddocks before mustering begins. They can book trucks, develop supplementary feeding programs and plan dry season work reliably in advance.

By participating in the satellite assisted forage budgeting program, producers will learn:

- skills to reliably estimate and record pasture yields
- how to combine paddock observations with satellite imagery to get precise paddock-scale feed estimates
- how to develop paddock-scale forage budgets and assess how many livestock can be safely carried each season.

The training package also includes a 12-month satellite imagery subscription for participating properties (up to the value of $1,000/property). ■

To register for training or to find out more contact:

Col Paton
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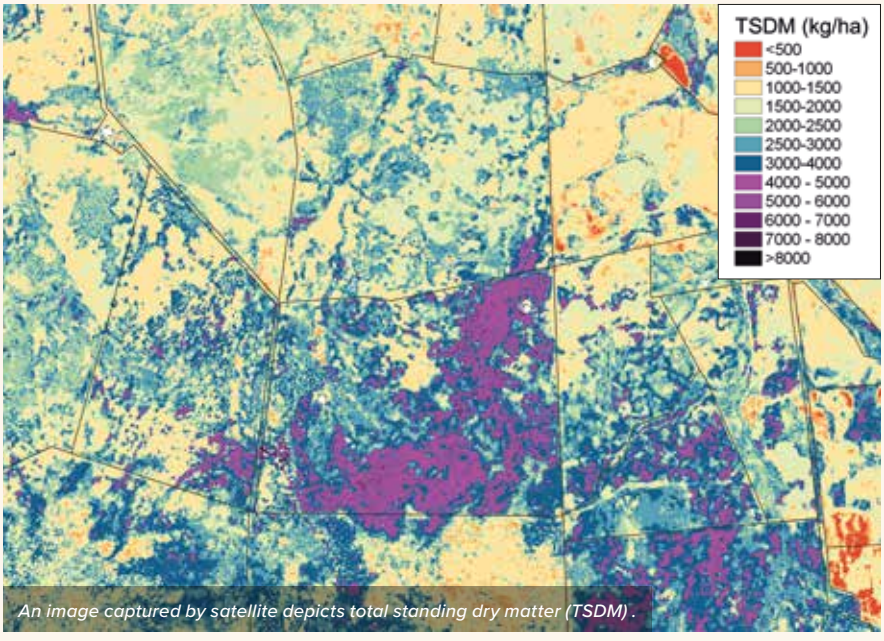
mla.com.au/pgs



An image captured by satellite depicts total standing dry matter (TSDM).

A different look at forage budgeting

The COVID-19 isolation period may have given some people spare time for new hobbies, but for Queensland beef producers Anthony and Anna Dunn, it was all hands on deck preparing their 2020 forage budgets.

It's only the second season the Dunns have incorporated satellite imagery and data to support forage budgeting on the Roma property they manage, 'Echo Hills', so manually verifying the data on-ground was their top priority.

Anthony, Anna and their two daughters turned a break from home schooling earlier this year into a session in the paddock, armed with a quadrat, scales and a smartphone to measure, weigh and record five pasture quadrants for each pre-determined satellite location.

Forage measurement and budgeting has been a lifetime practice for the property's owner, Peter Thompson, and his family.

For decades, it's been routine practice to develop spreadsheets to record and forecast crop and pasture growth and rainfall events.

When Anthony joined the business 10 years ago, he embraced the system. More recently, consultant Col Paton was employed to help develop more detailed forage budgets.

Traditionally, in autumn, they would use visual and physical assessments supported by historical data to establish dry season feed budgets through to late spring.

Two years ago they started using Cibo satellite imagery to support this decision making.

"It was the driest period in the property's history and we felt it was a great time to start with a baseline and understand how much ground cover we need to retain to get the optimal gain when rain returns and to see just how quickly it does grow," Anthony said.

Fine-tuning the system

While Anthony feels satellite imagery already paints a good picture, adding data from pasture measurements during the development phase will only make it stronger and more accurate.

"It doesn't replace what you already do with your eyes, but it adds an objective element," he said.

> **"Our main motivation was to use the best tools to help us manage climate variability while remaining productive and sustainable."**

One of the other gains from satellite-assisted forage budgeting for Anthony is the ability to create a robust, repeatable budgeting procedure which can be easily used by other staff members, including new employees.

The next steps in the evolution of the forage budgeting system at Echo Hills is automating rainfall data collection (currently collected at 15 gauges across two properties) and applying the budgeting to other feed sources such as forage oats and leucaena.

Producer training

Producers can access a new training package, Satellite Assisted Forage Budgeting, through MLA's Profitable Grazing Systems (PGS) program (see story opposite). ■

SNAPSHOT:

Owners: Peter and Nikki Thompson, Managers: Anthony and Anna Dunn,
Roma, Queensland

Area:
7,600ha across two properties

Enterprise:
Mixed cropping and cattle

Livestock:
Breeders through to finished cattle, all pasture-fed

Pasture:
Buffel, improved pasture mix and leucaena

Soil: Scrub

Rainfall: 575mm

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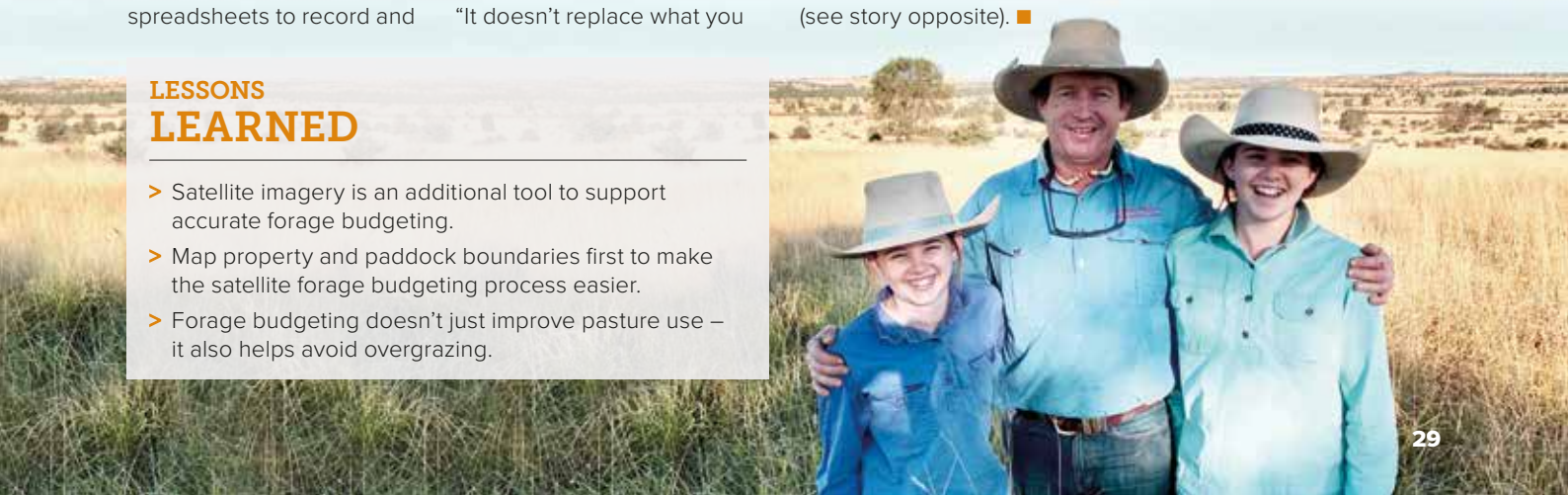
Profitable Grazing Systems
mla.com.au/pgs

Cibo Labs app
cibolabs.com.au

Below: Anthony Dunn and his daughters Eve and Alice.

