

FEEDBACK

MLA – FOSTERING PROSPERITY

MAY/JUNE 2020



ON FARM
SUPERFOOD FOR SHEEP
32

SUPPLY CHAIN
PROFIT FROM WASTE
38

IN MARKET
G'DAY USA
44

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 24): NSW producer Fiona Aveyard has stepped up to the plate and developed sausage rolls to add value to her Outback Lamb brand. Image: Georgie Newton Photography.

Have your say!

We'd love to hear from you

✉ info@mla.com.au

☎ 02 9463 9333

🌐 mla.com.au

📘 @meatandlivestockaustralia

🐦 @meatlivestock

📺 meatandlivestock

Feedback is produced and published by Meat & Livestock Australia Ltd (ABN 39 081 678 364).

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

This magazine was printed on Sumo Offset Laser, an environmentally responsible paper manufactured under the environmental management system ISO 14001 using Elemental Chlorine Free (ECF) pulp sourced from sustainable forests. Sumo Offset Laser is FSC Chain of Custody (CoC) certified (mixed sources).

Disclaimer:

The views expressed in Feedback are not necessarily those of MLA, its employees or agents. Feedback content is provided as information not as advice and you should make your own enquiries before making decisions concerning your interests. All material in Feedback is copyright. Reproduction of the material is encouraged, however due acknowledgement to Feedback is required.

CONTENTS

COVER STORY

24 A lamb brand on a roll

IN BRIEF

- 5** COVID-19 red meat resources
- 6** Beef still going for gold
- 6** Positive scorecard
- 7** Milestone reached for Merino Lifetime Productivity project
- 7** Mobile-friendly eNVD
- 8** Creating a carbon account for your business

ON FARM

SPECIAL FEATURE

- 12** What's next for ag-tech?
- 14** Ag-tech pilot delivering results
- 16** A more connected northern beef industry
- 17** Tailored technology provides remote solutions
- 18** Data is the new gold
- 19** Measuring for better management
- 20** Remote connection teaches digital lessons
- 22** Technology turning point

NATIONAL

- 10** Get back to business
- 11** Prepare now to improve MSA compliance for summer
- 23** 10 tips to build an innovative agribusiness
- 27** Benchmarking raises the bar

NORTHERN CATTLE

- 28** Over the fence – Jane Sale
- 35** Steering a course for success

SOUTHERN CATTLE AND SHEEP

- 30** Brassicas bridging the feed gap
- 31** Foraging for feed options

SHEEP

- 26** Communication and collaboration key to marketing
- 29** Over the fence – Andrew Mitchell
- 32** Superfood for sheep
- 34** Just add saltbush
- 36** An eye to comply

SUPPLY CHAIN

- 38** Turning waste into profit
- 40** High-value opportunities
- 41** Market security

IN MARKET

- 42** Red meat industry taps into aged care
- 43** Proof is in the premiums
- 44** G'day USA
- 46** Hats off to Erin
- 47** Cosy up to this Italian



14



22



26



44

A NOTE FROM THE MD...

Welcome to the May/June edition of *Feedback* magazine.

As always, I welcome your feedback on the magazine – please feel free to email me at the address listed below.

What I'm working on

With no travel for a month (and a few more months no doubt to follow), I thought I would have more spare time – but it seems to have been easily filled with the changing environment we operate in.

The development of our *Strategic Plan 2020–2025* and *Annual Investment Plan 2020–21* is on-track and is keeping the planning team busy. We are also experiencing a significant increase in stakeholder enquiries right across MLA, often from producers who are looking for more information on what is happening in the market and how to best respond.

I encourage our levy payers to sign up for our *Prices & Markets* e-newsletter to ensure they're receiving the latest market information each week. Producers can also check in regularly at mla.com.au/prices-markets.

My priorities over the next few months

We have some real challenges ahead of MLA and the industry in the next few months as we navigate our way through (and out the other side of) the COVID-19 impacts.

Between now and the end of June, MLA is extremely focused on delivering against our 2020 plan/budget, as well as on providing all the support we can to our stakeholders. Hopefully we will be well on our way to opening MLA's offices again as the financial year draws to a close.

Have a question for me?

Jason Strong

MLA Managing Director

✉ E: jstrong@mla.com.au



MLA's response to COVID-19

Like the rest of the world, the Australian red meat and livestock industry is experiencing extraordinary times. The term 'unprecedented' must have been used more in the last six months than any other time in the history of agriculture in Australia. Every day, it seems like we are preparing ourselves for challenges we have never experienced before.

MLA is responding to this changing environment on many fronts. All MLA offices (except China) have been closed since 26 March, with all staff now working from home. Many of our projects are continuing as normal, but those that require us and our stakeholders to travel – like many of the events we sponsor – are now restricted.

Where necessary, staff time is being redeployed to areas that need immediate attention. There are a lot of demands on MLA's time and resources at the moment and we will continue to respond to the changing market and stakeholder needs as they arise.

Market information and insights

- We have temporarily replaced the livestock market indicators with comparable CV9 indicators until our Livestock Market Officers can return to saleyards: mla.com.au/prices-markets
- Each week, the team develops market information and analysis about the changing market situation, which we share with the industry to ensure producers are aware of the changes in the markets. You can see some of this work for yourself at mla.com.au/COVID-19-insights
- The marketing team has responded to the shifts in market dynamics with a range of support programs and materials: australianbeef.com.au and australianlamb.com.au

Online events and communication with levy payers

Wherever possible, we've converted events and activities to online resources such as webinars or postponed them. We're avoiding cancelling events as much as possible so when social distancing measures have been relaxed, these events can proceed.

Producers can also stay up-to-date on the latest MLA and market activity via our weekly *Friday Feedback* and *Prices & Markets* e-newsletters, social media (Facebook, Twitter or LinkedIn), or mla.com.au.





Event cancellations and postponements

Industry events, including **LambEx 2020**, have been cancelled or postponed in response to **COVID-19**. **LambEx** has been postponed until **30 June to 2 July, 2021**, at **Melbourne Showgrounds**.

- Visit MLA's Events page to stay up to date: mla.com.au/events
- Subscribe to LambEx's newsletter to stay informed about the 2021 event: lambex.com.au

Get back to business

MLA, Australian Wool Innovation and Sheep Connect NSW are hosting a series of **free online webinars** to support livestock producers as they continue to rebuild after recent bushfires, drought, floods and storms.

The hour-long webinars began in March and will be held weekly every Tuesday at 1pm. The last one is scheduled for 9 June. Recordings of past webinars are available for producers to listen to in their own time.

The sessions offer resources and support from experts to help those impacted by recent events get 'back to business'. They replace the original face-to-face workshop formats in response to the current situation with COVID-19. ■

For more information on the webinars and how to register, visit mmla.com.au/events

Recordings of past webinars are available at Sheep Connect NSW sheepconnectnsw.com.au/tools



MLA stands with Wuhan



Amid the global battle to contain the coronavirus, an MLA China initiative saw Australian beef fuel medical staff at the epicentre of the COVID-19 outbreak in Wuhan. MLA China collaborated with Wuhan-based Australian beef importer, ANZJoy International, to deliver two tonnes of Australian beef to eight hospitals in Wuhan, supplementing a power meal to 11,570 medical staff. ■

Global benchmark

Just how competitive are Australian beef and sheepmeat producers on a global level?

A new report commissioned by MLA examines sheep and beef production in Australia, as well as some of our largest global competitor nations.

It draws on data from 'agri benchmark', a global, non-profit and non-political network of agricultural economists, advisors, producers and specialists in key sectors of agricultural value chains. ■

Read the report at: mmla.com.au/agribenchmark



Market response to COVID-19

The unprecedented and unpredictable nature of COVID-19 makes it difficult to report on the complete range of impacts to the Australian red meat and livestock industry in an accurate and timely manner.

While China appeared to be emerging from the COVID-19 shutdown as *Feedback* went to print, consumption of Australian red meat domestically and around the globe continued to be disrupted.

MLA will release the April/May export updates via the *Prices & Markets* e-newsletter as they become available. ■

Subscribe at mmla.com.au/prices-markets
For the latest market trends and analysis visit mmla.com.au/market-snapshots

COVID-19 red meat resources

In response to the constantly changing coronavirus (COVID-19) pandemic, MLA has compiled this list of resources so producers can find the most up-to-date information.

Australian Government

The Australian Government website is regularly updated with the latest coronavirus news, updates and advice from government agencies across Australia.

australia.gov.au

Mental health support

These are challenging times, but you don't have to deal with it all by yourself. If you need someone to talk to, or just want to read up on some resources to help you get into a better headspace, visit MLA's Mental Health Hub for a list of contacts and tools to get you started.

mla.com.au/mental-health

Market reports

Stay informed about what's happening in Australia's domestic and export markets during COVID-19 with MLA's *Prices & Markets* e-newsletter which includes analysis of trends.

mla.com.au/prices-markets

National Farmers' Federation

The National Farmers' Federation website outlines the industry's response to COVID-19 including the 'Don't panic: Aussie farmers have your back' campaign to reinforce the importance of Australian food producers.

nff.org.au

farmers.org.au

farmhub.org.au/covid-19-key-information

MLA's e-learning hub

With face-to-face workshops and industry events cancelled or postponed, MLA has compiled a list of online programs to continue building producers' business skills during COVID-19. Check out some of the webinars, podcasts and other online programs in MLA's e-learning hub.

mla.com.au/e-learning-hub

On-farm and market information

Other industry groups also have specific COVID-19 resources for producers:

Cattle Council of Australia:

cattlecouncil.com.au/coronavirus

Sheep Producers Australia:

sheepproducers.com.au/covid

Red Meat Advisory Council

The Red Meat Advisory Council has prepared a COVID-19 toolkit of key resources for Australian red meat and livestock businesses.

rmac.com.au

Feedlot industry

The Australian Lot Feeders Association has developed a resource to help the feedlot industry manage the impacts of the virus. *COVID-19 – A guide for feedlots* includes checklists, protocols and templates to support the safety of feedlot staff and the continued wellbeing of livestock.

feedlots.com.au/covid-19

COVID-19 online resources



Access information about:
red meat markets | border control | financial assistance |
mental health and wellbeing and much more.

mla.com.au/covid-19

Beef still going for gold

Australian beef plays an important role in a healthy lifestyle and **MLA will take that message to the world's largest sporting events: the Olympic and Paralympic Games.**

Due to the global COVID-19 pandemic, the Tokyo 2020 Olympic and Paralympic Games have been rescheduled and will now take place in 2021.

MLA's 'Australian Beef' brand is an official partner of Australia's Olympic and Paralympic Teams.

MLA is working closely with the Australian Olympic Committee and Paralympics Australia to ensure the Australian Beef partnerships are aligned with the new Games period.

- The Olympic Games begin 23 July 2021
- The Paralympic Games begin 24 August 2021.

MLA Domestic Marketing Manager Graeme Yardy said MLA will continue to feature its Olympian and Paralympian Australian Beef ambassadors in the lead up to the Games.

He said the relaunch of Australian Beef's partnership activities in early 2021 will highlight Australian Beef's key messages of 'healthy for me', 'easy-to-use' and 'quality', and will use social media to connect with consumers.

"Consumers have increased cooking time and frequency and are interested in eating healthy, so MLA will highlight the value and versatility of Australian beef," Graeme said.

For example, in response to recent buying trends, MLA has developed tips on storing, freezing and thawing to ensure bulk red meat purchases are appropriately managed. ■

✉ Samantha Warfield-Smith
E: swarfieldsmith@mla.com.au

📺 Meet the Australian Beef Ambassadors:
australianbeef.com.au/olympics
Tips for freezing, defrosting and reheating beef:
australianbeef.com.au



Positive scorecard

An independent and impartial review into **MLA's performance between 2016 and 2020 has shown the organisation is in good shape.**

The review, released in late April, determined MLA is:

- well managed
- delivering value for money
- meeting its levy payer and government obligations
- well positioned to effectively tackle future challenges for the red meat and livestock industry.

The review included MLA subsidiaries, Integrity Systems Company and MLA Donor Company. It will be used to inform the development of the next Statutory Funding Agreement between MLA and the Australian Government.

It also includes a number of important recommendations which MLA will look to implement heading into the new financial year.

MLA Managing Director, Jason Strong, said it was a pleasing scorecard for MLA but the organisation would not be resting on its laurels.

"On behalf of the MLA Board and Leadership Team, I want to thank MLA's staff for their hard work which has helped deliver a successful result," Jason said.

"The review, which is entirely independent and carried out by an external organisation, shows MLA has made real progress.

"However, on behalf of red meat producers and the wider red meat supply chain, we see this as an opportunity to learn, develop further and set the organisation up for future success. That is our obligation to levy payers."

Key conclusions from the review include:

- MLA is a large, complex and relatively mature organisation with ample evidence to suggest it is well-governed and managed.

- MLA has met the substantive obligations of its Statutory Funding Agreement and obligations to levy payers and industry to deliver high quality research and development and marketing outcomes, in a cost-effective way.
- Over the review period, MLA enhanced efforts to engage meaningfully with stakeholders, to deliver benefits to industry across the red meat supply chain.
- MLA's approach to assessing the economic impact and value of its research activities aligns with current best practise, however MLA should increase its efforts to assess social and environmental benefits and where possible quantify these.

Jason said the time period covered by the review had been a challenging one for the red meat supply chain, including 'worst-on-record' conditions and natural disasters.

He said the review will help identify factors which are likely to shape MLA's decisions into the future as its looks to deliver 'fewer, bigger, bolder' programs of work to ensure transformational change and double the value of red meat sales to 2030. ■

✉ Jason Strong
E: jstrong@mla.com.au

📺 Read the *Independent Review of MLA Performance 2016–2020* at:
mla.com.au/performance-review



Milestone reached for Merino Lifetime Productivity project

Sheep producers will soon have access to a wider selection of rams with more accurate Australian Sheep Breeding Values (ASBVs).

Sheep Genetics, the national breeding evaluation service for sheep breeders and buyers, is expanding its database as part of the Merino Lifetime Productivity project. The service will use information on traits from 5,700 daughters of 134 sires.

The project is collecting lifetime data for 10 years across diverse environments and Merino types to improve ewe performance.

The most recent information added to the MERINOSELECT database is for traits including wool, body weight, fat, muscle, worm egg count, reproduction and visual traits.


MLA General Manager – Research, Development and Adoption, Michael Crowley, said the sires in the project have also been used extensively across

the industry, so the impact of this expanded dataset on MERINOSELECT data and ASBVs is being tested.

“This testing is an important part of the project, as it allows any enhancements to the analysis methodology and the impact of including this new data to be fully understood and explained,” he said.

“The project will give producers access to more accurate breeding values for an increased number of animals.

“Breeding value accuracy and availability will be enhanced to give more certainty to producers when they set out to improve their flocks through genetic selection for particular traits.” ■

 Merino Lifetime Productivity project wool.com/sheep/genetics/merino-lifetime-productivity

Merino Lifetime Productivity at a glance



The project is a collaboration between Australian Wool Innovation (AWI) and the Australian Merino Sire Evaluation Association (AMSEA), five site hosts (Tuloona Pastoral, Murdoch University/University of Western Australia, Moses & Son, NSW DPI and CSIRO) and the five site breeder committees.