LESSONS LEARNED

- Satellite imagery is an additional tool to support accurate forage budgeting.
- Map property and paddock boundaries first to make the satellite forage budgeting process easier.
- Forage budgeting doesn't just improve pasture use – it also helps avoid overgrazing.



Taking feedbase managem

Victorian sheep producers Craig and Jayne Drum could measure pasture and feed budget in their sleep, but it didn't stop them from looking for new information to drive feedbase productivity.

Craig and Jayne Drum, pictured with their dog Louie, are getting back to the basics of managing their feedbase.

Jayne was a technical officer for trials in the MLA-supported EverGraze project for two years and Craig is an agronomist, but they reckon it's one thing to teach and another to do.

"Jayne's probably taken a thousand pasture measurements through her work," Craig said.

"The problem was, we just weren't disciplined in applying what we knew – and told others to do – in our own enterprise."

To overcome this and provide rigour to their mixed farming enterprise, the couple are currently working their way through the Managing a Diverse Feedbase program with MLA's Profitable Grazing Systems (PGS).

The program, which Craig helps facilitate, is delivered primarily by southern Victoria rural consultant Cam Nicholson to producers through group sessions, farm visits and one-on-one learning over a 12-month period.

Participants, through skills-based learning and practice, focus on how to better manage a mixed farming feedbase to meet their livestock production goals.

The PGS program is helping Craig and Jayne understand the supply of and demand on their feedbase in a 12-month cycle.

Learning curve

The Drums are relatively new to mixed farming.

Six years ago, inspired by the productivity of nearby mixed farmers, the couple introduced Australian White and Dorper ewes to their cropping enterprise.

While these breeds were easy-care and productive on a farm with no sheep-handling infrastructure, their tendency to rub and damage newly erected fencing resulted in the Drums swapping them for Merino ewes.

Craig and Jayne, who are still building up numbers, currently run 200 ewes, joined to Suffolks for a first-cross prime lamb. They opportunity trade first or second-cross lambs.

Ewes and lambs are grazed on a mix of:

- older phalaris and sub-clover pastures (dominated by phalaris)
- newer perennial ryegrass and sub-clover pastures
- failed winter crops, such as in 2019 when 138mm fell in May, 90mm in June and 80mm in July
- clover hay and feed grain produced on-farm.

Identifying the gaps

One challenge the Drums

ent back to basics

faced was the need for ewes to lamb from 1 April, to fit in with demands of activities on and off the farm.

"The ideal would be to have ewes lambing in green pastures but, while we get lots of rain, we're in a Mediterranean-type climate where summer rainfall is very low," Craig said.

The PGS training helped the Drums identify this gap and understand how their pastures were performing.

Jayne said they've made two changes in response:

- pushing lambing back to the end of April
- providing a green food source if possible for lambing (such as sowing earlier grazing crops and, in 2020, introducing a summer crop).

They sowed fodder rape and lucerne in September to take advantage of summer storms and expect it to provide feed for pregnant ewes in February and/or March.

"I've learnt through measuring dry matter and developing feed budgets over and over again in this program, that I was generally overestimating how much feed was available," Craig said.

"It's why sheep were taking longer to reach target weights than I'd anticipated."

The Drums believe better feedbase management is a springboard for growing their business – a theory they're testing out by moving into trading lambs to turn events such as failed crops into opportunities.

"The PGS style of delivering learning through group sessions and one-on-one learning means you can really get to the bottom of your challenges and sort out what's holding you back," Craig said.

"For us it was just not being rigorous enough in optimising our feed supply and understanding the impact on animal growth.

"It's a complex business when you're growing crops and running livestock, but nowadays every paddock is a feed source at some stage and there are decisions to be made about that every day."

Jayne said she's found the balance of group discussion with one-on-one time with Cam very beneficial.

"When we sat down with Cam and mapped out our pasture growth for the year and our sheep production system, it was clear what changes could be made to our system and both the expected production and financial outcomes," she said.

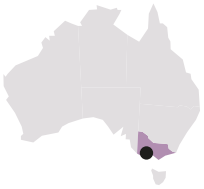
"Both of us knew these fundamentals from our work and uni days but the program has reminded us to put them into practice."

As they improve feedbase management, Craig said it will support their next challenge – lifting their lamb weaning rates.

"If we know we're meeting ewe feed requirements better all year round, then we can work on the other factors which impact lamb numbers, such as genetics," he said. ■

SNAPSHOT:

Craig and Jayne Drum, Tatyoon (south of Ararat), Victoria



Area:
240ha

Enterprise:
Mixed farming with a Merino ewe flock and opportunity sheep trading

Livestock:
200 Merino ewes joined to Suffolks for first-cross lamb production; trading an additional 200–300 lambs a year

Pasture:
Sub-clover based with phalaris and ryegrass

Soil:
Clay over very heavy clay

Rainfall:
550mm

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MLA's Profitable Grazing Systems
mla.com.au/pgs

CATTLE BEHAVI TRIGGERS HEAL

A study of cattle behaviour in Australian feedlots has identified new behavioural distinctions between healthy and sick cattle which could help in earlier diagnosis and treatment of Bovine Respiratory Disease (BRD).

The project was funded by MLA in consultation with the Australian Lot Feeders' Association (ALFA) and led by US veterinarian Professor Brad White of Kansas State University and Precision Animal Solutions.

Researchers analysed data collected by remote early disease identification (REDI) technology at several Australian feedlots to illustrate specific relationships between individual and group behaviour in cattle and the associated health outcomes.

REDI technology provides objective, 24-hour-a-day behavioural monitoring to determine changes in wellness status.

Researchers analysed animal behavioural data, disease occurrences and the magnitude of lung lesions associated with BRD at slaughter.

Early behaviour critical

Professor White said the research provides new insights through remote monitoring, which could improve BRD detection and treatment rates, as well as animal welfare and productivity outcomes.

"We found there were some important behavioural distinctions between healthy and sick cattle, which carried through to their lung scores at slaughter and then through to carcase performance," Professor White said.

"The more severe the lung scores were, the lower the carcase performed.

"This isn't surprising, but it becomes important when we talk about associations between animal behaviour and lung consolidation or pleurisy scores at slaughter."

Behaviour clues

"We found that cattle which ended up being sick spent more time at the feed bunk in the first six days after arrival at a feedlot than healthy cattle.

"Importantly, the cattle spent more time at the bunk in the late evening and early morning hours and less time at the bunk during daylight hours, compared to the healthy cattle."

Another key finding was the behavioural difference between the sick and healthy cattle at water.

"Again, in the first six days at the feedlot, the sick cattle spent more time at the water," Professor White said.

"Healthy cattle would spend between 1.5% and 2% of their time at the water, but sick cattle might spend 2.5% of their time or more at the water in those first six days.

"This differed by time of day as well. During the daytime, the water in a feedlot pen is much like the office water cooler – it's a place where cattle socialise.

"During the day, we often see cattle go up to the water in groups of four, five or six, hang out for a while, then move away.

"However, at night, if they go to the water, they tend to be as singles because they're thirsty – it's not a social activity. So we observed sick cattle going up to the water overnight more frequently, likely because they're dehydrated."

OUR
TH CLUES

At a pen level, the findings were also interesting.

"Sick cattle earlier in the feeding phase had more cattle within three metres of them than healthy cattle, meaning they're hiding in the group," Professor White said.

Challenging assumptions

Professor White said the findings challenge some existing assumptions about the behaviour of animals with BRD, such as cattle going off by themselves if they're sick.

"We train pen riders to look for the cattle which are isolated, but cattle won't do this early in the disease process.

"For most of the BRD we deal with, the main therapy is antimicrobials. Antimicrobials are more effective if given early in the disease process because there are less bacteria for them to battle, and less damage has occurred to the pulmonary tissue and lung tissue.

"We're starting to develop a picture which illustrates sick cattle spend more time at water, more time at feed, and more time in a group in the first six days at a feedlot.

"If you ignore the water aspect, this is almost the opposite of what we tell pen riders to look out for.

"However, after the early phase in the feedlot, sick cattle get to a certain point where they can no longer compensate for their illness and their behaviour flips to doing things like staying away from the group."

Professor White said the findings highlighted the importance of understanding the disease progression of BRD, and the time when pen riders are doing observations.

"We think a good time to observe cattle is around feeding time, or just before feeding, which is accurate if you want to observe their feeding behaviour but it's also a high social pressure time, making subtle behavioural changes more difficult to observe," Professor White said.

"We know BRD is concentrated at the front end of the feeding phase, so if you can observe or monitor them closely during this high-risk time for BRD, that can make a big difference to health outcomes." ■

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The final report is available at:
mla.com.au/project-BFLT3005

IS YOUR TRANSPORTER TR

Look for the TruckSafe sticker on the side of your livestock carrier's truck.

Loading livestock onto a truck shouldn't be the end of the line for best practice management.

Taking care of livestock during transit is important to maintain the quality of red meat, as optimum eating quality can be reduced by inappropriate handling in the two weeks before slaughter.

TruckSafe provides a best practice standard for trucking operators when transporting livestock.

It underpins industry programs such as Meat Standards Australia and Livestock Production Assurance to maintain supply chain integrity.

Currently, 210 transport companies with more than 15,000 trucks and trailers are accredited with TruckSafe.

TruckSafe's Safety, Health and Wellbeing Director Melissa Weller said a TruckSafe-accredited livestock operator looks after livestock when they leave the farm gate, giving producers confidence their livestock are in the best hands during transit.

"TruckSafe was established 28 years ago to unite the transport industry and demonstrate it's serious about improving heavy vehicle safety," Melissa said.

TruckSafe is the only freight industry accreditation which addresses human safety factors and animal welfare. Its members must meet multiple standards:

- business management practices
- risk management
- driver health
- speed and fatigue management
- mass and dimension including loading and load restraint
- vehicle standards
- animal welfare.

"TruckSafe members don't pick and choose what areas of accreditation to complete, they take on the whole system which uses a rigorous, independent audit approach," Melissa said.

"This gives producers peace of mind they're working with a professional operator focused on risk management, safety and animal welfare.

"There's no point having well-prepared livestock ready to load if you're going to put them at risk during transit. Losing stock in transit affects producers' bottom line and can damage the entire industry's reputation."

Animal welfare

TruckSafe's animal welfare module focuses on the humane transportation of livestock.

"Drivers are trained in how to prevent disease, stress and contamination when moving livestock, as well as making sure the 'paddock-to-plate' traceability is supported during the journey, which ultimately protects the eating quality of the final product," Melissa said.

"Producers can be confident a TruckSafe operator has considered every risk possible. However, if something goes wrong, highly trained TruckSafe members can handle the incident and maintain animal welfare." ■

Alana Boulton
MLA Northern Beef Adoption Project Manager
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Find out if your livestock transporter is TruckSafe accredited by visiting the 'Accredited Members' page at trucksafe.com.au or phone (02) 6253 6900.

Use MLA's *Fit to load* guide to determine if livestock are in suitable condition for transport – download it from **mla.com.au/isitfittoload**

Read more about how handling livestock can affect eating quality in the Meat Standards Australia information kit:

Beef cattle (page 7): **mla.com.au/msa-beef-info-kit**

Sheepmeat (page 5): **mla.com.au/msa-sheepmeat-info-kit**

Livestock Production Assurance **integritysystems.com.au/lpa**


TruckSafe's Melissa Weller, pictured with Chris Sutton, driver trainer at the Transport Industries Skills Centre.

UCKSAFE?

Are livestock fit for transport?

It's essential to manage livestock during transport to reduce stress and minimise risks to animal welfare.

Producers have an important part to play by understanding their roles and responsibilities and ensuring they comply with the *Animal Welfare Standards* and *Guidelines for the land transport of livestock*, as well as their relevant state or territory legislation.

Here's a handy checklist to prepare livestock for transport to ensure they're in good condition on arrival and reduce issues such as skin staining and bruising – which can reduce market compliance – and mortality.

Livestock transport checklist:

- ☐ Check the holding/loading yards and loading ramp to ensure they're adequate
- ☐ Use low-stress handling techniques
- ☐ Don't conduct highly stressful activities such as crutching, dipping and drenching just before loading
- ☐ Don't transport sick, injured, or heavily pregnant animals
- ☐ Yard livestock before loading, preferably overnight so they have time to settle
- ☐ Segregate livestock appropriately for loading and load livestock to the approved density
- ☐ Keep livestock off feed/water for 8–12 hours prior to transport if possible, but remember strict maximum times off water apply
- ☐ Use a TruckSafe accredited livestock carrier
- ☐ Move drought-affected livestock early to ensure they're fit to load
- ☐ Make sure all movement documents travelling with the livestock are completed

Animal welfare front of mind all day, every day

Transport company Frasers have been moving livestock across the eastern seaboard of Australia since 1944. Today, they operate 55 trucks and more than 150 trailers.

Here, Frasers Compliance Manager, Athol Carter, gives an insight into why Frasers joined the TruckSafe program more than 20 years ago and what it means to producers.

Q. Why did Frasers become accredited with TruckSafe?

Australia's red meat industry leads the world in best practice animal welfare and it's essential the transport of live animals is also supplied under best practice standards.

We recognise Frasers need to be more than just transporters of animals.

We're a visible link in the meat supply chain so we hold a lot of responsibility for the industry's reputation – animal welfare needs to be front of mind all day, every day.

Consumers want ethical and humane animal handling, environmental consciousness and a palatable paddock-to-plate story – the TruckSafe program ensures Frasers can meet those expectations.

Q. How is TruckSafe part of your daily practices?

The TruckSafe program sets a benchmark, giving our company an incentive to strive for the highest standard in everything we do.

Our drivers can evaluate animal welfare risks and ensure no discomfort is caused to livestock. They're competent in loading and unloading, assessing and observing livestock, recognising weak or diseased animals and can respond appropriately to fix a problem.

We document everything from contingency plans for delays such as extreme weather, biosecurity threats or a requirement to supply water to animals.

Q. What are the risks if producers don't use a TruckSafe accredited transporter?

It's simple – if a truck isn't mechanically well-maintained or a driver isn't fit for duty, a consignment may be put at risk. ■

Athol Carter
E: AtholCarter@fraserstransport.com.au

Serving up new r

When Australians think about healthy eating, they don't think of food pyramids – they think of easy, everyday meals.