AWI, AMSEA, MLA and the Animal Genetics and Breeding Unit have worked together to get data from the project into the MERINOSELECT genetic evaluation.



The data will build on the information from MLA's Resource Flock project and data collected by breeders to improve understanding of the genes sheep carry for all traits.


Mobile-friendly eNVD

A new, mobile-friendly version of the electronic National Vendor Declaration (eNVD) system is now available, providing an efficient and convenient platform to complete livestock consignments.

The updated eNVD was developed by Integrity Systems Company and is user-friendly, easy to navigate, removes duplication and can be completed on a mobile device or desktop computer.

It's one of the changes to the National Vendor Declaration (NVD) being rolled out this year to give producers and supply chain stakeholders an easier, more efficient and cost-effective way to interact with Australia's red meat integrity system.

Other changes include the release of updated versions of NVDs for all species in July and the decommissioning of the eDEC system at the end of the year. ■

 To start using the new eNVD, go to envd.integritysystems.com.au and log in using your LPA credentials.

For more information about the new eNVD system, visit the Integrity Systems Company website: integritysystems.com.au



Creating a carbon account for your business

The Australian red meat and livestock industry has set a target to be carbon neutral by 2030 (CN30).

This means in 10 years' time, Australian beef, lamb and goat production will make no net release of greenhouse gas (GHG) emissions into the atmosphere – but how can producers make a start on working towards this target in their own businesses?

An important first step is to create a carbon account to determine what a farm business's net GHG emissions position is, so producers can identify strategies to reduce these emissions and improve carbon storage on-farm.

MLA, Toowoomba and Surat Basin Enterprise Food Leaders Australia, and Integrity Ag & Environment Pty Ltd recently ran a carbon accounting workshop for producers to help them generate a carbon account for their own enterprise.

The workshop will be used to develop a carbon accounting training manual (due for release later this year), as well as case studies to help producers get on the front foot and maintain or improve their productivity while reducing emissions.

Here, MLA's CN30 Manager Margaret Jewell and workshop presenter Steve Wiedemann of Integrity Ag & Environment answer three questions producers may have about carbon accounting.

1. What is carbon accounting?

Carbon accounting is the process producers can use to determine their annual net GHG emissions position.

There are two main elements of a carbon account:

Annual GHG emissions

These come from:

- carbon dioxide from fossil fuels used for electricity, transport and inputs such as fertiliser and supplementary feed
- nitrous oxide from fertiliser application and livestock manure
- enteric methane produced when ruminants digest food.

Carbon stocks on-farm

These stocks are of carbon which has been removed from the atmosphere and stored in vegetation and soils.

2. Why is carbon accounting important?

Calculating baseline carbon emissions and stored carbon is an essential first step for producers who are considering opportunities arising from low or zero carbon red meat, such as carbon-neutral branded products.

A carbon account can be used in on-farm decision making and sets a benchmark to show progress over time.

Just as financial accounting aids financial decision making and reporting, carbon accounting aids decision making and reporting around how carbon is – or is not – used on-farm.

3. How can I create a carbon account?

The University of Melbourne has created a free spreadsheet for producers to enter their GHG emissions and calculate the emissions component of their carbon account.

Download the carbon accounting tool from the 'calculator' section on: greenhouse.unimelb.edu.au

The carbon storage component can be generated by measuring or modelling land using spatial data, as well as data collected as part of any soil carbon methodologies. ■

Three tips for carbon accounting

1. Accurate data collection is essential, so make sure you're collecting the information required to create a carbon account such as:
 - different classes of livestock
 - weaning/turn-off rates
 - live weight gains
 - livestock numbers
 - inputs and outputs such as fuel, fertiliser and fodder.
2. Know the different land and vegetation types across your property so you can easily identify areas to build carbon stocks.
3. Identify information gaps early on so you can find the answers and build a strong foundation for your carbon neutral plan.

✉ For more information about the carbon accounting workshops, contact:

Margaret Jewell
MLA CN30 Manager
E: mjewell@mmla.com.au

Steve Wiedemann
Principal Consultant,
Integrity Ag & Environment
E: stephen.wiedemann@integrityag.net.au

💻 For more information about CN30 visit mmla.com.au/cn30



ON FARM

RESEARCH IN ACTION



NATIONAL
GET BACK TO BUSINESS
10

NORTHERN CATTLE
REMOTE TECH SOLUTIONS
16

SOUTHERN CATTLE
MEASURING SUCCESS
19

SHEEP
OUTBACK VALUE-ADDING
24

Get back to business

Red meat producers affected by recent bushfires can still access critical one-on-one support, tailored to their business, to help with their recovery and rebuild.

Amid COVID-19 containment measures, MLA's Back to Business program, which allows producers in fire-affected regions to access up to three free one-on-one-sessions with a local farm business consultant, is now being delivered online.

NSW State Coordinator for the Back to Business program, John Francis of Holmes Sackett, said the program gives producers clarity and direction by prioritising actions, which is vital during the ongoing recovery phase.

"Every business has different needs, depending on their scale, skills, human resources and physical resources," John said.

"Regardless of those variables, developing a clear plan helps provide a path to see through to the other side."

How it works

The initial Back to Business session is with a farm management consultant and covers strategic and financial planning, setting priorities and how to implement them.

In the following sessions, producers can choose technical specialists – such as in livestock nutrition or agronomy – to assist with implementing management plans.

John said although the sessions were now online, they were still practical and could even develop producers' skills in other areas, such as giving them greater confidence to use technology within their business.

Consultants can also assist with other areas of interest, if needed, such as finding mental health support services. ■

Above: NSW State Coordinator for the Back to Business program, John Francis, Holmes Sackett.

Three priorities to get back on track

John Francis said there are three key areas producers should prioritise to get their business back on track after a bushfire or other natural disaster. Here, he outlines what steps to take and in what order.

1. Livestock

The first priority is to keep livestock alive and healthy and plan how to manage them moving forward.

This means working out what you're going to do for feed and how you're going to allocate resources.

The Back to Business program offers advice from livestock professionals, such as how to conduct a feed budget. For example, through the one-on-one sessions, the consultant can help producers calculate their available feed and what the most appropriate action is, for example whether to buy in feed, agist or sell livestock.

They can also help producers manage other variables, such as capitalising on green feed if they've had rain, with simple strategies such as using single-strand electric fence to keep stock contained on pasture temporarily to remove pressure to repair or replace permanent fences.

2. Infrastructure

It's vital to work out what you need to do, in what order, to get yourself back to business as quickly as possible.

This involves auditing infrastructure, pasture and any other resources

which have been lost.

For example, if fences have been lost, it's important to categorise which fences are a high priority to repair.

Boundary fencing is important but may not be the highest priority, particularly if it's containing livestock on a pasture with only low carrying capacity.


It may be better to invest time in a smaller project which results in quicker pasture availability for a higher proportion of livestock.

3. Finances

It's critical to understand what your financial limitations are, so consultants in the Back to Business program can help with cash flow budgets and assist with bank financing applications.

Although many producers may have already done this, other financial priorities include contacting insurance agencies, understanding government assistance and identifying other opportunities.

Where there are multiple people in a business, it can be helpful to allocate this task to one person so others can get on with prioritising operational actions.

 MLA Back to Business program:
mla.com.au/back_to_business
backtobusiness@mla.com.au

MLA events: mla.com.au/events

A series of free weekly Back to Business webinars offered practical tips for producers to help rebuild on the back of recent bushfires, drought, floods and storms. Recordings of past webinars are available at Sheep Connect [NSW sheepconnectnsw.com.au/tools/](http://NSW.sheepconnectnsw.com.au/tools/)

Prepare now to improve MSA compliance for summer

Western Australian and South Australian beef producers targeting Meat Standards Australia (MSA) requirements can take steps now before they enter what is historically the most challenging time of the year for meeting MSA compliance – spring and early summer.

The 2019 Australian Beef Eating Quality Insights report revealed average MSA non-compliance for WA producers throughout 2017–19 was 4.5%, peaking in December 2017 at 9% as a result of high pH, which is meat pH greater than 5.70.

For SA producers, average MSA non-compliance throughout 2017–19 was 7%, peaking in December 2017 at 12% as a result of high pH.

Timely tips to help improve compliance

MSA Producer Engagement Officer, Laura Garland, said there are key areas producers can target to address pH and improve MSA compliance.

“Ultimate pH is heavily influenced by on-farm practices and there are two major components to this – nutrition and stress,” Laura said.

“Carcass pH levels are driven by muscle glycogen, which is built up through good nutrition and then depleted by stress and exercise.

“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.”

She encouraged producers to look carefully at their production systems to identify what might be contributing to issues of high pH.

“Given the extended dry conditions being experienced across large parts of WA and SA and short supply of available feed, supplementing cattle with other nutritious feed sources will help to optimise their performance,” she said.

“Ensuring cattle are achieving growth rates of at least 0.9kg/day will help to



MSA Producer Engagement Officer,
Laura Garland

reduce the risk of dark cutting.

“When cattle are gaining weight at these growth rates and above, their muscle glycogen will be ‘full’, allowing them to cope with stressors like handling, exercise and transport and still have enough stored glycogen at the point of slaughter.

“A high-energy ration for at least 30 days before slaughter can increase muscle glycogen and reduce the risk of dark cutting.”

Producers should assess their cattle management in the lead-up to slaughter to identify potential stressors and consider the following tips:

- 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 before to consignment. ■



MyMSA
mymsa.com.au

2019 Australian Beef Eating Quality Insights report
mla.com.au/abeqi-2019

The effect of pH on beef eating quality
mla.com.au/msa-ph

MSA requirements for handling cattle
mla.com.au/msa-handling-cattle

MSA changes

Changes to the Meat Standards Australia (MSA) model, Vendor Declaration Form and myMSA are being rolled out.

What’s changing?

New myMSA features: the updated website includes access to the new Opportunity Index on cattle which did not meet MSA minimum requirements. This provides an indication of the potential value of those carcasses if the reasons for non-compliance had been addressed.

Hump height will be used as a direct predictor of eating quality: hump height has always been measured as part of MSA but it will now be used as a direct predictor of eating quality rather than an estimate of tropical breed content.

‘Cut by cook’ combinations increase from 169 to 275: this gives new secondary cut options to the foodservice industry and provides increasingly popular cooking methods such as *sous vide* and combi-oven roasting.

Revised MSA Vendor Declaration Form: this will simplify how producers record tropical breed content and will provide an option for owners who use agistment or custom feeding to receive direct carcass feedback through the myMSA feedback portal. The new form will be available from 1 July 2020 in hard copy and electronic formats, but earlier versions of the MSA declaration will still be accepted.

✉ E: msaenquiries@mla.com.au

🖥️ mla.com.au/msa

What's next for ag-tech?

MLA's Digital Agriculture program explores how red meat producers can adopt technologies such as drones, unmanned vehicles and remote monitoring and management tools – as well as infrastructure – to improve whole-farm connectivity.

Here, MLA's Manager of Supply Chain Technology Innovation, Darryl Heidke, outlines what's on the digital ag horizon for red meat producers.

Q. What is MLA working on as part of the Digital Agriculture program?

We're working with technology suppliers to develop and trial technologies which could improve the industry's productivity and profitability through improved monitoring, measuring and management.

It's important to ground-truth solutions to identify the value each technology offers to the end user – in most cases, red meat producers – to guide sound adoption of these tools as they become commercially available. This helps us focus investment on digital agriculture for the next three to five years.

Q. Is a digital farm possible?

Yes, and it's already happening in various locations such as Carwoola Pastoral Company (see story page 14) and Romani Pastoral in NSW and Murchison House Station, WA (page 20), where MLA's ag-tech pilot projects are either progressing or completed.

Based on the success of these digital farm sites, MLA's digital agriculture focus is on determining the value proposition and return on investment of

technologies, before they're rolled out to larger ag-tech demonstration sites.

The aim of these sites will be to demonstrate the hardware and software which is currently available and robust for on-farm use, as well as give producers the opportunity to provide feedback to technology companies on their products.

Q. What challenges do producers face in adopting ag-tech solutions?

Producers are reluctant to deploy some technologies due to over-stated benefits or the simple fact some of the hardware isn't viable for on-farm use. Producers need ag-tech which can withstand dust and heat, hold up to curious animals, maintain performance across significant distances and which have sufficient technical support.

Ag-tech can be a complex, confusing area, so MLA is investing in this space to move towards solutions which meet everyone's needs and expectations. For example, we're encouraging digital solution providers to share data so producers aren't locked into a single provider for all their digital management needs.


Q. What ag-tech should producers keep their eye on?


On-farm productivity is a priority for MLA's Digital Agriculture program and one of our areas of investment is to develop systems to deliver commercially viable, autonomous solutions for the red meat industry.

MLA has partnered with international technology companies and the red meat industry to fast-track automated technologies which offer on-farm

productivity gains such as:

- monitoring fences – autonomous sensing to identify and categorise damage
- herd location – smart-tags or even tag-less sensing to measure herd behavior, distribution and movements
- weed and pest control – autonomous sensing to identify weeds, pests and feral animals
- monitoring feedbase – sensing and categorising ground coverage
- monitoring waters – autonomously measuring tanks, troughs, rivers and dams, analysing water quality and even alerting managers about dead or bogged stock
- managing feedlots – calculating rations based on growth factors or prescribing isolation based on animal health data. ■

 Darryl Heidke
E: dheidke@mla.com.au

 Here are some MLA digital agriculture resources and research reports:

Get connected:

MLA-funded research into ways producers can implement connectivity on-farm
mla.com.au/get-connected

Farmers2Founders:

An MLA-supported program to develop producers' entrepreneurship and technology capabilities
farmers2founders.com

Below: MLA is trialling autonomous vehicles to evaluate how producers could use them for on-farm tasks such as weed control.



Are you ag-tech ready?

Producer Penny Schulz and Annie Brox from technology company Origo.farm share their tips for investing wisely in digital tools:



**Penny Schulz,
producer, SA**

Penny recommends producers ask themselves five questions before the invest in new technology:

1. **Will it make my life easier?** If it's going to add complexity to your business, don't go near it.
2. **What are the pain points in my farm business?** Once you've worked these out, start looking for technology which can help you manage them.
3. **Does it add value to my business?** If you're paying good money for something, it needs to have a good value proposition – otherwise there's not much point in taking it on.
4. **Is it compatible with other technology I'm using?** There's nothing more frustrating than having to enter the same information into multiple systems.
5. **Will it save me money and/or time?** If so, don't get hung up on price. Ag-tech developers are creating some really useful tools, but they're coming up against a price barrier, because people aren't used to paying for apps. If the benefits are clear and obvious, go ahead.

Turn to page 22 for more information on how Penny is using ag-tech in her business.



**Annie Brox,
Origo.farm**

Origo.farm's Annie Brox shares her tips on wading through the options and investing wisely in digital on-farm solutions.