And when it comes to eating red meat, research shows consumers don't need convincing: it's already the most popular protein in the Australian repertoire.

The new *MLA Healthy Meals Report* uses consumer insights such as these to provide clear guidance on the role of red meat in a healthy diet.

Veronique Droulez is MLA's Senior Food and Nutrition Manager. It's her role to understand the report's insights about popular meals, typical practices and sources of nutrition information to promote ways consumers can enjoy red meat in healthy, balanced meals.

She said the report demonstrates to health professionals such as dietitians and general practitioners – who use MLA's nutrition resources to provide dietary advice – the benefits of using a 'meals-based approach' to explain healthy eating in line with the *Australian Dietary Guidelines*.

"We found Australians think about nutrition within the context of healthy meals," she said.

"They want to receive information about nutrition through meal ideas they like to eat, because they're unlikely to adopt dietary advice if it's outside their typical meal habits."

While Australians understand red meat is a nutritious food, they're less confident about the amounts recommended for good health.

"The report findings suggest Australians can enjoy recommended amounts in three to four meals a week, alternating between smaller and larger portion sizes," Veronique said.

These recommended amounts are consistent with current consumption patterns, which have remained fairly stable over the past 20 years.

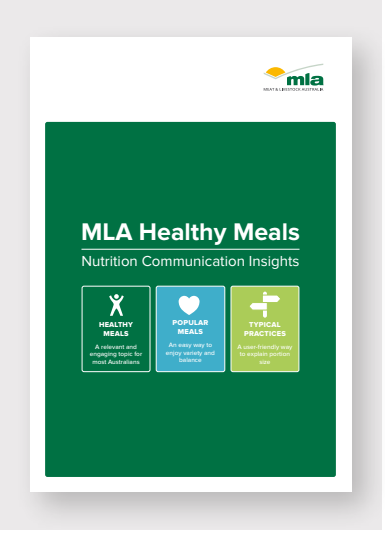
The research also shows:

- people are getting most of their nutrition information in the retail setting
- while nutrition and health are topics of interest, value for money is top of mind for most when planning meals and purchasing meat
- consumers are more interested in product information than nutrition facts.

The biggest impact of the report so far was seen during the COVID-19 lockdown period in Australia.

Beef mince was a huge seller during this time as people stayed home, and the report helped to identify how the red meat industry could respond to consumers' need for practical tips and meal ideas.

"They want freezing and thawing tips, to know how to cook the



Above: The Healthy Meals Report outlines ways to help dietitians and GPs provide guidance on red meat consumption in a healthy diet.

ed meat nutrition insights

RED MEAT IN A HEALTHY DIET

An easy way to enjoy recommended* amounts is to have three to four red meat meals a week, alternating between smaller and larger portion sizes.

500g strips
makes 4 meals

1 medium steak
makes 2 meals

500g mince
makes 4 meals

1kg diced meat
makes 5 meals

(Amounts refer to raw weight)

***Australian Dietary Guidelines recommend 455g per week lean and cooked red meat, equivalent to approximately 650g per week, raw weight.**

Above: The MLA Healthy Meals Report *depicts how a variety of three to four red meat meals a week, alternating between meals with smaller and larger portion sizes, is consistent with* Australian Dietary Guidelines.

perfect steak and how to balance meat to vegetables on the plate," Veronique said.

"Practical tips like these provide confidence the meal will be worth the price paid for the meat, and will be healthy, easy and tasty."

MLA's Domestic Marketing team is turning these insights into product information for shoppers, to make it easy to select and purchase red meat, including the best cuts, how much meat to buy, what meals to make and how to cook and plate meat in balanced meals.

The *MLA Healthy Meals Report* has been sent to 6,000 dietitians to engage Australians in messages about healthy eating.

It will also be used to develop a guide for all MLA communication activities, to provide consumers with consistent and relevant information to inform their decisions, making it easier to enjoy red meat in a healthy diet.

"By understanding the context of red meat consumption, we can better understand the role of red meat in the Australian diet and help make Australians feel confident they can continue to enjoy red meat in everyday meals," Veronique said.

The *MLA Healthy Meals Report* provides the foundation for other nutrition resources and activities developed by MLA to help consumers better understand the role of red meat in a healthy diet:

- The 'So what's for dinner?' program guides consumers towards balance on their plate by providing details about recommended variety and portion sizes.
- MLA also partnered with Sports Dietitians Australia to support communication activities which provide guidance on portion sizes for different levels of physical activity. ■

Veronique Droulez
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MLA Healthy Meals
mlahealthymeals.com.au

'So what's for dinner?' program
mlahealthymeals.com.au/resources/whats-for-dinner

Meal-time insights

The *MLA Healthy Meals Report* includes information about Australians' eating habits, including:

Healthy meals are an engaging and relevant topic for most Australians.

Home-prepared meals feature five to six days a week in the Australian repertoire.

Australians enjoy having a variety of meals, particularly at dinner.

Meal planning starts with protein variety.

PUTTING BUTCHERS BACK ON THE MAP

Jessica Rowe (centre) interviewed butchers from across the country, to encourage shoppers to get to know the people behind the meat cabinets.

Bringing the local butcher back to the top of shoppers' minds was the focus of The Greatest Butcher on Your Block campaign, run by MLA with support from the Australian Meat Industry Council.

The campaign, which set out to reconnect shoppers to their local butcher, contributed to a 15% increase in beef sales and a 9% increase in lamb sales.

The campaign was developed in response to declining sales for independent retail butchers as a result of:

- fewer households purchasing meat
- shoppers purchasing meat less frequently
- shoppers favouring supermarkets for ease and convenience.

MLA's Business Manager – Retail and Corporate Butcher, Doug Piper, said consumer research shows butchers are a trusted source when it comes to red meat and a vital part of the supply chain.

"Butchers are an important pillar in every community," he said.

"They proudly showcase Australia's produce and provide shoppers with information on how to cook and store red meat and how to choose the right cut for the occasion."

To bring the butcher out from behind the counter, MLA partnered with award-winning journalist Jessica Rowe. As the face and voice of local butchers, she helped tell their stories of local community, sustainability and nutrition.

Jessica hit the road, interviewing 12 butchers across the country to raise awareness about the positives of eating red meat, prompting consumers to head to their local butcher and get to know the people behind the meat cabinets.

The series of 12 videos, titled 'A Butcher's Tail: Meat the Masters' reminded consumers of Australia's rich and proud meat history and highlighted the underused resource of the local butcher.

"Jessica is a great storyteller and someone who shoppers can easily relate to, so she created plenty of media attention, including on prime-time television programs such as The Morning Show and Studio 10," Doug said.

The Greatest Butcher on Your Block campaign highlights

1,111 butcher shops
participated in the campaign

5% increase
of foot traffic into butcher shops

15% increase
in beef sales

9% increase
in lamb sales

The campaign, which ran from spring 2019 to summer 2020, saw new and lapsed shoppers (those who had previously shopped at independent butchers but turned to other outlets) head to their local stores to meet the butcher on their block.

As well as stocking up on red meat and recipes, shoppers also had the chance to win one of two 2021 Tokyo Olympic Games VIP experiences and hundreds of barbecues.

Stay tuned to see how MLA will continue to hero butchers and build on these campaign results. ■

Doug Piper
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For more information on what's happening in the independent retail butcher sector, visit: **australianbutchersguild.com.au**

Ken's the greatest butcher on his block

Ken Barritt from Ken's Kepnock Butchery had the most customer entries in the Greatest Butcher on Your Block competition.

Butcher Ken Barritt of Bundaberg, Queensland has become a local legend.

His traditional-style butcher shop, Ken's Kepnock Butchery, has been a community icon for the past 24 years but business is even better thanks to MLA's The Greatest Butcher on Your Block campaign.

Ken's customers also have good reason to smile – 117 of them (out of 1,155 who entered the campaign competition) won barbecues.

"I've been involved with MLA's Australian Butchers' Guild promotions for the past six years – it's a great opportunity to promote beef and lamb and also reward my customers," Ken said.

"It was really easy to implement, as all the promotional material was sent straight to my door."

When it came to getting customers to enter the competition, Ken had a few tricks up his sleeve.

"I briefed my staff on how the competition worked, so everyone was on the same page and could tell our customers all about it when they purchased beef or lamb.

"I also had a couple of iPads in-store so customers could fill out their details and find out then and there if they had won a barbecue.

"I believe what made this year's competition so successful was the ability to win instantly – it provided customers with extra incentive to enter and I loved seeing how excited they were when they won."

Ken saw beef and lamb sales increase during the campaign period, with most customers choosing to come in each day and purchase red meat rather than bulk-buying.

"Steaks, sausages and mince are my top-selling products and they literally ran out the door.

"With customers coming in every day to buy what they needed for dinner, I was able to develop relationships with my customers, which really increased loyalty."

Ken believes quality over quantity has helped him build a successful business and gain long-term loyal customers over the past 24 years.

"The quality of the meat is the most important part and I thank producers for the work they do to ensure Meat Standards Australia criteria are met.

"I spend a lot of time sourcing my red meat to ensure my customers only receive the best. This quality keeps my customers coming back for more." ■

Ken Barritt
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Getting creative with ma

t takes more than a global pandemic to slow MLA's Domestic Marketing team down.

When they were faced with the challenges of COVID-19 this year, the team thought outside the box and delivered ground-breaking marketing campaigns to keep red meat on plates across Australia.

Take a behind-the-scenes look at how MLA is developing innovative activities to increase red meat sales throughout the pandemic.

Stepping up the Aussie barbecue

Sam Burke
MLA Product and Business Development Manager and Corporate Chef

We had to be creative to ensure red meat stayed on menus during COVID-19, and for MLA's foodservice team, this involved adapting our programs to:

- provide the foodservice industry with inspiration on how to serve innovative red meat dishes which are suitable for takeaway
- help consumers feel confident and excited about cooking red meat at home.

This year we launched a new video series, 'Red meat over flames: an Aussie tradition'.

The series takes the Australian barbecuing tradition to the next level to show foodservice providers and consumers how to cook red meat over an open fire. The 11 videos in the series feature a range of beef, lamb and goat dishes.

I embraced the new 'working from home' lifestyle and filmed the videos in my own backyard with a full outdoor commercial kitchen in just 10 days.

It's great to share my passion with the rest of the industry. I really enjoy cooking over fire – it's a pure form of cooking which connects us with the ancient world. The meat has a unique smoky flavour profile and I love smelling the aromas of the meat as the juices drip through onto the coals.

To help foodservice providers use these dishes in our new COVID-safe world, I provided inspiration on how each dish could be presented in a takeaway format and as a traditional plated dish for those eating at home.

Feedback has been really positive among chefs and consumers, with the videos being viewed more than 44,000 times.

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Watch Sam Burke's 'Red meat over flames' videos at: **youtube.com/AustralianLamb** and **youtube.com/australianbeefthegreatest**

One of the recipes featured in the 'Red meat over flames: an Aussie tradition' video series: butterflied lamb leg with roasted cauliflower and zesty salad.

Rib eye with salsa verde at 10 William St in Sydney featured in MLA's Rare Medium *e-magazine.*

The new normal for restaurants

Mary-Jane Morse
Editor of *Rare Medium* e-magazine and MLA Foodservice Communications Manager

MLA's quarterly foodservice e-magazine, *Rare Medium*, works with the country's best chefs to raise the profile of Australian red meat on menus and educate the foodservice sector about Australian beef and lamb from paddock-to-plate.

We've maintained close contact with the industry to gain insights on how venues are adapting to social distancing restrictions and the role of red meat on the menu during and beyond COVID-19.

It's unlikely foodservice venues will be returning to normal any time soon. So, what does the 'new normal' look like for foodservice in the next 12 months?

As 22,000 Australian restaurant operators rethink their business models in response to the COVID-19 crisis, we'll see a strategic rethink of menus and a move towards more casual food offerings.

COVID-19 emphasised the role restaurants play in nourishing their local communities.

The adaption strategies of many restaurants – such as takeaway, delivery or finish-at-home set menus – ensured diners could still access restaurant-quality food at home.

rketing during COVID-19

It's likely restaurants will focus more on being a part of the community, a destination for warm hospitality and a place to connect through food and experience.

Already we're seeing a shift in the logistics of restaurant operations, particularly with a move towards set menus. With less chefs, fewer staff on the floor and restricted dining times, set menus allow restaurants to plan in advance, reduce waste and tighten the bottom line. Less labour means less components to each dish, so we'll see a return to simplicity, allowing quality produce to shine.

Diners will be more focused on where their food comes from and restaurants will use the stories of produce to engage them.

Red meat must capitalise on its quality, authenticity, provenance and connection to community – the paddock-to-plate story has never been more relevant.

The focus of *Rare Medium* throughout COVID-19 and beyond is to champion Australian red meat's place on menus and raise its profile among the foodservice community.

The e-magazine has evolved, with new sections reflecting anticipated changes to the foodservice sector and a broadening of voices to tell the Australian red meat story. We welcome one of Australia's most renowned food journalists, Pat Nourse, and one of Australia's most influential chefs and restaurateurs, Mark Best, as regular contributors to the publication.

Our current issue looks at impact and adaption throughout the red meat supply chain, profiling those using red meat with success during the COVID-19 crisis. In a time of uncertainty for foodservice, *Rare Medium* remains a constant and a trusted source of knowledge to keep red meat on menus in the new normal and beyond.

Mary-Jane Morse
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Rare Medium:
raremediummag.com

Above and below: Australian beef was showcased in the June edition of Men's Fitness *magazine, which is read by 260,000 Australians.*

Australian beef sizzles on MasterChef

Samantha Warfield-Smith
MLA Senior Brand Manager – Beef

Australian beef played a starring role on the nation's favourite cooking show, MasterChef Australia 2020.

'Australian Beef. The Greatest' was advertised on TV during MasterChef and Australian beef was featured in a mystery box challenge for contestants, demonstrating its versatility across a range of dishes – more than one million Aussies tuned into this episode, which aired in June.

COVID-19 has had a significant impact on the Australian foodservice sector and there's been a need to shift the types of cuts traditionally seen in foodservice into retail. The MasterChef campaign was ideally timed, to demonstrate to consumers how to use these cuts at home.

Australian Beef is also an official partner of Australia's teams for the Tokyo Olympic Games and Paralympic Games, but with these events postponed until 2021, MLA has tapped into new ways to market Australian beef to domestic consumers.