1. **Keep your focus on what you want to achieve, not the technology.** Understand your business's current workflow and identify what changes need to be made. Use this as the starting point for conversations with ag-tech providers to ensure you get the full financial benefit from the technology.
2. **Choose a whole-of-farm system.** If you're an IT expert who enjoys programming, you can buy bits and pieces of different technology. But if you're not and just want an efficient tool, choose a single, whole-of-farm system. Be aware, though, that every property is different and some customisation may still be required.
3. **Use a system which is scalable to suit a commercial operation.** There are many experimental systems available but they may have only been tested on a few hundred hectares. Producers in pastoral zones need equipment which is proven to be scalable and capable of working in their commercial environment.
4. **Ensure the service is up to scratch.** Make sure the technology comes with a proper service agreement – I can't overstate the importance of this. You need things like remote monitoring by the provider, a reliable help desk and local technicians.

Turn to page 20 for an update on the digital connection project at Murchison House Station, WA, involving MLA and Origo.farm.



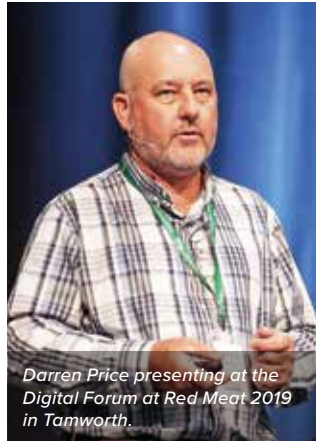
Turn the page to read *Feedback's* feature on ag-tech in real life, showcasing how producers across Australia are incorporating digital solutions into their businesses.

Ag-tech pilot delivering

Despite the Carwoola Pastoral Company ag-tech project only just passing its halfway mark, the new technologies explored in this pilot are already providing a return on investment and guiding management decisions.

Around 400 devices from different providers – ranging from smart cattle tags to soil probes – are being put through their paces in a commercial setting.

Here, Darren Price, Price Rural Management, who is overseeing the project, provides a snapshot of some of the many cost and time-saving benefits the business has experienced from these ag-tech solutions, along with some of the lessons learned so far.



Darren Price presenting at the Digital Forum at Red Meat 2019 in Tamworth.

Saving time and money on water runs

With 40 water sensors installed on dams, troughs and tanks at 'Carwoola' alone and many more across the company's other three properties, this technology has already significantly reduced time and money spent on checking water points.

A typical water run at Carwoola used to involve checking five tanks, nine troughs and six dams. It took around an hour to complete this 14km water run, which needed to be done seven days a week in summer – costing the business just under \$20,000 a year.

Darren said the water sensors have reduced the need to check troughs manually by 70%.

"That's quite a good payback in 12 months," he said.

"We still do physical checks, obviously, but it gives me a really good early warning system on issues."

He said another advantage was the ability to check water points remotely.

With 8km of Molonglo River running through

Carwoola, the project also installed flood level detection sensors as an early warning system so livestock can be moved to safer paddocks if required.

Labour efficiency

Carwoola Pastoral Company's feeder cattle business requires cattle to be weighed every four to six weeks, in mob sizes from 100–160 head.

Manual weighing and drafting previously required three staff, averaging 60–80 head/hour.

However, the installation of an air-operated, three-way auto-drafting system with an auto RFID scanner has lifted the drafting rate to 200 head/hour and removed the need for one labour unit, freeing employees up to do other tasks.



An unmanned autonomous vehicle undergoing testing at Carwoola. Carwoola Pastoral Company is owned by Rob Purves and Bronwyn Darlington and comprises cattle, sheep and cropping enterprises across four properties.

From the battlefield to the farm

An autonomous vehicle designed for the US military to carry supplies to troops in combat has been customised by HDT Expeditionary Systems, in partnership with MLA, to be used on Australian grazing properties.

MLA Manager – Supply Chain Technology Innovation, Darryl Heidke, said the six-wheel vehicle was put through its paces at Carwoola in January, to test its robustness under agricultural conditions.

"The autonomous vehicle has potential to undertake a range of tasks on-farm, such as detecting weeds, towing feed, fuel and water trailers, and moving livestock," Darryl said.

"We're also keen to trial the vehicle with other producers to develop

more cases for how this technology can be used."

So, has it run into any fences? Darryl has good news.

"It has a collision avoidance system. HDT input GPS points into the vehicle so it can track its way around the property, performing tasks, without incident."

Other technologies on the list for testing at Carwoola this year include virtual fencing, walk-over-weighing systems, and more smart tags for sheep and cattle.

results

LESSONS LEARNED

- > Don't expect to just buy any sensor off the shelf and get results – be prepared to invest in the right tool for the job.
- > Consider the realities of where you are locating technologies as devices will require protection to prevent damage from livestock.
- > The ability to monitor your business even when you're off-farm is a huge comfort.

Smart monitoring

Smart cattle tags are being trialled in this project, creating the ability to track bulls during joining as well as to provide insights into grazing patterns.

"It's very quick and easy to get a snapshot of what the herd's doing," Darren said.

"I think the biggest return on investment and business change can come from using the smart tags with bulls, as it tracks how far an animal has moved in a period of time.

"We can identify bulls which aren't moving about the herd, assess if they have any issues and swap them out. The potential to increase our calving percentage by even 5% is a big advantage."

Darren is also using the smart tags to gather useful management information by group tracking mobs to analyse how they're using supplement stations.

"It's highlighted we may need to move some lick feeders to get them across more country."



Remote water monitoring technology at Carwoola.

Accurate irrigation scheduling

Darren is using soil probes to ensure greater accuracy in scheduling irrigation events for the two 23ha centre pivots on Carwoola, which irrigate lucerne and perennial rye.

"It's expensive to irrigate so we want to change the way crops are reacting so we can maximise water use efficiency," Darren said.

"I haven't seen a stressed lucerne plant since I've been working with these sorts of tools. It's really starting to maximise our growth."

Sky-high management

"As a grazing business, Carwoola is constantly measuring pastures and we spend considerable time – an average of six hours/month/property – assessing

them," Darren said.

Using satellite pasture management technology could save the business around \$8,500 in pasture monitoring.

"The beauty of this technology is I'm able to assess this every week.

"Because it's re-evaluating and reporting regularly, when we get busy with feeding, this enables me to continue to do everything else I have to do and also do our pasture measurements.

"I can check it while I'm eating my Weet-Bix in the morning. If we can then connect this to a feed budgeting tool, we're getting some really powerful information." ■

SNAPSHOT:

Carwoola Pastoral Company, four

properties located east of Canberra, ACT, and north of Yass, NSW



Area:
6,337ha

Enterprise:
Angus cattle, sheep, winter fodder crops

Livestock:
Self-replacing Angus herd of 900 breeders targeting feeder trade/restocker markets; 10,000 first-cross ewes producing lambs for domestic trade/store markets

Pasture:
Native and improved pasture blend

Soil:
Range from sandy loam through to light quality soils

Rainfall:
700mm

✉ Darryl Heidke
E: dheidke@mia.com.au

A more connected northern beef industry

Connectivity remains a barrier for many northern producers when it comes to collecting data and managing livestock, but an MLA-funded investigation revealed solutions could emerge in the next two to three years.

For the project, which was instigated by producers, telecommunications consultancy GHD assessed the suitability of currently available and emerging technology which could help improve connectivity to northern properties.

The company assessed mobile phone and internet coverage around homesteads as well as communications, cameras and sensor technologies out in the paddock.

GHD Senior Engineer Bryce Leedham said while there's no obvious technology solution available in the marketplace at the moment, the outlook is more promising.

"Data requirements vary for different uses – for example, a camera stream requires a lot more data than voice does," Bryce said.

"For most of these applications, the best option is the 4G mobile network, but most of the northern pastoral properties we visited have no option to subscribe to a mobile phone network."

Where the 4G mobile network is available, it provides a cheap option to run technology. Where no mobile network is available, the next option is to look at satellite services.

Bryce said there are some newer satellite products which look promising in the future, but for now, it's a matter of watching and waiting.

"Some technologies, such as SpaceX's global satellite internet offering, show promise of significant improvement within the next three years, but remain unproven at present, without published costs to subscribe," Bryce said.

"Incremental improvements in the National Broadband Network Sky Muster and 4G cellular plans provide a useful stopgap in the interim for pastoralists across northern Australia."

Overcoming the distance

Northern beef producer Mick Hewett, Hewett Cattle Australia, said northern producers are excited about using new and emerging technologies to advance operations, but leveraging them into remote areas is a challenge due to the connectivity issues.

"The project provided insight into future options such as low-orbit satellite," he said.

"It was also beneficial to get an analysis of the costs associated with different connectivity solutions and how well they would work across the extensive distances stations cover."

Bryce said while pastoralists do have the option of building their own networks, the cost is prohibitive and the return on investment is unlikely to be favourable.

"In one example we investigated, a property-wide Wi-Fi network would involve 30–40 new towers and an upfront cost in the order of \$500,000 to provide access to data services across the property," he said.

"It's difficult to justify the business case for this investment with a lack of proven returns on new technology across the scale of properties operated by northern producers.

"Before signing up to building your own network, it's worth waiting to see how the new services perform – if they deliver on what they're promising, many ag-tech opportunities will open up."

He said deployment of some new technologies takes around 24 months.

"Some satellites are already up, but in terms of getting a good feel for if this approach is going to be the saviour for remote connectivity, we'll likely have some answers later this year." ■

RESEARCH IN REVIEW

PROJECT NAME

Options for improving telecommunications across northern Australia for a connected beef industry

RESEARCH ORGANISATIONS

GHD and MLA

FUNDING ORGANISATIONS

MLA and Australian Government

GOAL

To review and assess the suitability of available and emerging technology which can provide connectivity to the northern Australian beef industry.

DURATION

2018–2019

KEY FINDINGS TO DATE

- Infrastructure costs to provide communications to emerging ag-tech devices across northern pastoral properties are prohibitive.
- Property owners and managers have a sound general awareness and appreciation of the advantages offered by new technologies, but the return on investment is largely unproven.
- There is no obvious answer to provide improved connectivity at a commercially attractive price.

✉ Bryce Leedham
E: bryce.leedham@ghd.com
Nigel Tomkins
E: ntomkins@mla.com.au

📄 View the research report at:
mla.com.au/telecomms-north-aus

Tailored technology provides remote solutions

Managing 140,000 head of cattle across a portfolio of Queensland properties demands intelligent logistics and good communication.

It's a challenging task when connectivity is limited, but family-owned paddock-to-plate company MDH is forging ahead with judicious investment in digital technologies.

MDH's chief financial officer Julie McDonald (pictured) said their suite of tools was selected to overcome the challenges of a diverse, remote business, both in the office and out in the paddock.

"One of the most crucial pieces of digital technology we use is our in-house accounting software, which is hosted by a third party to enable access for our remote employees with administration roles," Julie said.

Customised tools

For the past three years, MDH has worked with Sapien Technology to develop cloud-based, integrated, multi-property paddock book software.

"It incorporates supply chain management tools to aid

with stocking, mustering and trucking decisions," Julie said.

The company is also working with Safe Ag Systems to develop employee management tools which could see future staff inductions include online interactive elements where relevant.

MDH trialled a solar-powered, fixed-wing drone, with assistance from MLA Donor Company, to monitor water points using satellite technology and high-resolution cameras.

Limited connectivity across the property meant live footage and photos couldn't be accessed in real time, so the system saved images to an SD card so they could be downloaded when the drone returned to base. Despite this limitation, Julie said the technology provided cost and time benefits, and reduced frequency of vehicle use.

"We estimate the drone would save \$1,000/week/property in the dry season by replacing two water runs on a large property," she said.

Other ag-tech

MDH uses Elynx animal management software at their 'Wallumba' feedlot to capture and track data about cattle, rations and commodities.

The software monitors and controls 10 centre pivots using telemetry via the mobile phone network.

MDH also uses FarmMap4D software for mapping and infrastructure planning.

Devices

"We use our smart devices for voice and video conferencing, program and logistics management, plus family and employee communications," Julie said.

Everyone in the company has a smart device in their pocket, so the opportunity to talk and text is limited only by coverage.

"Our Cape York property, 'Rutland Plains', has mobile reception in part, and wherever we have a sniff of a mobile signal, we use boosters to make the most of it," she said.

"Where we don't have coverage, we install Wi-Fi networks around homesteads.

"We do have properties which present challenges as far as coverage goes, which is certainly an issue for workplace health and safety when people are working remotely. We cover this by using UHF radio and satellite phones."

She said improved connectivity would deliver many benefits to remote enterprises, especially as the need for technology increases with the need to improve yield and productivity.

"Connectivity in regional and remote areas needs to be sufficient to enable adoption of technology which will allow the northern beef industry to continue to thrive in changing climatic, political and social conditions, and community and customer expectations." ■

SNAPSHOT:

Julie McDonald,
MDH Pty Ltd, Cloncurry,
Queensland



Area:
3.36 million hectares

Enterprise:
Cattle

Livestock:
175,000 head capacity
(currently 140,000 head due to rebuilding after drought)
Brahman breeders joined to Angus

Pasture:
Gulf country, grasslands

Soil:
Variable

Rainfall:
Varied across properties

✉ Julie McDonald
E: julie.mcdonald@mdh.net.au

LESSONS LEARNED

- > Technology opens the door for best practice.
- > Reduced connectivity limits, but does not exclude, innovation.
- > Small satellite technology is promising for increasing connectivity across pastoral regions.



Data is the **new gold**

With her 16-year background in research, WA sheep producer Kelly Pearce appreciates the value of data for optimising decisions and processes.

In fact, she sees data as ‘the new gold’ and is capturing information to drive profitability and sustainability in her farming business.

Kelly (pictured below) has a broad view of the ag-tech landscape. Rather than drilling down to the development of individual apps and platforms, she’s zealous about facilitating processes to collect data and use it – if not immediately, then in the future.

More value from data

Kelly is identifying the areas where data could help to solve problems within her farm business, such as:

- managing cash flow
- optimising selling decisions for livestock and grain
- optimising input management.

She’s working towards systems which relate the gross margins of enterprises and individual paddocks through to their farm budgets and cash flow.

“Within our farm business, we’ve gone on a journey to catch more value from our farm data and move to more proactive decision making,” Kelly said.

“Gone are the days where I’m happy to sit with a farm

consultant once a year and do a retrospective business analysis – I want timely and accurate decision making during the year.”

Kelly said when it comes to crunching the numbers, a limiting factor is knowing the real costs, as farm management software often doesn’t capture budgets.

“We need ag-tech to move beyond spreadsheets and integrate with field records, sales, revenue, cost and yield, to allow us to use our financial information better.”

Better together

Kelly took to the stage at the recent ag-tech event evokeAG, where she advocated for producers to think more collectively around data collection, storage and ownership.

“We’ve created an informal group in WA called the ‘Digital Ag Collective,’” Kelly said.

“We want producers to push for and be reassured that their data is being managed competently.”

Kelly is keen to see the formation of a data cooperative in Australia, similar to the models which exist in the US and the Netherlands.