This included highlighting the importance of nutrition and healthy eating during isolation. Australian beef featured in the June issue of *Men's Fitness* magazine, which was read by 260,000 Aussies. The article featured one of MLA's Beef Ambassadors, rugby star Lewis Holland, who provided recipe inspiration and useful tips on cooking and storing beef.

Samantha Warfield Smith
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Continued overleaf

Getting creative with marketing during COVID-19
continued

MLA Business Manager – Retail and Corporate Butcher, Doug Piper, shared his tips and tricks for his favourite beef cuts in a virtual masterclass.

Making the most of red meat cuts

Doug Piper
MLA Business Manager – Retail and Corporate Butcher

When many foodservice outlets closed during COVID-19, a range of red meat cuts flooded the retail market.

Many consumers are not familiar with how to cook these cuts at home, so our focus has been to fill this gap.

I shared some insider tips and tricks on my favourite beef cuts in a virtual masterclass with representatives of Australian media.

We went through the cuts from a beef rib set and I demonstrated how popular cuts such as a tomahawk steak, rib eye/scotch fillet, standing rib roast and short ribs are broken out of this section of the carcase.

I showed the value and versatility of one of my favourite cuts, the oyster blade. It performs well as a roast and can be value-added by removing the connective tissue in the centre of the oyster blade to create a tender flat iron steak.

The masterclass also provided an opportunity to promote MLA's three meat apps – Meat Cuts, SteakMate and RoastMate – to the media. These easy-to-use apps help consumers cook the perfect steak, serve up a roast which is sure to impress, and learn about individual meat cuts.

Doug Piper
E: dpiper@mla.com.au

Download MLA's apps – Meat Cuts, SteakMate and RoastMate – from Apple Store or Google Play.

Sharing the lamb (virtually)

Anna Sharp
MLA Brand Manager – Lamb

Isolation restrictions inspired MLA's lamb marketing team to think creatively and focus on what's important: connecting people, even when we can't physically be together.

MLA's first winter lamb campaign, 'Share the Secret Recipe', launched in June to reconnect people to each other (and lamb) during social isolation.

We created four videos, showing senior Australians from different cultural backgrounds sharing their secret lamb recipes with younger Aussies. Each recipe showcased their unique heritage and cooking style.

Based on MLA consumer research, we know many older consumers are big users of lamb – they grew up with it and are really comfortable cooking it. Younger consumers aren't as comfortable cooking lamb, so this campaign brought together isolated seniors and curious young Aussies seeking cooking inspiration.

More people were searching online for ways to cook and prepare lamb dishes at home because of the restrictions on eating out, so we provided this information in a feel-good way.

Surprisingly, creating this campaign in the face of social distancing wasn't as tricky as we thought it would be. Fortunately, the technology we needed was readily available and we were able to produce the series remotely.

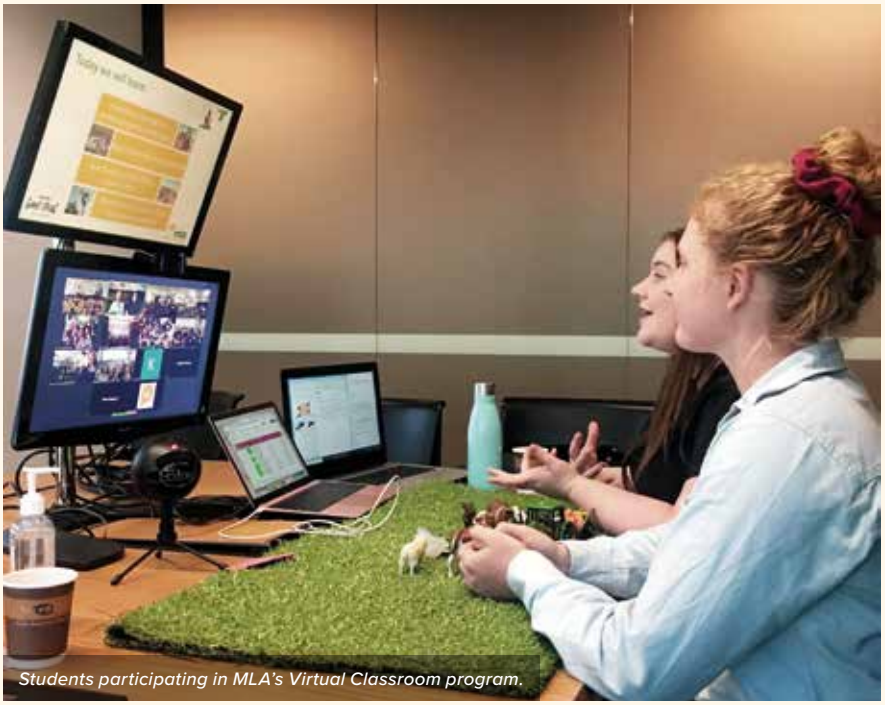
The campaign reached more than 1.2 million users on social media. Facebook alone drove 56,451 people to the Australian Lamb website. ■

Anna Sharp
E: asharp@mla.com.au

Find out more about the 'Share the Secret Recipe' campaign at **australianlamb.com.au/sharethesecretrecipe**

MLA's winter lamb campaign brought together isolated seniors with curious young Aussies seeking cooking inspiration.

RED MEAT GOES FOR GOLD IN CLASSROOMS



Students participating in MLA's Virtual Classroom program.

MLA consumer insights indicate only one in five meat eaters have a good understanding of Australian red meat production and only one in three metro Australians have visited a cattle or sheep farm, with these numbers gradually declining over the past 10 years.*

At a time when there's a disconnect between agriculture and metropolitan communities, MLA's schools program helps students understand the red meat and livestock industry in an interactive and engaging way.

Your Expert Classroom series

MLA recently launched three new video-based initiatives to continue educating students and their teachers about red meat production during COVID-19.

In term 2 of 2020, MLA sponsored the 'Your Expert Classroom' series, a new curriculum-linked program for students aged 5–14 years.

The series included four parts: a series of educational videos, in-home activities, a livestream video Q&A with a producer, and an online marketing program targeting parents and teachers.

Teachers can adapt these activities to suit online classrooms as well as physical classrooms.

So far, 246 classes have participated in the series, which covered topics such as:

- **Smart agriculture:** MLA's Program Manager – Sustainability and CN30, Doug McNicholl, spoke to students about how Australian red meat producers use technology to enhance sustainability and protect the environment.
- **Eat right, move well:** Nutrition expert and dietitian Peta Carige spoke with students about why a healthy diet is important and highlighted why protein – particularly red meat – is needed to maintain a healthy, active lifestyle.
- **A healthy start:** Peta Carige also shared tips on how to build and maintain a healthy diet that includes red meat, discussing its benefits, how much we need and how often we need it.
- **Greener pastures:** To increase awareness that Australian red meat producers are responsible stewards of the land, producer Charlie Arnott spoke to students about the importance of maintaining biodiversity on his farm in Boorowa, NSW.

Sports stars in the classroom

MLA also launched a new module for its Virtual Classroom program as part of the 'Australian Beef. The Greatest' brand sponsorship of the Australian Olympic and Paralympic teams at the Tokyo Games.

The new module, Be Your Greatest Virtual Classroom, offers students around Australia the opportunity to chat with Paralympic and Olympic athletes who are also ambassadors for Australian Beef, to gain insight into their journey to greatness, including their background story and connection to agriculture.