“I’m not about keeping my data for myself; I want it used to create solutions to our problems, but I’m conscious our farm data has other economic uses.

“We need to ensure we understand the issues around data storage, control, ownership and aggregation.”

Kelly said the livestock sector has made advances in how it’s using data to make decisions, but adoption remains an issue without demonstrated return on investment.

“Look for ways you can see how tech could benefit your business,” she said.

“If you need to be part of a ground-truthing process, do it, but keep collecting the data.” ■

LESSONS LEARNED

- > Keep collecting your data – even though there’s a cost to collecting it, it will be important one day.
- > Think about data control, storage and ownership.
- > Use programs which allow you to easily extract your data.
- > Help ag-tech developers, by all means, but don’t give away your intellectual property without some reward.

SNAPSHOT:

Kelly Pearce and Alan Manton,

Yealering, WA



Area:

4,500ha owned,
2,000ha leased

Enterprise:

60% cropping, 40% livestock

Livestock:

2,500 Merino ewes crossed to White Suffolk rams; White Suffolk Stud

Pasture:


Stubbles, lambs weaned onto sown pastures of serradella/clover mix


Soil:

Sand over clay

Rainfall:

195mm in 2019 growing season (325mm historical growing season)

 Kelly Pearce
E: pearcekelly@bigpond.com
Twitter: @KellyPearce7

 evokeAG
evokeag.com

Ag data cooperatives
GiSC (USA)
gisc.coop

Join Data (Netherlands)
join-data.nl/?lang=en

Digital Ag Collective:
digitalagcollective.com



Measuring for better management

Victorian producer Harry Lawson is a fan of numbers and what they tell him about his business.

It's no surprise, as Lawson Angus – one of Australia's largest cattle seedstock businesses – generates plenty of data.

"We've chosen to invest in technologies and systems which we see as beneficial to us in a management sense, and also to our clients from a genetics perspective," Harry said.

One such tool is a data capture, management and decisions support program called GrowSafe.

The Lawsons have used GrowSafe since 2018 to accurately measure feed intake and average daily gain.

As well as a feed intake system, the technology's GrowSafe Beef component records partial body weights every time cattle drink, providing real-time information.

Harry said he's 'revved up' about the ability of technology to deliver multiple weight readings throughout the day to create a more accurate picture of cattle performance.

"It gives us more accurate weights in a timely manner without having to run the pens through the yards each time we need to weigh them," he said.

"If you run 40 bulls into the yards, some might have drunk 40–50 litres of water or eaten 20kg of feed just before they came in, which means you get a great variation in weight at any one time."

Harry said the main reason he's

invested in this technology is to develop a system which not only accurately ranks animals for feed efficiency but also links to a global database, as the Canadian-developed program is used by research facilities.

"Most of the Angus sires which have feed efficiency data don't meet our other multi-trait criteria, such as calving ease, mature cow weight and carcass traits," he said.

The Lawsons have established their own bull testing and research and development centre to draw on GrowSafe's software and analytics, to feed information into genetics research as well as provide valuable management information.

Harry sees a place for this technology on-farm, with potential future use in conjunction with emerging technologies such as virtual fencing.

He's also interested in the practical applications of technologies which allow producers to manage large amounts of data.

For example, technology which collects real-time information about livestock can identify health issues.

"The system picks up bulls with reduced intake and/or lower average daily gain before clinical signs of ill-health appear, so that way you can treat animals before the issue.

"Last year, we had a bull which lost 2kg a day for more than a week – this

showed up in the data. When we looked at him, he had pink eye so we could treat it and get him back on track."

Wise investment

"Instead of just getting a weaning weight at the end of the year, with this system we'll be able to fine-tune management throughout the year.

"I want to know what the minimum amount of grain is to meet my targets. If mixed grain is \$450/tonne, then every kilogram variant is 45c/head/day, which is significant when feeding large numbers of cattle.

"I can vary my ration, feed more hay or silage, and I can find my answers accurately at least fortnightly." ■

LESSONS LEARNED

- > Look for options to incorporate technology into your business model, but don't just focus on the cost of it – consider the impact of technology on people and management.
- > Don't do things because you think they're sexy – incorporate technological solutions which work for your business and will provide information to help you make decisions.
- > Technology provides leverage to engage the next generation of producers.

✉ Harry Lawson
E: lawsons@lawsonsangus.com.au

Above: Lawson Angus bulls lining up at the feed bunkers.

Photo: Lawson Angus.

SNAPSHOT: Harry Lawson, Lawson Angus, Yea, Victoria



Area:
260ha at Yea, other properties and lease blocks and 'contract to operate' herds

Enterprise:
Cattle seedstock

Livestock:
2,000 registered Angus breeders

Pasture:
Ryegrass, clover

Soil:
Mudstone derivative

Rainfall:
650mm

Remote connection teaches digital lessons

In late 2018, *Feedback* reported on a first for the Australian livestock industry – a project developing a whole-farm digital connectivity solution for a remote pastoral station. Here's an update on how this 'digital station' is progressing and what other producers can learn from the project.



Remote technology at Murchison House Station's watering points has saved time and labour while providing peace of mind.

Belinda and Calum Carruth used to have virtually no internet connectivity and limited mobile coverage across their 140,000ha property, 'Murchison House Station', at Kalbarri, WA.

So, the Carruths teamed up with ag-tech provider Origo.farm and MLA (through matching Australian Government R&D funds via MLA Donor Company) to install infrastructure and digital tools to improve connectivity and support remote management.

Belinda and Calum faced the situation shared by many Australian producers as they tried to run a diversified farming business with only NBN Sky Muster internet, combined with the

challenges of operating a large property with increasing staff costs.

With this in mind, they set out to prioritise what their business needed:

1. High-speed internet access
2. Efficient, remotely controlled water management
3. Remote monitoring and control of water traps to increase mustering efficiency.

The project has enabled Murchison House Station and Origo.farm to develop and evolve an autonomous on-farm connectivity and IoT (Internet of Things) system which provides high-speed on-farm services.

Here's how Origo.farm's electronics and meshing

network technology, combined with off-the-shelf parts such as the valves, controls and sensors, is delivering results for management at Murchison House Station.



High-speed internet access

The availability of increased data with unlimited NBN from Kalbarri to Murchison House Station has changed how the Carruths use internet services for their business.

Calum and key staff members can now access the Origo.farm monitoring and control system from anywhere in the world via secure internet access.

"NBN has changed life on the station," Calum said.

"For example, if I'm in the shed talking to the mechanic about a problem with a piece of equipment, I can download an online manual on my phone and either send it to the printer at the homestead or find a part number right there and order it. It's fantastic."

Improved internet has also improved the social situation for family and staff as they can now access streaming services such as Netflix. However, it hasn't been without challenges.

The station initially chose one internet provider as its NBN service provider and achieved download speeds of 20 megabytes per second.

However, speeds began slowing due to over-subscription and eventually dropped to about 9mb/s, so in January 2020 the Carruths switched to another NBN provider.

Although the new NBN was installed in January there was no connectivity after the first week. The situation was not rectified until March.

As well as losing internet access on-farm, the Carruths could not use their remote monitoring and control system when off-farm.



Wireless digital mesh (digi-mesh) IoT network

The digi-mesh IoT network – which doesn't require internet access – is the first

of its kind in the Australian livestock industry to cover such diverse landscape and scale as at Murchison House Station. There, the network covers approximately 120,000ha and supports remote water management and trap-mustering systems and remote weather stations.

Origo.farm's Annie Brox said the project has highlighted the real-world challenges of applying technology to livestock enterprises.

"Murchison House Station is a challenging environment in terms of topography, distances, vegetation and interaction between animals and equipment," she said.

"It has taught us a lot about deploying large-scale digi-mesh networks and as a result, we can now offer a commercial whole-of-farm solution."

Calum said using the current digi-mesh system has allowed him to identify new opportunities, such as adjusting the camera system.

MLA provided funding for the initial system but additional changes are the responsibility of the Carruths and Origo.farm.



Remote water management

The remote water management system at Murchison House Station remotely controls pumps (diesel and electric) as well as valves.

It monitors water levels and flow rates and sends SMS alerts when needed.

Before the project, the average weekly 'mill run' was 1,050km in summer and 700km in winter, costing an average of \$77,000/year.

Installing the technology has reduced the average mill run to 350km/week in summer and 175km in winter, averaging \$25,000/year. In addition, the technology targets specific maintenance and preventative repairs before catastrophic events happen.

Taking into account capital investment (excluding research and development) of \$65,000, over five years this new tool will yield an annual efficiency saving in the order of \$39,000.

Calum said other benefits of remote water monitoring are harder to put a dollar figure on, but significant.

On several occasions, he has remotely checked his Origo.farm dashboard, identified spikes in outflow from water tanks and alerted staff who found leaks and repaired them – preventing stock held in yards from running out of water.

"It's avoided heat stress on yarded animals – I can't quantify the value, but heat stress definitely escalates losses and, as a stock owner, I know I experience extreme stress when I know my animals are suffering."

"We started off using cheap irrigation equipment for valve control, but we've learned it needs to be more industrial and robust," Annie said.

The initial remote water monitoring system relied on 50mm reticulated solenoid valves which, combined with a computerised switching system, cost around \$300.

These worked with constant pressure but aren't up to the task with kilometres of poly pipe which leak or form air locks.

"The cheapest option which can deal with our situation

is a motorised two-way valve which, together with the switching station, costs about \$1,300," Calum said.

While he isn't going to adopt the more expensive valves just yet, Calum said the significant savings he's already seeing through the water management mean they'll be worth it when he does allocate funds to further develop this infrastructure.



Remote-control mustering

Murchison House Station's mustering system includes remotely closing gates on water traps combined with time-lapse cameras which automatically transfer images every 10 minutes.

The Carruths planned to use this system for the first time in the 2019–20 summer muster, but the issues with NBN meant it wasn't possible.

"We weren't able to use the system this muster, but we've had a few goes at using the cameras on mustering areas to work out what time goats come in and out," Calum said.

"It works to a degree, but 10 minutes between photos is a bit slow for what we're trying to do.

"After talking with Annie, we're now planning to run Wi-Fi the length of the station which will allow us to change the camera technology.

"Current cost estimate for the Wi-Fi is \$12,000 and we'll have to wait for the drought to break to do it, but this will allow us to use off-the-shelf security cameras which can send real-time footage back to the homestead server whenever they're triggered by stock." ■

SNAPSHOT: Calum and Belinda Carruth, Murchison House Station, Kalbarri, WA



Area:
141,600ha

Enterprise:
Rangeland goats, beef cattle and tourism

Livestock:
120 Shorthorn-cross cattle, 4,000 rangeland goats

Pasture:
Varied, native and introduced grasses, mulga and wattle scrub

Soil:
Varied, red or black loam over limestone, sandy coastal heath

Rainfall:
375mm historical average (158mm in 2019)

✉ Annie Brox
E: abrox@8origo.com
Calum Carruth
E: murchisonhouse@hotmail.com

🖥️ murchisonhousestation.com.au

Technology turning point

The old adage 'necessity is the mother of invention' certainly rings true for SA beef and lamb producer Penny Schulz.

In her quest to find technical solutions to a lack of transparency between livestock agents and producers – as well as a fragmented livestock marketing system – Penny co-founded an ag-tech business with her friend, Jo Williams.

Penny and Jo were involved in the inaugural round of the MLA-supported Farmers2Founders program to develop producers' entrepreneurship and technology capabilities to solve industry challenges.

She said the concept of guiding producers to develop ideas to solve their own problems is the best way to overcome challenges.

"While producers are good business people, they're not always the best people to have start-up businesses, so the program goes through a structured process to set us up for success rather than failure."

Through the Farmers2Founders 'Ideas Program', Penny and Jo's idea evolved from their initial concept of a meta-search aggregator (an online retrieval tool which pulls together data from web search engines) to buy and sell livestock, into something quite different: a tool to help livestock agents.

However, Penny said throughout the evolution of their idea, the 'pain point' they'd identified – the perceived lack of



transparency in the livestock marketplace – didn't change.

To overcome this, Penny and Jo's FarmStocker app aims to help agents service their clients better through an improved understanding of clients' businesses.

In the future, there'll be additional tools to enhance the value proposition between the producer and their agent.

"Agents' businesses are based on relationships. When we interviewed them, agents told us they want the opportunity to provide more value for their clients.

"We're trying to build a tool that improves everybody's business model so we're all on the same page," Penny said.

FarmStocker will soon be ready for testing.

Alongside the app's development, Penny is completing a PhD through the University of New England, looking at the adoption of app technology by producers.

"There was all this information around about how to build apps for producers, but nothing on how well those apps were adopted," she said.

"No one was checking whether they were beneficial, or how many people downloaded and used them. I thought there's a big gap there.

"Producers, particularly livestock producers, get a bad rap for being poor adopters of digital technology, and that really grates on me.

"The producers I work with are very savvy people. Given a good value proposition, they'll take it up, change and adapt." ■

SNAPSHOT:
Penny and Jason Schulz, Jason's mother Joanne Schulz,
Field, SA



Area:
900ha plus 120ha leased

Enterprise:
Limousin and Lim-Flex stud, commercial cattle, commercial sheep


Livestock:
800–1,000 ewes producing first-cross Merino–Border Leicester lambs, 120 stud breeder cows and 100–150 commercial trade heifers

Pasture:
Dryland lucerne and veldt pastures

Soil:
Sand and sand over clay

Rainfall:
450mm

 Penny Schulz
E: penny@schulzlivestock.com.au

 Farmers2Founders program:
farmers2founders.com

10 tips to build an innovative agribusiness

An MLA-supported initiative, **Farmers2Founders**, is putting red meat producers at the cutting edge of innovation and entrepreneurship.

Former CEO of MLA Donor Company, Christine Pitt is co-founder and executive director of Farmers2Founders, which places producers at the centre of agrifood innovation so they can solve critical industry challenges.

“We launched Farmers2Founders because we believed there was a big need and a big opportunity to help farmers explore entrepreneurship and have the confidence to build ventures,” Christine said. ■

✉ Christine Pitt
E: cpitt@foodfutures.com.au

🗣 Farmers2Founders runs workshops, courses and mentoring programs to help producers work out if business ideas are worth pursuing, support them to grow, or to work with technology developers to gain early access to tech solutions.
farmers2founders.com

MLA Business EDGE is a workshop that brings groups of like-minded producers together to take a hard look at their businesses and take back control.
mla.com.au/edge

Here, Christine shares 10 tips on how producers can be on the front foot and take advantage of innovation opportunities:

1

Don't begin with writing a business plan. Begin with understanding the problem and the value proposition you're trying to solve for the consumer. Then, work out how you can do this quickly, cheaply and smartly.

2

Establish whether you are:

- growing your business by producing more product, or
- value adding to your existing product, or
- a combination of both.

3

Go and look in supermarkets and restaurants; follow trends. Be aware of what's happening in your industry.

4

Understand your consumers' needs and begin to get a sense of what you can do to meet their expectations.

5

Understand what consumers' problems are and how you can tap into that. For example, create more experiences for consumers, such as allowing them to track your product from farm to plate.