Ambassadors include:

- Paralympians Eliza Ault-Connell and Scott Reardon
- Rugby Sevens' most capped female player Emilee Cherry
- Rugby Sevens Vice-Captain Lewis Holland
- Hockeyroos Co-Captain Emily Chalker
- Olympic basketball player Chris Goulding.

Students can also learn how these ambassadors incorporate healthy eating into their active lifestyles, with live-streamed cooking classes where culinary personality Matt Sinclair teams up with athletes to cook their 'winning' beef meal. (Try one of Matt's delicious red meat recipes on page 47.)

This Virtual Classroom launched in August and will continue during the lead-up to the Tokyo Games in 2021. ■

(*Source: MLA Community Sentiment Research, 2020)

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Georgia Goode
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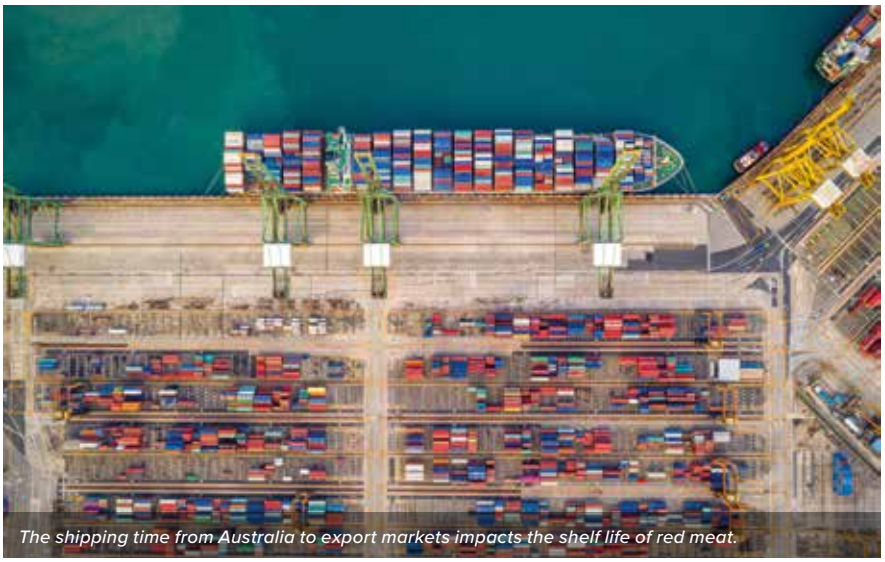
Learn more about MLA's community and school programs at:
mla.com.au/community-programs

goodmeat.com.au/education-resources

Teachers and students can register for MLA's Virtual Excursions at:
mlavirtualexcursions.com

How a new shelf life predictor **will reduce wasted product**



The shipping time from Australia to export markets impacts the shelf life of red meat.

A new tool, five years in the making, is now helping to better predict the shelf life of red meat.

Shelf life is considered a non-technical trade barrier as some countries won't accept Australian red meat (since it can take 30 days to ship product internationally).

MLA, in conjunction with the University of Tasmania, collected data on the temperature of chilled meat products and the time it takes to send them to Australia's overseas markets, so red meat brand owners and exporters can more accurately determine shelf life.

Previous MLA research to validate the shelf life of red meat has helped to negotiate more favourable shelf life conditions for Australian chilled beef and sheepmeat in many export markets, such as United Arab Emirates, Saudi Arabia and Kuwait.

The addition of this new shelf life prediction tool allows the red meat supply chain to ensure product quality is maintained until the labelled expiry date.

It's being used in pilot studies to find and fix problems in cold chain management, to reduce customer complaints and insurance claims, and to potentially assist red meat brand owners to negotiate trade in export markets.

MLA's Market Access Science and Technology Manager, Ian Jenson, said the shelf life predictor tool will benefit red meat brand owners and producers to help grow Australian red meat's market share.

"The tool is essentially an equation, in the form of a spreadsheet, which uses time and temperature data (collected through data loggers) to tell us how much the shelf life of a chilled, vacuum-packed red meat product has been used up and how much is left, based on certain storage conditions," Ian said.

Data loggers have always been included in red meat shipments to record temperature data, but it was difficult for brand owners to determine where the problem was and how to fix it.

"It's standard practice to include a data logger with a shipment, but sometimes we never see them again. If there's a problem, we have to try and retrieve it and then interpret the data – this has left many exporters scratching their heads," Ian said.

"This is where the shelf life predictor tool comes in – it turns data into valuable information."

Data loggers are now more sophisticated as they can measure temperature as well as the GPS location, sending data to the cloud so it can be read in real time.

"This gives exporters the ability to control the supply chain, identify where the problem is and work to fix it.

"The data can tell us where the product is at a particular temperature, so exporters can determine who's responsible," Ian said.

"Identifying and fixing problems in cold chain management makes the supply chain more efficient."

Benefit to brand owners and exporters

The shelf life predictor tool gives red meat brand owners and exporters:

- increased awareness of precise temperature control
- the ability to use the shelf life predictor tool with GPS data loggers to forecast potential issues early on
- the ability to offer an informed opinion if there is a problem.

Above: The shelf life predictor tool uses time and temperature data to calculate how much the shelf life of a chilled, vacuum-packed red meat product has been used up and how much is left, based on certain storage conditions.

"We're encouraging people to look at the data and understand how they can change their practices to ensure the quality of the red meat product at the other end of the supply chain."

MLA has a licence from the University of Tasmania to use the tool for research purposes. MLA is working with consultants to help exporters use the tool to analyse their supply chains.

It's expected to become commercially available within a year. ■

Ian Jenson
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Learn more about the shelf life of red meat at:
mla.com.au/shelf-life

Listen to Ian Jenson discuss the benefits of the shelf life predictor tool on Episode 4 of MLA's 'On the ground' podcast at:
mla.com.au/on-the-ground

Why the shelf life tool is a win for the red meat industry

"Australian beef and lamb have a great advantage globally with shelf life and this kind of innovation just helps build more trust with the customer."
Andrew Cox, MLA General Manager – International Markets

"With global markets becoming more competitive, having tools which assist to manage the shelf life of Australian red meat across the cold chain will be a distinct advantage. This should not only prompt more product loyalty and customer satisfaction, but also help facilitate improved acceptance and access for vacuum-packed products."
Andrew McCallum, MLA Global Manager – Trade and Market Access

"The shelf life predictor tool turns data into valuable information. This tool gives exporters the ability to control the supply chain, identify where the problem is and work to fix it – ultimately making the supply chain more efficient."
Ian Jenson, MLA Market Access Science and Technology Manager

Making sense of customer complaints

The Western Australian Meat Marketing Co-operative (WAMMCO) has started using the MLA-developed shelf life predictor tool to make sense of customer complaints about shelf life.

The producer-owned cooperative specialises in chilled, vacuum-packed, value-added lamb cuts for export markets including the EU, North America and Malaysia.

WAMMCO Quality Manager Marc Chambers said the first step was to take data from loggers in containers which had already arrived overseas and enter it into the shelf life model.

"This educated us as to the huge variances even small temperature changes could make and the drastic reduction of shelf life to our red meat products," Marc said.

"Generally, there was an obvious issue with temperature variance above 1°C for a period of time. We used this information to demonstrate to our transporters and customers that we needed to keep the temperature below 1°C for best shelf life results."

WAMMCO now uses GPS data loggers to forecast when there may be an issue with shelf life.

"Instead of wearing the cost of a large claim, we now have the opportunity to claim insurance compensation from transporters, or at least advise a customer if shelf life has been decreased," Marc said.