6

Design your business model in order to capture this created value.

7

Understand your value chain. How much of the value chain do you want to own and what parts do you want to outsource? Work out what it is you actually want to do – do you want to do it all?

8

Recognise that a solution to your own problems may have relevance to others as well.

9

Work out if you need partners and, if so, what sort of partnerships you need to develop your ideas. Do you want to bring on other co-founders, partners, subcontractors and employees?

10

Ask yourself where you really want to be in three years, and start taking steps in that direction.



Turn the page to meet Farmers2Founders participants Fiona and Bill Aveyard, who used the program to value-add their paddock-to-plate business, Outback Lamb.

A lamb brand on a roll

SNAPSHOT:
Fiona and Bill Aveyard,
Tullamore, NSW



Area:
2,800ha

Enterprise:
Cropping and sheep

Livestock:
1,000 Merino ewes and
1,000 crossbred ewes joined
to Poll Dorset rams. Aim to
increase crossbred flock to
2,000 after recent rain.

Pasture:
Improved pastures, mainly
lucerne, clovers, medics

Soil:
Chocolate loam

Rainfall:
Long-term average 500mm
(2019: 70mm)

Reinventing a business is a daunting task, but NSW sheep producers Fiona and Bill Aveyard took the challenge head-on for their family and their community.

Fiona and Bill both came from traditional mixed farming families and were running a traditional cropping/livestock enterprise at Tullamore until succession planning discussions inspired a shift in how they approached their business.

“Bill’s family had just gone through a successful generational shift in the farming business and, even though they’d done it well, I suddenly realised that with our four kids, we couldn’t just keep on doing things the old way,” Fiona said.

In the face of tight margins, their strategy to stay viable was to expand horizontally to increase productivity: more land, bigger machinery and more technology.

However, this wasn’t changing their margins and Fiona was conscious that bigger farms can lead to smaller communities.

Faced with these dilemmas, Fiona took a new approach and asked a new question: ‘What if we expanded vertically instead of horizontally?’

From this vision, Outback Lamb was born, creating a value-added pathway for their business which flows through their small community.

Starting a lamb brand was daunting, but Fiona set out with a clear list of what she wanted to do, as well as what she did not want to do.

“We wanted to provide opportunities for our kids so they could one day work in the business if they wanted to and at the same time provide business opportunities in the community.

“We didn’t want to do farmers’ markets because we’re pretty remote here and I didn’t want to create too many extra jobs for us to do.”

Business development

Outback Lamb kicked off in 2017, when Fiona approached some local butchers and a nearby micro-abattoir to process some lambs. She used social media and a simple website to sell boxed lamb directly to consumers.

As business grew, the Aveyards adjusted their supply chain and now work directly through butchers.

“A lot of butchers are keen to have a direct relationship with farmers, so we redirect any customers who come to us back to the butchers.”

The Aveyards have overcome the geographical barriers of their remote location by simple collaboration, teaming up with two other local producers – the Gourmet Goat Lady and Farmer Brown’s Pastured Eggs – to buy a refrigerated truck. They share the weekly 10-hour round trip to take their product to artisanal butchers in Sydney and Wollongong.

Outback Lamb also supplies Bourke St Butchers in Dubbo.



Value adding

Fiona, who was a 2019 Farmer of the Year finalist, is certainly not one to just sit back and enjoy the ride. Her quest for new ideas led to value-adding their product.

“We’re proudly local and we hang our shingle out there at community events whenever we can,” she said.

At one such community event, Beers to the Bush Festival in Dubbo, the Aveyards served up Outback Lamb sausage rolls.

As well as “going down a treat” with boutique beers, Fiona said it gave them the idea of doing more with their lamb than standard cuts.

She took the idea of a gourmet lamb sausage roll to Farmers2Founders, an ideas accelerator program supported by MLA (see story page 23).

She said the opportunity to meet other innovators through Farmers2Founders was an eye-opener.

“It was tough to look at our business with fresh eyes but we were able to really scrutinise where we were going.

“We talked to a lot of people in the food industry and looked at megatrends, which made me realise the preservative-free trend was a good fit for our artisanal range, so that’s what we’ve done with the sausage rolls.

“We also looked at compostable packaging and, as a direct result of the work we’ve done with Farmers2Founders, we’ve changed to using preservative-free and green packaging.”

The Aveyards have now finalised their sausage roll recipe, completed product development and testing, and are taking orders.

“We want to maximise the return on the animal and utilise all the animal, which is our ethos,” Fiona said.

“We also want to grow businesses and opportunities in the local communities, so we’re working with a baker in Condobolin to create the sausage rolls.” ■

Below: Bill and Fiona Aveyard with three of their children – Evie, Archie and Jim. Their daughter Lily was at boarding school.

Image: Georgie Newton Photography.



✉ Fiona Aveyard
E: fiona@outbacklamb.com.au

🖥 outbacklamb.com.au
Farmers 2 Founders
farmers2founders.com

LESSONS LEARNED

- Expanding vertically can open up new opportunities.
- Knowing what you don’t want to do can be as important as knowing what you do want to do.
- Making the most of opportunities leads to further opportunities.



Communication and collaboration key to marketing

Fourth-generation prime lamb producer John Gardner keeps his eye on the final link in the supply chain – consumers – to deliver the product they want.

Although John (pictured) uses different pathways to market, selling at least 95% of lambs produced at ‘South Mokanger’ to either restockers or JBS at trade weight, he said a common and essential factor is to maintain an in-depth understanding of consumers.

“Regardless of whether you’re selling direct or through saleyards, producing something with the end in mind is key,” John said.

“From there, you can factor in the landscape, climate, people and other elements to calculate what’s possible.”

Building supply chains

John has a background in construction management in Sydney and Adelaide, and sees synergies with this industry and red meat production.

“When you break farming down, it’s not dissimilar to what I was doing in construction management,” John said.

“It’s all about people, time and money, and managing the three to get the best possible outcome.

“Construction taught me to focus on data-driven outcomes and I apply this approach to farming.

“To me, the real difference with



agriculture lies in the open and collaborative attitude of people in the industry.”

One of the first things John did when he returned to the business was to follow lambs through to processing.

“After seeing how our lambs performed and understanding what end markets were available to us, we were able to work backwards with our genetics and environment to hit this target market,” John said.

Quality assurance is a part of the Gardners’ market risk mitigation, particularly when supply is tight.

They use records and data to understand and predict when their lambs are going to reach the desired weight, and then communicate openly with their processors to make sure the space will be there when they need it.

“This mitigates some risks associated with market fluctuations and lets our processors plan things at their end as well,” John said.

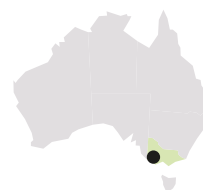
“It’s less about ‘us versus them’ in my mind. There are gains to be made from collaborating and aiding the whole supply chain where you can.

“This works both ways and we use platforms like Livestock Data Link to interpret processor feedback and address any issues on-farm to get better results.”

John is a 2020 Nuffield Scholarship recipient and will be undertaking global research to look at ways to future-proof red meat markets through a more in-depth understanding of consumer demands and environmental constraints on the industry. ■

SNAPSHOT:

John Gardner,
‘South Mokanger’,
between Cavendish
and Dunkeld, Victoria



Area:
1,720ha


Enterprise:
Prime lambs, wool, agri-tourism


Livestock:
11,500 Coopworth-composite ewes

Pasture:
Perennial base (phalaris, ryegrass and clover)

Soil:
Clay sand to clay loam

Rainfall:
620mm

 John Gardner
E: southmokanger@outlook.com

 Livestock Data Link:
mla.com.au/ldl

LESSONS LEARNED

- > Producers have unrivalled opportunities to collaborate and share knowledge.
- > It’s critical to understand consumers and produce red meat which meets their requirements.
- > Use tools like Livestock Data Link and collaborate with your supply chain to interpret feedback.

Benchmarking raises the bar

Managing a business which sprawls across nearly 500,000ha is a big job for 35-year-old John Frith.

Together with his parents Charlie and Liz, John and his wife Angela own Glen Arden Cattle Co, which includes properties at Roma and Morven in Queensland and between Tennant Creek and Alice Springs in the NT.

This diversified business includes breeding, backgrounding and lot feeding enterprises, as well as irrigated cropping.

The Friths became involved in an industry benchmarking program in 2014 and haven't looked back.

"The benchmarking process and way of thinking has given us a framework which lets us work on our business, instead of just in it."

The Friths originally ran their business as an integrated model, but since they started benchmarking they've changed to running individual 'profit centres' or enterprises.

"This lets us look at each enterprise individually to make sure they're profitable in their own right, as well as identifying where things might be underperforming," John said.

Set performance indicators

Through the benchmarking process, the Friths have established specific key performance indicators (KPIs) for each enterprise, which are routinely measured and reported against.

The main KPIs include earnings before interest/tax per adult equivalent,

kilograms of beef per adult equivalent, labour efficiency and cost of production.

Despite challenging seasonal conditions, benchmarking has enabled the Friths to achieve a steady increase in kilograms of beef produced per adult equivalent, as well as improve labour efficiency.

"With an increase in scale and improved technology like remote water monitoring across all properties and satellite pasture mapping, we can now run more cattle per team member."

Benchmarking has also provided the Friths with an in-depth understanding of each part of their business, and this awareness has ultimately led to growth.

"Once you intimately know what's going on and really understand the numbers in your business, then you can focus on the right things and naturally grow your earnings, regardless of external factors like markets and seasons," John said.

"For us, a focus on reducing expenses at overhead and individual-enterprise levels has allowed us to grow our earnings year by year."

Young Guns

John will share his benchmarking journey at the MLA-supported Business EDGE Young Guns workshop in Brisbane on 8–9 June.

His insights will include the importance of measurement, diligent record keeping and objective decision making.

"We record every cost, purchase, sale and animal movement and allocate it down to an enterprise level," John said.

"If you can measure it, you can manage it.

"It sounds labour intensive, but once the system is there it is quite simple and gives us the ability to pull out data for analysis and input it into the benchmarking templates.

"At the end of the day, you need to give the ship a rudder.

"Measuring and tracking KPIs lets you really learn about your business, which is what ultimately drives business strategy, improvement and growth."

John also sees collaboration with other top performers as a major benefit of the benchmarking process.

"With our benchmarking group we get to see the leaders of different fields and learn from them," John said. ■

LESSONS LEARNED

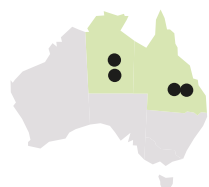
- > Benchmarking provides an in-depth understanding of other high-performing businesses.
- > Constant business analysis is key.
- > Put in place structures so you can work on your business, not just in it.

✉ John Frith
E: johnfrith.gacco@outlook.com

🖥️ MLA Business EDGE:
mla.com.au/edge
Register for the Business EDGE
Young Guns workshop in Brisbane
on 8–9 June:
bushagri.com.au/registration

Above: John and Angela Frith with their children Charlie, Harry and Nancy.

SNAPSHOT: Frith family, Roma/Morven, Queensland and Tennant Creek/Alice Springs, NT



Area:
500,000ha

Enterprise:
Backgrounding,
lot feeding,
breeding and
irrigated farming

Livestock:
5,500 trade
cattle, 8,000
Droughtmaster-
cross cattle

Pasture:
Buffel, Rhodes,
Premier digit,
panic

Soil:
Brigalow-
belah soils

Rainfall:
600mm



Over the fence

In this series, *Feedback* follows producers from across Australia as they manage their operations over the course of a year and respond to the challenges that arise in a modern grazing enterprise. This is the fourth instalment of the 2019–20 series.

SNAPSHOT:

Jane and Haydn Sale,
Kimberley, WA



Area:

Approximately 1,619,000ha across several stations and Indigenous sub-leases

Enterprise:

Breeding and backgrounding cattle

Livestock:

50,000 Brahman/
Droughtmaster

Pasture:

Spinifex and annual grasses, buffel and curly spinifex on river blocks, Mitchell, bundle bundle and blue grass

Soil:

Desert country is red sand over clay, and river country is clay loam and into white clay

Rainfall:

350mm–550mm
(ranges between properties)



Jane Sale



The Sales are desilting and cleaning old dams on the properties they manage.

SEASONAL CHALLENGES:

We had some good rains in January and February, and the catchment dams are full. The grazing country has recovered well with steady, regular rainfall – only a few isolated spots haven't received much rain. Our holding paddocks have been spelled and are green with good pasture cover.

The past year was particularly challenging, following two very dry wet seasons in 2017–2018 and 2018–2019. This made it necessary to start mustering very early in the season, at the start of March. With a late wet season, we were still moving cattle around and fencing off waters right up until the new year. This pushed our workforce very hard and drove us to do a bit more development than planned, so our budget was well over what was anticipated, and staff morale was also pushed to its limits. However, the crew rose to all challenges under

extreme heat and difficult circumstances.

WHAT'S ON MY PLATE:

We're currently completing budgets and negotiating sale contracts. We're also planning and ordering materials for development and mustering, as well as completing our induction preparation for the start of mustering.

We've taken special note of issues which arose with employees and staff living and working together, and have shaped a very specific and involved induction for our mustering season employees. This will address safety, as well as emotional and physical wellbeing. We'll be setting very clear and specific boundaries and expectations for these employees, and holding a two-day induction that will include first aid training, as well as working groups addressing wellbeing topics and physical 'how to' demonstrations.

The government's Fair Work website and the Rural, Regional and Remote Women's Network of WA have been great online resources for our induction program.


LOOKING AHEAD:

Silted-up old dams on properties which recently came under our management have proved to be a very big problem, with stock getting bogged as the dams dried up due to the late and particularly harsh season. In response, we've put into place a rotational cleaning (desilting) and enlarging program for these waters.

This coming year, we'll be moving to tanks, troughs and bore water where possible, to become less reliant on catchment water. ■

THREE ACTIVITIES OVER THE NEXT TWO MONTHS:

- > Seasonal staff arrival and induction program
- > Stockmanship and Best Practices Cattle Workshop for employees
- > AGMs and reporting on Indigenous sub-leases

 Jane Sale
E: jane.sale@bigpond.com

SNAPSHOT:
Andrew and Kimberley Mitchell, Mintaro, SA



Area:
3,300ha over several properties, plus 300ha leased

Enterprise:
Dual-purpose Merinos, cropping and wine grapes

Livestock:
6,000 sheep, including 3,200 Merino ewes

Pasture:
Native pastures, sown cereals, ryegrass and white clover

Soil:
Heavy red-brown clay, some chocolate brown earth

Rainfall:
600mm

Andrew Mitchell

SEASONAL CHALLENGES:

We cut lucerne for hay in October, grazed it and then locked it up in January. We were fortunate to receive 40–50mm of rain in early February and the lucerne responded well, so we cut it for hay in March, which is a first for us. We've only ever grazed it in early autumn – we've never cut it at this time of year. Coming into autumn, we had a good green pick but need more rain to keep it going. Everyone is feeling a bit more positive and we're looking forward to a reasonable autumn and winter.

WHAT'S ON MY PLATE:

Our rams went out in late February for early spring-drop lambs, and we put the wether lambs into feedlots. During April, we monitored ewes that are starting to lamb and provided supplementary feed. In May, we'll seed pastures and start our normal cropping program.

Our pasture species include clover, ryegrass and forage cereals (Moby barley and Outback oats). Hopefully we have enough paddock feed so we'll only have to hand-feed the ewes which lambed in April.

LOOKING AHEAD:

As far as our cropping program goes, we're taking a slightly different approach to last year. At the beginning of 2019, all the sheds were empty of hay from the previous year and conditions were dry. In response to this, we decided to put a lot of hay in and, in retrospect, that worked very well. I think we probably got the most out of last year that we could have. This year, with parts of Australia receiving good rain and the potential for more, I suspect the domestic hay market will come off a bit, so we're not going to put as much hay in. People will be rebuilding stocking levels as well.

Our ewes will be mated to Merinos. We're not going to put the Dorset rams out this year as we believe there'll be a requirement for Merino ewes for flock rebuilding.

On the family front, we're slowly working our way through our succession plan and continuing to set up two farm bases. ■

THREE ACTIVITIES OVER THE NEXT TWO MONTHS:

- > Feeding young stock in feedlots
- > Feeding lambing ewes
- > Seeding pastures before we start the main cropping program

✉ Andrew Mitchell
E: aandkmitchell@bigpond.com



Below: The Mitchells' flock moves through one of their vineyards.



Brassicas bridging the feed gap

Forage brassicas are being put through their paces in an MLA-supported project to help producers fill feed gaps.

In lower-rainfall and sub-tropical mixed farming regions, forage oats are often the fallback option for filling seasonal feed gaps. However, without robust crop rotation practices, this strategy can lead to longer-term weed and disease pressure.

The Livestock Productivity Partnership (LPP), of which MLA Donor Company (MDC) is a member, is funding a CSIRO-led project to investigate how forage brassicas could be used as a grazing alternative.

Project leader, CSIRO Principal Research Scientist Dr Lindsay Bell and his colleague Dr Lucy Watt are comparing the quality and quantity of forage produced by 10 forage brassica genotypes against a standard forage cereal control.

Dr Bell said the research aims to increase producer and advisor awareness of the value of forage brassicas in mixed farming systems across Australia.

Commercially available forage brassicas include forage rape, kale, leafy and bulb turnips, forage radish and raphanobrassica (a kale–radish hybrid).

“Forage rapes and raphanobrassica performed most consistently at our trials, which have been carried out in some really tough drought years,” he said.

“In several cases, they produced similar or greater biomass than forage oats and maintained quality for longer, making them a promising alternative.”

Agronomic considerations

Forage brassicas are suited to a range of soil types of varying fertility.

Leafy varieties have deep root systems which allow them to use subsoil moisture, although crop nutrition is also important.

Dr Watt recommends implementing similar agronomic management to grain or dual-purpose canola.

“Optimal sowing time for autumn grazing is during March and April, but this can be later if spring growth is required.”

Forage brassicas are susceptible to similar pests and diseases as canola. On-farm management, including seed treatment, spraying and trash removal, will help to mitigate risks.

Livestock health

Forage brassicas can fill feed gaps in autumn, winter and spring, and can maintain quality better than other options if allowed to accumulate biomass.

“A number of these species can be grazed multiple times and late into the season, which provides greater flexibility in the livestock enterprise,” Dr Bell said.

As with many monoculture forages, there are some animal health risks with grazing forage brassica crops. Animals should be introduced gradually and with a full stomach, and grazing should be avoided after recent nitrogen fertilisation to prevent nitrate poisoning.

“As with any change, it’s advisable to monitor animals regularly for any signs of ill-health,” Dr Watt said.

Economic benefits

Preliminary analysis has shown that by filling feed gaps at critical times of the year, forage brassicas can reduce supplementary feeding or the need for destocking during these periods. This can increase safe stocking rates by 20–40%, depending on the system and location.

“This aspect of our research project is still being investigated further using whole-farm system modelling approaches,” Dr Bell said.

“This will allow us to identify the benefits of forage brassicas in filling existing feed gaps within different regions and livestock production systems.

“Our research has shown forage brassicas can provide extensive grazing for livestock. For example, over a dry autumn, raphanobrassica provided more than 3,000 sheep grazing days compared to forage rape, which provided 1,200 sheep grazing days.”

Other considerations

Dr Watt said the project will help to identify optimal grazing windows based on biomass availability and forage quality.

For example, in New Zealand, traffic cones are currently provided with some forage brassicas (e.g. raphanobrassica) to guide producers to identify optimal plant heights so they know when to start and finish grazing.

“We’ll conduct on-farm demonstration sites this year, where we’ll grow forage brassicas and use these guidelines to test this under real farm conditions,” she said. ■

✉ Lindsay Bell
E: lindsay.bell@csiro.au

Lucy Watt
E: lucy.watt@csiro.au

🖨 Livestock Productivity Partnership:
mla.com.au/lpp

Below: Traffic cones being used to indicate optimal grazing height in a New Zealand trial of raphanobrassica. When the plant reaches the top of the cone, it’s ready to graze. A mark at the base of the cone indicates when grazing should end.



Foraging for feed options

Partnering for productivity

The Livestock Productivity Partnership (LPP) is a partnership between MLA Donor Company, NSW Department of Primary Industries, CSIRO, University of New England, University of Melbourne and Tasmanian Institute of Agriculture.

The goal is to develop regional and system-specific feedbase options, new animal phenotyping and farm management tools.

The partnership has a focus on eastern Australia, although some outputs will deliver benefits in other regions or nationally. Ultimately, the LPP aims to contribute to improving the national increase in productivity from 1% to 2.5%/year.

Are forage brassicas right for you?

Producers should consider forage brassicas when:

- there's a need to fill feed gaps at critical times of the year
- they require an alternative break crop with forage potential
- canola is considered unprofitable or risky
- multiple grazing or grazing late in the season is required, such as to finish late lambs.

NSW producer Aidan Rodstrom has ventured into forage brassicas in a bid to find a reliable solution for spring and autumn feed gaps for his trade steer enterprise.

He's trialled Winfred forage rape for the past two years and started out small, planting 12ha in the winter of 2018.

"There wasn't enough moisture for anything else," Aidan (pictured) said.

"We received around 35mm in March 2018 and the Winfred just drove its roots down and took off. I had 56 steers over three grazings that season, with a little bit of supplementary grain in the feeder."

Encouraged by these results, last year Aidan added another 12ha of Winfred and also included raphanobrassica, a kale-radish hybrid, in the mix.

His planting mix was:

- Paddock 1: 6ha Winfred forage rape and 6ha Moby barley
- Paddock 2: 6ha Moby barley, 3ha Winfred and 3ha raphanobrassica.

Aidan observed older, more 'educated' animals went straight to the brassicas, but young cattle took a little longer to acquire the taste.

Aidan has been very pleased with the steers' performance on his trial paddocks, particularly in a season as tough as 2019.

"We had 200kg steers on the brassicas and Moby barley and they put on an average of 1.6kg/day over 30 days – that's pretty handy, especially in a hard year."

This year, Aidan is part of a formal network of 14 on-farm demonstration sites as part of a Livestock Productivity Partnership project led by CSIRO (see story opposite).

Producers will sow forage brassicas in late July or early August and graze it off first at 15–20cm, with the aim of filling the late winter/early summer feed gap as well as the following autumn feed gap.

"This year we'll try to graze to a suitable height then lock it up over summer to keep the grass weeds out, so by March next year, there'll be feed when we sow oats.

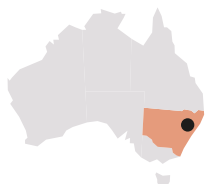
"Next year, we'll will start sowing more brassicas on bigger blocks. The cattle do really well off it." ■

✉ Aidan Rodstrom
E: aidanrodstrom@gmail.com

Aidan's tips for introducing forage brassicas

- Send animals in with a full stomach and leave a hay feeder in the paddock while they adjust.
- You can plant brassicas with oats and barley, but planting them as a monoculture gives you options for grass weed control.
- Rotate chemical groups and manage your herbicide resistance.
- Consider selective herbicides for broadleaf weeds in brassica crops. It's more expensive but worth it in the long term.

SNAPSHOT: Aidan and Sophie Rodstrom, Boggabri, NSW



Area:
160ha

Enterprise:
Trade steers

Livestock:
50–60 steers

Pasture:
Bambatsi, Premier digit and Consol lovegrass

Soil:
Grey clay through loams to hard red ridge soils

Rainfall:
600mm

Superfood for sheep

A recently released variety of old man saltbush has hit a sweet spot with producers and their sheep, paving the way for new research into getting more value out of forage shrubs.

Anameka™ saltbush was commercialised in 2015 and, according to project leader Dr Hayley Norman at CSIRO, the uptake is faster than anticipated, with one million stems expected to be sold this year.

“More than half the sales of Anameka so far have been repeat sales, which is exciting because it means people had success with it,” Dr Norman said.

The old man saltbush research began under the auspices of the Future Farm Industries Cooperative Research Centre (2007–2014) and continues with funding from MLA and Australian Wool Innovation (AWI).

Anameka saltbush was selected for its higher nutritive values and relative palatability. It’s a valuable addition to livestock enterprises, providing options for deferred grazing, filling the feed gap, and providing antioxidant vitamin and mineral supplements.

Anameka seedlings are grown from cuttings, which places limitations on production and makes seedlings more expensive than other saltbush shrubs grown from seed.

The next phase of research aims to tackle these challenges to provide more options for producers who want to include the forage in their seasonal grazing strategy.

“We’re working on new old man saltbush varieties which can be grown from seed and have comparable qualities to Anameka’s nutritive value, palatability and digestibility,” Dr Norman said.

The research team is working with producers across WA to collect productivity and economic data to demonstrate how sheep and cattle can utilise saltbush shrubs to improve weight gain when grazing adjacent crop stubbles.

The project will also investigate management strategies to improve saltbush growth and utilisation.

Super supplement

Dr Norman said drought-tolerant shrubs such as saltbush provide nutrients to complement other summer–autumn forage options, including pastures or crop stubbles.

Saltbush can lift farm profitability by:

- reducing supplementation requirements
- allowing deferred grazing of regenerating pastures
- buffering the impact of low forage supply in poor seasons
- providing antioxidant, protein, vitamin and mineral supplements.

In particular, saltbush is rich in vitamins E and A, zinc, copper, sulphur, manganese and selenium, which may contribute to pathways that reduce oxidative stress that can occur when it’s hot and dry and when animals are reproducing.

“In our dryland farming systems, these often happen during the same time, so saltbush – especially Anameka – is a superfood for sheep when green feed is scarce,” Dr Norman said. ■

Below: Anameka plants on a sand-over-gravel (non-saline) soil near Dongara, WA. These 10-month-old plants received 120mm of rain since they were planted.

Image: Craig Forsyth.

RESEARCH IN REVIEW

PROJECT NAME

No more gaps with superior shrub systems

RESEARCH ORGANISATIONS

CSIRO

FUNDING ORGANISATIONS

MLA and Australian Wool Innovation

GOAL

To find economical drought-tolerant shrub solutions to bridge seasonal nutritional gaps.

DURATION

31 March 2019 – 31 March 2022

KEY FINDINGS TO DATE

- Saltbush is not just for saline and arid areas; it performs well in other environments
- There is significant variability in feeding value between shrub varieties.

IMPORTANT NOTE:

As saltbush contains oxalates and is high in sulphur and salt, it shouldn’t be more than one-third of a sheep’s diet. It’s best to think of it as a protein, mineral and antioxidant supplement, not the entire diet.

✉ Dr Hayley Norman
E: Hayley.Norman@csiro.au



CSIRO researcher Dr Hayley Norman.
Image: CSIRO

Is saltbush right for you?

- Do you have country which is less productive and has a nutrient gap during summer and autumn?** Saltbush can lift productivity of poorer areas.
- Do you want to reduce reliance on supplementary grain?** Saltbush can provide nutrients to complement crop residue and help fill feed gaps.
- Do your stock have vitamin E deficiency?** Saltbush contains high levels of vitamin E and minerals associated with antioxidant pathways.
- Are you developing strategies to manage climate variability?** Saltbush has its highest relative value in a poor year, by reducing the need for supplementary feeding and providing areas to hold breeding stock.

Saltbush super powers



According to research by CSIRO, sheep grazing Anameka saltbush as well as cereal stubbles maintained weight and grew 20% more wool than sheep just grazing cereal residues.



Some producers have observed an increase in twin survival when ewes are lambed down in saltbush.



According to research by CSIRO, increasing the adoption of shrub systems will improve landscape health and reduce the impact of salinity.



This MLA/AWI project investigates the on-farm benefits of the next generation of shrubs (saltbush and rhagodia). For example, research using respiration chambers found including the native shrub 'mallee saltbush' (*Rhagodia preissii*) in a sheep's diet could reduce methane emissions by 26%.

Tips to fit saltbush into your system

Seedlings

Chatfield's Tree Nursery in WA is the commercialisation partner for Anameka saltbush. In response to producers' success with Anameka, Chatfield's has increased distribution capacity with an additional propagation nursery in WA and a new distributor in NSW to service growing demand in eastern states.

Site selection

Old man saltbush, including Anameka, is very tolerant to salinity but not to waterlogging.

"It appears to be going really well in sandy areas, particularly where there's some gravel underneath, and also in rocky country," Dr Norman said.

"Anameka will also happily grow in good country, but you need to look at why you are putting them in and make a decision based on your farming system and what works for you."

Establishment

Dr Norman said the general rule is to plant no more than 700 plants/ha. In higher rainfall areas or to manage a shallow water table, about 1,000 plants/ha is a good option.

"Consider putting in an understorey before the shrubs, choosing species which suit the country.

"If possible, get the shrubs into moist soil or plant before a rainfall event. Plant the seedlings deep so less than 4cm of the shoot is above the soil surface," she said.

"They may be drought-tolerant when they're established, but saltbush needs water while it's getting its roots down."

Grazing

When it comes to grazing, Dr Norman said to start with a light grazing in the first season – no more than a third of the leaves.

"After that, they're almost indestructible. Saltbush responds best to heavy short-term grazing. You can hammer them if you need to, but if you remove all of the leaves they will take longer to come back." ■

For more information:
chatfields.com.au

Other varieties of saltbush are available from many tree nurseries across Australia.

Just add saltbush

Saltbush has helped overturn the scourge of salinity for the Lehmann family, who use it to convert poor areas of their WA property into productive country.

"It's hard to put an actual dollar value on saltbush because it adds so much to the whole system," Sam Lehmann said.

Sam (pictured below) farms with his wife Lauren and parents Ian and Sandy at Cranbrook, near the Stirling Ranges. His father started planting saltbush more than 30 years ago to help deal with the rising saline water table.

"The saltbush stops the problem in its tracks," Sam said.

"All those plants are like millions of little solar water pumps pulling that water table down. You're using up the water, stopping the salt creep and improving the soil and then all of a sudden, you can get a better understorey in."