He said when customers know temperature is monitored through to delivery and the shelf life predictor tool is applied, there are a reduced number of insurance claims for decreased shelf life. ■

Marc Chambers
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INDUSTRY INSIDER

Putting producers **first**

Hayley Robinson wears many hats: AFL tragic, secret cross-stitcher (just ask her about the time she took out Dalby Show's handicraft section) and advocate for the perfectly cooked steak.

As Program Manager – Consultation, Hayley (pictured) blends her background in beef production with an interest in technology and supply chain innovation to make sure producers are getting the most out of MLA programs.

"I grew up on a small cattle property and my parents have an artificial breeding business, so I've always been interested in the beef industry – especially genetics and reproduction," Hayley said.

She studied a Bachelor of Science, majoring in genetics and biochemistry. She planned on applying this to the cattle industry until her career trajectory changed in 2001 when she was awarded the Angus Youth University of Illinois scholarship.

"I studied a range of topics in Illinois, including meat technology, so I switched gears and applied my degree to meat science.

"My first job out of uni was with Genetic Solutions (now Zoetis), working with genetic technologies for meat quality traits – talk about the perfect job."

Hayley completed a PhD in innovation management, focused on the beef industry, and has worked in Australia and Russia to develop supply chains and improve communication and data flow.

"When a role with Meat Standards Australia (MSA) came up in 2015, I was excited to work across the supply chain to drive value in the industry and increase consumer satisfaction."

This year, Hayley moved into a new role with MLA's regional consultation team.

"It's a great opportunity to work with producers to help ensure the levy is being invested in areas which are important to them." ■

Here, Hayley talks to *Feedback* about her role.

Q:

Why is your role important to the red meat industry?

I work with producers through research advisory and peak industry councils to ensure levies are being invested in research, development or adoption projects which meet members' needs. The regional consultation team also works closely with other areas of MLA's on-farm productivity team to identify areas of research that are important to producers.

Q:

What does a typical day involve?

As the name of my role suggests, there's a lot of consultation and collaborating. I work with research advisory councils such as the Southern Australia Livestock Research Council, Western Australian Livestock Research Council and North Australia Beef Research Council to make sure they have the information and resources they need to determine MLA's investment priorities.

Q:

What do you love about your role?

It's great to translate producer needs into areas of research and report back to producers with the outcomes of the investment. I enjoy collaborating with different teams across MLA to make sure producers get the most out of MLA programs.

Q:

What's your favourite red meat dish?

I love any red meat served according to the MSA-recommended cooking method, which ensures it's the best version of itself it can be. But more specifically, I love a good porterhouse steak grilled to medium-rare. I never get sauce on the steak as I think beef is best with just some salt and pepper – let the Australian beef shine.

Q:

When you're not at work, where would we find you?

I could be at an AFL game (go Hawks!) or watching a game on TV while cross-stitching. My husband and I have a small herd of cattle which we enjoy working with.

Q:

What's something we don't know about you?

I lived and worked at a feedlot in regional Russia for a couple of years.

Hayley Robinson
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Become a master of your kitchen

MasterChef star and owner of Queensland restaurant Sum Yung Guys, Matt Sinclair, partnered with Australian Beef to share this flavourful Massaman beef curry recipe. It's the perfect recipe for batch cooking – enjoy the meal hot and fresh from the oven then freeze leftovers.

For more delicious beef recipes, visit australianbeef.com.au

Watch...

Matt cook this dish on Australian Beef's YouTube channel. Visit **australianbeef.com.au/recipes/matt-sinclairs-massaman-curry** for the link.

Matt Sinclair's Massaman beef curry

Serves: 8 • **Preparation:** 10 minutes • **Cooking:** 180 minutes

1.5kg chuck steak cubed
3 tbsp vegetable oil (any neutral oil)
2 tins of Massaman curry paste
500g potatoes cubed
500ml coconut cream (reserve 2 tbsp for garnish)
500ml water or stock
80g lightly roasted whole peanuts (plus extra for garnish)
20g crispy shallots (plus extra for garnish)
3 tbsp palm sugar
3 tbsp fish sauce
2 tbsp tamarind puree
Coriander, to serve
500g mixed greens (such as broccolini and beans), to serve
Steamed rice, to serve

1. Pre-heat oven to 160°C. Place a large heavy-based saucepan on a medium-high heat. Once hot, add oil and fry off curry paste for 6–8 minutes until lightly caramelised and smelling sweet.
2. Add beef and coat in the curry paste. Continue to fry off and seal the beef for a further 5–6 minutes.
3. Sprinkle in palm sugar and cook for approximately 3–5 minutes to caramelise and deepen in colour. Once it has reached a deep red colour, add in fish sauce, tamarind, coconut cream, water, peanuts, shallots and a big pinch of salt. Add the potatoes and let them submerge into the liquid.
4. Stir all ingredients together, bring to a simmer. Once simmering, place lid on and put in the oven at 160°C for approximately three hours.
5. After three hours, check tenderness of beef – you should be able to cut with a spoon. Taste and adjust seasoning to suit. The taste should be mild spicy with a sweet, sour, salty balance.

TIPS

- Use a pot or microwave to steam greens, season with salt.
- Garnish curry with coconut cream, shallots, peanuts and fresh coriander.
- Serve with steamed rice.

Still haven't found what you're looking for?

Maybe one of these hubs on the MLA website can help.

MEAT & LIVESTOCK AUSTRALIA

Livestock

GENETICS | genetics.mla.com.au
Find out how to use breeding values to accelerate your herd or flock's productivity

BEEF | mbfp.mla.com.au
An online manual to help you produce more beef from pastures

SHEEP | makingmorefromsheep.com.au
A best practice management guide for Australian sheep producers

GOATS | mla.com.au/goats
Online resources and commonly asked questions to help you 'get into goats'

Feedbase

PHOSPHORUS | mla.com.au/phosphorus
Benefits of phosphorus supplementation, featured resources and top tips

LEUCAENA | mla.com.au/leucaena
Best practice information on how to establish leucaena in northern Australia

PASTURE DIEBACK | mla.com.au/dieback
Get the latest R&D updates on pasture dieback and learn more about the disease

Sustainability

CARBON NEUTRAL BY 2030 | mla.com.au/cn30
Everything you need to know about the industry's target to be carbon neutral by 2030

DUNG BEETLES | mla.com.au/dung-beetles
Key benefits and considerations, a full list of introduced species and featured resources

Climate

CLIMATE | mla.com.au/climate
Find out what work MLA's doing in the climate space and what's on the horizon

BUSHFIRE RECOVERY | mla.com.au/bushfire-recovery
Important resources for cattle, sheep and goat producers impacted by bushfires

Other useful resources

SPRING RESOURCES | mla.com.au/spring-hub
A suite of resources, tips and tools to support your on-farm decision making during spring

COVID-19 RESOURCES AND MARKET INSIGHTS HUB | mla.com.au/covid-19
The latest news, resources and market insights relating to the global pandemic

MENTAL HEALTH | mla.com.au/mental-health
It's okay to not be okay – check out MLA's mental health hub for information and support

PRICES & MARKETS | mla.com.au/prices-markets
Get the latest market news, daily indicators and resources to help inform your business decisions

MLA'S E-NEWSLETTERS | mla.com.au/enews
News, views and advice on a range of different topics direct to your inbox

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