The Lehmanns have planted 150–200ha of saltbush across their farm, fenced off into 10 designated paddocks.

They graze it alongside pasture and stubble paddocks to give sheep a balanced diet.

All the Lehmanns' sheep graze on saltbush at some point throughout the year, so Sam doesn't need any other form of vitamin E supplementation. He's also confident the sulphur in saltbush contributes to the quality and quantity their wool cut.

Importantly, it helps bridge their feed gap, providing an important link in a mixed-farming system.

"At the break of season, we know we have the standing feed there. We can get all the sheep off the annual pasture and cropping areas while they get established.

"Then, through winter, we rotationally graze hoggets through the saltbush when we're lambing down and can't move ewes and lambs around much."

Site selection and preparation is key

Sam, who is chair of the Gillamii Centre, a producer group based in Cranbrook, said people often make the mistake of planting saltbush into the hardest, most waterlogged area they have.

"They think they have a failure and assume saltbush isn't for them, but it's just that they put it in the wrong place," Sam said.

He said most of their saltbush has been planted on saline, waterlogged areas, which necessitated the use of a moulder when planting, as saltbush doesn't like wet feet.

Most of the Lehmanns' saltbush has been direct-seeded, but they also have a trial of Anameka™ old man saltbush and CSIRO's new seed lines (see story page 32).

Sam said it is important to get a good knockdown of weeds before establishing saltbush.

"After the knockdown, we sow a perennial understorey, such as wheatgrass and Puccinellia," he said.

"Then we come back with a moulder and plant the saltbush seed onto the mounds, which is really important in waterlogged areas, otherwise it just won't grow."

He said, while the mounds do make it harder to drive across paddocks and can increase the risk of sheep casting, this is offset by the benefit of creating productivity where there was none originally.

Sam checks for cast sheep daily during lambing and has had minimal losses.

"As the plots get older, the mounds are less defined, so it becomes less of a problem over time."

Sam is working with the Gillamii Centre, producers and scientists to promote a saltland grazing system throughout the region.

"We're working on helping people to get it right – establishment, weed and insect control, the understorey, grazing management," Sam said.

"There's such a huge area of WA that's not getting fully utilised, probably because people aren't aware of what they can turn it into." ■

LESSONS LEARNED

- > Saltbush can make unproductive land productive.
- > Saltbush is best incorporated into an overall grazing system.
- > Direct seeding can be used with 'wild' old man saltbush, but Anameka needs to be planted as seedlings.

Above: All sheep on the Lehmann farm spend time grazing saltbush at some stage of the year.

Image: Dr Hayley Norman.

SNAPSHOT:

Sam Lehmann,
Cranbrook, WA



Area:
2,000ha plus 100ha leased

Enterprise:
Sheep and cropping

Livestock:
5,000 Merino ewes, about 20% joined to crossbred rams

Pasture:
Annual and perennial pastures, including ryecorn, saltbush, wheatgrass and Puccinellia

Soil:
Mixed, but mainly sandy loam

Rainfall:
450mm (240mm in 2019)

✉ Sam Lehmann
E: samueljohnlehmann@hotmail.com

🖥 Gillamii Centre
gillamii.org.au

Contact the Gillamii Centre on admin@gillamii.org.au for information about their upcoming saltland grazing workshops.



Steering a course for success

Lance and Janelle Burnham were keen to shift their family business up a gear by extending the same meticulous scrutiny they apply to their livestock to their entire operation.

The young couple seized the opportunity to enrol in an MLA-developed Business EDGE course delivered by Ian McLean of Bush AgriBusiness to improve their financial literacy and take a fresh look at their farm.

Looking at the business with fresh eyes

“We’re at a point where we need to focus on the small things to go the extra mile,” Janelle said.

For Lance, who grew up in the business, the course offered a fresh perspective.

“It’s given us the tools to separate emotion from business, to assess the commercial and stud enterprises objectively, and to make sure both are delivering financial benefits,” he said.

The Burnhams’ stud, Boogal Brahmans, has been registered for nearly 50 years, a milestone Lance and Janelle wanted to honour with a strong approach to business into the future.

They’re taking the hard work of Lance’s parents, Tex and Bronwyn, into the new era of genomic-enhanced genetic evaluations as they continue to produce moderate-cost, grassfed, performance-recorded and tested bulls with an emphasis on fertility and productivity traits.

However, their investment in DNA testing and commitment to delivering personalised service to clients comes at a cost, so Lance and Janelle wanted to ensure they were using all the tools available to prove the value of their approach.

“Estimated breeding values (EBVs) and DNA analysis are increasing the accuracy of our EBVS, but it all costs money and we wanted to make sure we were on the right track,” Janelle said.

“Doing the course has given us a confidence boost because we now have the tools and equations to break down the business into its two main enterprises – stud and commercial – and to work out what pays, what doesn’t and what elements align with our longer-term goals.”

Beyond the financial benefits

Business EDGE emphasises business literacy, but

Lance and Janelle felt it also boosted their sense of wellbeing.

“It makes you think about your work/life balance and encourages you to understand your worth. It’s very easy to take that for granted,” Lance said.

“You may not necessarily be paying yourself a wage; however it’s important to take the time to really appreciate what you give to the business.

“Your sense of self-worth affects the decisions you make such as: will I do this simple but time-consuming job or get a contractor and assign my time to jobs with higher value, which make the business more productive and profitable?”

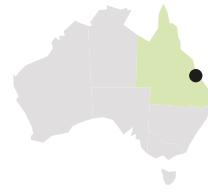
Janelle said Business EDGE also prompted participants to plan for the future, including investing off-farm and succession planning.

“It really showed us that, despite drought and other challenges, we’re in a good position and we have options,” she said.

“Learning new skills and tools has actually been pretty exciting and made us more hopeful and optimistic for the future.” ■

SNAPSHOT:

Lance and Janelle Burnham, Tex and Bronwyn Burnham, ‘Glenleigh’, Monto, Queensland



Area:

18,000ha

Enterprise:

Brahman stud and commercial beef production

Livestock:

800 Brahman breeders

Pasture:

Green panic, buffel, Rhodes grass, fine stem and Wynn cassia stylo, native blue grass and spear grass

Soil:

Granite, black, red and loam

Rainfall:

550–650mm



Lance and Janelle Burnham
E: lburnham83@activ8.net.au



MLA Business EDGE:
mla.com.au/edge
Bush AgriBusiness
bushagri.com.au



Lance and Janelle Burnham with their children Prue and Max.

Image: Bronwyn Burnham.

LESSONS LEARNED

- > Separate emotion from business.
- > Don’t take yourself for granted, assign a value to your role.
- > Financial literacy gives confidence to answer tough questions.

An eye to comply

S A lamb producer Josh Hancock went into a Profitable Grazing Systems (PGS) program expecting to pick up a ‘couple of extra things’ and came out the other side with tools to overcome stumbling blocks in his business.

Participating in the ‘Lamb Lean Meat Yield and Eating Quality – Realising the Potential’ pilot program cemented Josh’s existing understanding of supply chain compliance.

“Genetics was where I learned the most,” he said.

“Through the program, I worked out how to select the rams I purchased in 2019, based on balancing eating quality traits such as shear force and intramuscular fat with lean meat yield.

“You might not be rewarded on eating quality by the processors just yet, but it is literally around the corner and I want my animals to be genetically ready for when that happens.”

After talking with fellow producers in the program, Josh had the confidence to reduce ram joining rates from 2% to 1.5% (with plans to eventually transition to 1% plus one).

“I noticed at ram sales that producers who had more sheep than me were buying half the rams and, as a result, could afford to pay for better genetics,” Josh said.

“In 2019, I spent the same amount on ram purchases but ended up with fewer rams and the exact genetics I was after.”

Meeting demand

Josh has marketed lambs direct to JBS at Bordertown for the past four years. He supplies lambs to JBS’s Farm Assurance Scheme, targeting a 50kg live weight animal yielding a 23–24kg carcass.

He weans June and July-drop lambs on to pasture in October and sells them in November and December, while lighter lambs are retained and finished on irrigated lucerne and fodder crops and sold from February to April.

Participating in the Lamb Lean Meat



Josh and Madeline Hancock with Josh's father, Wayne, and Josh and Madeline's children Tait, 6, and Beau, 4.

Image: Elke Hocking.

Yield and Eating Quality pilot program, which involved workshops with JBS and following carcasses through processing, reinforced his production goals to produce a consistent carcass which is high yielding and with a low, even fat cover.

“Every lamb producer should see exactly what a processor, and ultimately a consumer, desires – and that’s a high yielding lamb with good eating meat and not a lot of fat.

“Why put energy, and good feed, into producing fat?”

“The future for Australian lamb looks extraordinary and if we ever return to high production, I want my animals to be the ones sought out by consumers and processors.”

Josh said participating in the PGS program, with its mix of group and individual learning, helped him fine-tune skills he’d developed over 10 years as he evolved his enterprise to be more focused on meat production.

“Producers need to join in these programs whenever they get the chance because you learn so much

from the other producers, who are happy to share their wins and their losses,” he said.

Josh is a big fan of practical learning sessions – out in the paddock, on the processing floor or in the yards.

“Producers learn best when they can see, feel, touch and smell something. They learn by doing, rather than listening all the time. That’s where PGS works really well,” he said.

“To farm in the modern world, you have to keep learning, adapting and growing.

“Your confidence grows as you make changes and if these changes are successful, they’re


the impetus for further change and growth.”

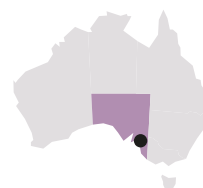
This year the Hancocks are focusing their attention on lifting their conception rates and lamb weaning percentage, as well as improving pastures and pasture management to provide a year-round, resilient feedbase.

Historically, the Hancocks achieved weaning rates of 96%, but, through improved management, they’re now seeing rates of 120%. Josh believes that, through targeted management of twin and single-bearing ewes, rates of 140% are achievable.

“We’ve started sowing early barley and annual ryegrass to get us through the winter feed gap, but we need to come up with some clever pasture mixes to match different soil types which are productive and persistent to help us with our goals,” Josh said. ■

SNAPSHOT:

Josh and Madeline Hancock and Wayne Hancock,
Reedy Creek, SA 



Area:
1,300ha


Enterprise:
Prime lamb production


Livestock:
2,800 ewes. Merinos are joined to Border Leicesters to produce self-replacing ewes, which are then joined to Poll Dorsets and White Suffolks.

Pasture:
Mixed with a sub-clover base and including new pasture mixes (chicory/lucerne/ cocksfoot/sub-clover) and annual forage crops such as early sown barley and annual ryegrass

Soil:
Sand, peat, alkaline grey clay over limestone and dark loams

Rainfall:
600mm

 Josh Hancock
E: josh_madhancock@hotmail.com
Elke Hocking
E: elkehocking@gmail.com

 [mла.com.au/pgs](http://mla.com.au/pgs)
Are you interested in being involved in a PGS program? Contact Angela Hammond for more information:
ahammond@mla.com.au



Making supply chain linkages

MLA’s Profitable Grazing Systems has developed a skills-based training package to help producers improve and better understand supply chain compliance.

Written by SA livestock consultant and producer Elke Hocking, ‘Lean Meat Yield and Eating Quality in Lambs – Realising the Potential’ has been delivered to producers in two pilot groups in SA and NSW.

The package involves group and one-on-one coaching of producers, and involves partnering with a local processor. JBS in SA and Gundagai Meat Processors in NSW participated in the pilot program.

The program is rolled out over 6–12 months,

enabling participants to learn the skills to:

- produce animals which meet customer specifications every time
- understand lean meat yield, eating quality and objective carcass measurement
- interpret and act on consumer requirements, processor grids and carcass feedback
- develop practical solutions to increase compliance through better management of genetics, nutrition and animal health.

The package will be available for wider delivery later in the year.

SUPPLY CHAIN

DELIVERING VALUE

INNOVATION 

TURNING WASTE INTO PROFIT



The Sustainability stand at Red Meat 2019 in Tamworth highlighted some of the products being produced through the Wastes to Profits project, such as fertiliser, biodiesel and animal feed materials.

Cost-effective biogas to power red meat processing plants and plastics made from bovine blood and stomach contents are some of the products being investigated in an MLA-managed project.

The four-year Wastes to Profits project aims to capture more than \$100 million/year in additional value for the livestock industry by turning wastes into bioenergy and high-value bioproducts.

The project's chief investigator, Professor Ian O'Hara from Queensland University of Technology, said Australia's meat processing industry is very effective at managing wastes; however, rising costs and pressure to demonstrate enhanced environmental sustainability across the livestock sector means new processes are needed.

"This project is about utilising technologies to reduce costs and create new revenue streams to improve the profitability of the red

meat industry, while enhancing its environmental credentials," Ian said.

"From a producer point of view, we anticipate the benefits of increased efficiency and profitability in processing will add value throughout the value chain.

"We're also working on new products which could add value on-farm, such as fertilisers, feed additives and bioplastics."

Diverse revenue streams

The project has four research areas:

1. Assessing waste streams, developing business models and pathways to adoption
2. Developing technologies to reduce the cost of managing wastes, including advanced anaerobic digestion and alternative renewable energy technologies

3. Developing technologies for the production of nutritionally advanced feeds
4. Developing technologies for production of fertilisers, chemicals, plastics and energy products.

“The big focus of area two is reducing the costs of wastewater treatment and energy for processors,” Ian said.

“We’re doing this by developing technologies which are able to produce either biogas, bio-oil or solid fuels from wastes. As an example, we’re investigating ways to increase the efficiency of anaerobic digestion – a well understood waste-treatment technology – to make it a cost-effective source of bioenergy for this industry.”

Ian said pilot-scale trials of advanced anaerobic digestion technology will be established at processing plants this year.

“We’ll have reactors operating on several of our partners’ sites, processing waste from their plant and producing biogas in real-world conditions.

“We’ll measure the gas produced and assess its suitability for commercial investment in electricity generation.”

Technologies in other areas of the project which have also been developed at laboratory scale over the past 12 months are moving rapidly to larger-scale pilot demonstrations and testing.

Waste not

Anaerobic digestion traditionally converts wastes into biogas and nutrient-rich fertiliser (digestate), however digestate handling can still incur substantial costs.

Ian said researchers were examining technologies to minimise the cost of digestate handling or produce higher-value components from the waste.

These components – including proteins and algal products – are the focus of researchers in the Wastes to Profits project, who are examining their potential to enhance the nutritional value of animal feeds.

“There are some great opportunities to develop high-value feeds from red meat industry wastes for the aquaculture and poultry industries,” Ian said.

“Given the progress to date, we expect to be undertaking animal feeding trials later this year.”

Researchers are also examining ways to incorporate waste components in a range of technologies, including using paunch (stomach contents) and waste protein to create bioplastics.

Ian said these bioplastics could be used for industrial applications, including portable fencing and other on-farm materials.

He said another focus was the development of organomineral fertilisers derived from the digestate left over from anaerobic digestion.

Glasshouse and field trials of the fertiliser products were undertaken in 2019 and will be repeated this year. ■

✉ Doug McNicholl
Project Steering Committee Chair
E: dmcnicholl@mla.com.au
Professor Ian O’Hara
Chief Investigator
E: i.ohara@qut.edu.au
Lisa van den Berg
Project Manager
E: lisa.vandenberg@qut.edu.au

🖨 Wastes to Profits:
research.qut.edu.au/biorefining/projects/wastes-to-profits

RESEARCH IN REVIEW

PROJECT NAME

Wastes to Profits

RESEARCH ORGANISATIONS

MLA, Dairy Australia, Australian Pork, AMPC, Queensland University of Technology, Murdoch University, University of Southern Queensland, University of Queensland, Australian Lamb Co, JBS, Harvey Beef, Teys Australia, Ridley, Urban Utilities and Barwon Water

FUNDING ORGANISATIONS

Australian Government Department of Agriculture, Water and the Environment Rural R&D for Profit program

GOAL

To develop technologies and business models for conversion of wastes from the red meat, dairy, pork and municipal waste industries into valuable products.

BUDGET

\$14 million

DURATION

2018–2022

KEY FINDINGS TO DATE

- A livestock sector waste characteristics database has been developed as an information source for technology and project evaluation.
- Larger-scale demonstration trials of waste-to-profit technologies are underway to provide information about the commercial viability of technologies being developed.

Below: Wastes to Profits researcher Dr Dio Antille, pictured with fertiliser field trials at the University of Southern Queensland, Toowoomba.



High-value opportunities

When WA meat processor V&V Walsh became the first foreign entity to be granted a licence to sell chilled lamb in China in 2015, it looked as though the hard work was done.

In reality, it was just beginning.

The company used market research co-funded by MLA Donor Company (MDC) to navigate their way to a sustainable export business model.

V&V Walsh chief financial officer Brent Dance said being the first entrant in the market presented a fresh set of challenges.

“The Chinese market had never dealt with a chilled sheepmeat product before, as their sheepmeat is either frozen or sold in wet markets,” Brent said.

“Chilled was a new concept, as was lamb, as they’re used to mutton. Chinese cuisine also demands different cuts.”

MDC Business Development Manager

Joshua Whelan said the market research project enabled V&V Walsh to identify three different market opportunities in China for chilled lamb, using transactional, integrated and niche models.

1. Transactional model

“The transactional model was based on the supply of chilled whole lamb carcasses,” Josh said.

“While this model is low margin, it’s helping V&V Walsh establish credibility in the market and develop a more competitive business and efficient value chain.”

2. Integrated model

V&V Walsh also tested more integrated options with high-end retail chains, combining e-commerce (online) and physical supermarkets with consumer data to drive innovation through the value chain.

“Integrated models were found to be very price sensitive and slow to acknowledge the value proposition for Australian chilled lamb,” Josh said.

“This contrasts with feedback from Chinese chefs who confirmed the excellent eating quality of Australian chilled lamb.”

3. Niche model

The third market opportunity tested during the project were niche models which use e-commerce platforms to supply directly to expat and high-net-worth Chinese consumers.

These created sustainable margins despite selling product at a lower price than other retail markets, presenting an opportunity for sustainable business if they were to be scaled up.

Market insights

The project included commercial testing and sales data, which highlighted the importance of developing and educating the Chinese market about chilled lamb compared to frozen product.

Brent said this helped V&V Walsh understand how to open up the market.

“We realised quickly we had to change our approach,” he said.

“We can’t force western cuts on the market. It forced us out of our comfort zone.”

Industry benefits

Josh said the additional demand for chilled lamb created by China is generating additional revenue for WA producers.

“It will also open the way for other processors to gain entry to the market as more chilled lamb export licences are issued,” he said.

He said MDC’s investment to understand supplier and buyer behaviour, identify alternate value chains and develop optimal value chain practices will contribute to increased revenue for the wider sheepmeat industry.

“Our next task is to apply the lessons we’ve learnt in this project to other supply development opportunities across the Australian red meat industry,” he said.

“Developing a sustainable export business to China requires innovation and capability development through the whole value chain.” ■



WA meat processor V&V Walsh was granted a licence to sell chilled lamb to China in December 2015, and since then has drawn on market insights to develop new integrated value chains.

Image: V&V Walsh.

Market security

RESEARCH IN REVIEW

PROJECT NAME

Building sustainable value chains that link producers to high-value chilled lamb export markets in China

RESEARCH ORGANISATIONS

V&V Walsh

FUNDING ORGANISATIONS

MLA Donor Company

GOAL

To demonstrate how new integrated value chains targeting high-value market opportunities should be designed and implemented, including the development of new product offerings to increase profitability and farm gate returns for the industry.

DURATION

2017–2019

KEY FINDINGS TO DATE

- The development of a sustainable export business to China requires innovation and capability development through the whole value chain.
- Underpinning a sustainable export strategy is the need to design and test multiple business models in different Chinese cities, markets and sales channels.
- Interconnection between the buy, make and sell functions of an export business is critical to international competitiveness.

READ THE FINAL REPORT

mla.com.au/value-chains-china

✉ Joshua Whelan, MLA
E: jwhelan@mla.com.au

A long-term supply chain is now more solid for WA sheep producers Hugh and Anna Roberts, with the creation of a new market into China.

They have supplied prime lambs from their Dandaragan farm to WA processors V&V Walsh for the past 24 years and are enthusiastic about the company's new path to supply chilled lamb (see story opposite).

They aim to produce around 6,000 prime lambs a year for direct sale to V&V Walsh, a relationship which has developed over the years.

On the back of V&V Walsh securing a licence to sell chilled lamb into China, Hugh is confident of a flow-on effect through the supply chain.

"I think China has provided a market for some of the lower-value cuts which aren't in demand here, and I'd like to think this process helps make us a few more dollars."

He said regardless of market, the message to producers remains the same: produce quality.

In their situation, it comes down to maintaining weights regardless of season.

"Seasonal conditions hit us hard last year and this always seems to be the hardest factor to deal with.

"We've been feeding heavily since last November because we want as many lamb numbers on the ground as we can." ■



WA sheep producer Hugh Roberts believes a focus on quality is crucial in prime lamb enterprises.

Image: Anna Roberts.

SNAPSHOT:

Hugh and Anna Roberts,
Dandaragan, WA



Area:

3,400ha arable land

Enterprise:

Sheep and cropping

Livestock:

Merino–Border Leicester self-replacing flock

Pasture:

Ryegrass and clover base, crop stubbles

Soil:

Gravelly to sandy loam

Rainfall:

550mm long-term average; more recently 480mm

✉ Hugh Roberts
E: yandan@westnet.com.au

LESSONS LEARNED

- > Quality prime lambs are readily marketable for domestic and international markets.
- > Seasonal conditions can present challenges to producing quality.
- > Supplementary feeding is critical to maintain condition when feed is scarce.

RED MEAT INDUSTRY TAPS INTO AGED CARE

Did you know the fastest-growing consumer segment is people aged over 60?

MLA research shows this demographic wants to maintain their physical, mental and social wellbeing – known as ‘active ageing’. These active agers require food that:

- helps prevent or manage conditions and diseases such as diabetes and high blood pressure
- helps retain their independence such as easy-to-open packaging
- meets nutritional requirements, in particular a higher need for protein
- is protein-rich but still easy to chew and digest.

MLA is keeping red meat on their plates by working with the aged care sector to develop recipes and new products which tick these boxes.

Aged care masterclasses

MLA has worked with aged care provider Estia Health since 2018 to grow red meat on their menus, contributing to 6% more beef and lamb served to 6,000 residents in 69 homes in NSW, Queensland, Victoria and SA.

MLA’s corporate chef Sam Burke delivers masterclasses to Estia Health culinary staff to develop economical and easy-to-replicate recipes which provide an enjoyable eating experience for aged residents.

“Recipes such as slow-cooked beef brisket or lamb shoulder offer many benefits for the aged care sector,” Sam said.

“As well as maximising yield and breaking down meat fibres so they’re easier to chew, these dishes can be prepared ahead of time and cooked during kitchen downtime to increase labour efficiency.”

It’s not all slow cooking – Sam also takes Estia Health staff through the steps to cook the perfect Meat Standards Australia (MSA) steak.

Estia Health Head of Hospitality and Lifestyle, Justin Wilshaw, said his goal is to give residents the same dining experience they enjoyed at home.

“We want to serve meals which they identify with the comforts of home, such as a family barbecue or a Sunday roast.”


He said strategies to create an enjoyable red meat eating experience include serving food immediately after cooking (instead of chilling and reheating, which can increase toughness); selecting the right cut for the cooking method; only using MSA-graded steaks for barbecuing; and serving steak at 63°C (medium) to avoid over-cooking.

As a result of the MLA masterclasses, Estia Health’s annual beef and lamb purchases have increased from 115 tonnes to 122 tonnes. Plans to add an additional red meat dish to the weekly menu this year will add another 34 tonnes/year to residents’ beef and lamb consumption.

Aged care round-table

Early this year, MLA hosted a round table run by the Hargraves Institute to overcome the challenges (such as staff education and budgets) of providing cost-effective, nutritious meals for aged care residents.

Sam demonstrated recipes such as slow-cooked lamb shoulder, which does not dry out in hot-boxes during service, and red meat snacks using secondary cuts, such as beef empanadas and corned beef fritters. ■

 Sam Burke
E: sburke@mla.com.au

Proof is in the premiums

A WA family-owned meat company is serving up to 5% premiums to its lamb producers thanks to a recipe of creativity, collaboration and customer loyalty.

Dardanup Butchering Company (DBC) credits MLA's CoMarketing and Meat Standards Australia (MSA) programs with helping to elevate its brands to an elite level.

For the past 26 years the company has worked on strategic branding under the direction of DBC board member Mark Lucas, who is also a creative director with a private advertising agency.

MSA takes brands all the way

Mark said the launch of MSA in 1998 was a major contributor to DBC's growth.

"We were the first WA processor to adopt MSA for beef and we now have four MSA brands: Tender Ridge Beef (launched 1998), Valley Spring Lamb (2004), Evertender Beef (2010) and Pitch Black Angus (2013).

"I would estimate our business turnover has grown four-fold since the MSA program began, and we're arguably marketing the highest-profile red meat brands in the state, with Valley Spring Lamb and Pitch Black Angus."

The benefits of producing a premium product such as Valley Spring Lamb flow back to DBC's suppliers.

"We only source from MSA-accredited producers and there's about a 3–5% value add for the lamb producer, compared to them selling a commodity product," Mark said.

CoMarketing support

DBC was also WA's first adopter of MLA's CoMarketing program when it launched in 2014–15.

"We've been involved with CoMarketing since day one," Mark said.

"It takes pressure off our budgets and

enables us to do quality, creative marketing campaigns."

DBC has carved out a reputation for cheeky, engaging marketing campaigns. Two stand-outs have been for Evertender Beef and Valley Spring Lamb.

"Our TV commercial 'Never touch another man's rump' was one of nine finalists from 3,600 entries at the Food and Beverage International Creative Excellence Awards in London, and our 'Boxing Day Test' campaign for Valley Spring Lamb ran on BestAdsOnTV.com," Mark said.

"CoMarketing funding was critical to both campaigns."

Mark said DBC's relationship with MLA and the CoMarketing program had been crucial.

"I meet with MLA a couple of times a year to discuss how best to utilise the funding," he said.

"It's a collaboration, not just a co-funding arrangement." ■

✉ Mark Lucas
E: lucas@lateralaspect.com.au
Majella Fernando
E: mfernando@mla.com.au

📺 MLA CoMarketing program
comarketing.mla.com.au
Dardanup Butchering Company
tastedardanup.com.au
Meat Standards Australia:
mla.com.au/msa



The 'Boxing Day Test' campaign for Valley Spring Lamb was featured on BestAdsOnTV.com



MLA's CoMarketing Program helps fund creative marketing campaigns for Dardanup's MSA-backed Valley Spring Lamb brand.

Five tips for developing a successful brand

Dardanup Butchering Company's Mark Lucas shares his quick guide to red meat brand development:

1. Strategy comes first. Determine:
 - What is your current situation?
 - What is your desired situation?
 - What is required to achieve your desired situation?
 - The big one: What is your budget?
2. Do everything well, within your branding budget. If you can't achieve your objectives in your first financial year, do it in the second. If you can't do it well, don't do it at all.
3. Be sure your product lives up to your brand.
4. Stick to your branding strategy for each 12-month period. If you chop and change direction, you can't measure success or failure.
5. Always know what your customers' customers want and align your brand to that.

G'day USA



The True Aussie Beef and Lamb Experience gave 175 US food influencers an immersive experience of the sights, sounds, smells and of course tastes of Australia.

Market response to COVID-19

As *Feedback* went to print, the global response to COVID-19 was impacting how consumers purchase red meat.

In the US, mandatory closures to eat-in service for restaurants and bars and consumer reluctance to visit retail outlets saw an increase in take-away, home delivery and 'click and collect' services.

In response, MLA is adjusting the way it markets True Aussie beef and lamb to remain relevant and helpful to consumers.

MLA's True Aussie campaigns continue to encourage consumers to make thoughtful protein choices and guide them towards Australian red meat, but there's a strong focus on health and nutrition, batch cooking and safe food storage via digital marketing initiatives.

While the immersion program is, for now, on hold, MLA is boosting its influencer program and developing initiatives such as virtual cooking classes to bring people together to cook in their own homes, led by chefs.

Move over Keith Urban: Americans have a new Aussie crush.

Australian red meat is taking over US menus, fuelled by local chefs' taste for simple, fresh fare and consumer demand for choices that tick the boxes for health and wellbeing, animal welfare and the environment.

Steady demand for Aussie product

MLA's Business Development Manager Catherine Golding has been based out of MLA's Washington DC office for five years. Through her work with US chef ambassadors and social influencers, she's helping to grow demand for Australian red meat.

"The US is a strong and steady market for Australian beef and lamb," Catherine said.

"Demand for Australian grassfed beef is stabilising but not slowing, and we're seeing real growth in lamb, with Australian suppliers outpacing US and NZ suppliers."

The US is Australia's third-largest export market for beef in volume and value and the second most valuable export customer for Australian lamb – with the market growing almost 60% in volume over the past decade.

Despite this strong base, US patriotism for local products means Australia

must work to be recognised for its high quality, sustainably raised grassfed beef and lamb.

"A new report, *The Power of Meat 2020*, showed US shoppers' preferences centre on the 'free-from' aspect of products – free from antibiotics, hormones and steroids," Catherine said.

"The message to Australian producers is that, with our strong quality assurance systems, we're uniquely well-positioned to meet US shoppers' quest for ethically raised meats, which they define as good for the animal and the environment.

"The red meat industry's carbon neutral by 2030 goal is also increasingly important as shoppers up the ante on their desire for sustainably raised products."

In response, MLA's most recent US activities have focused on healthier, more environmentally friendly options.

Although grassfed beef is most common in US fast-casual and fine dining restaurants, growth is solid across all foodservice segments and has tripled over the past decade.

Meet the meat-eaters

According to MLA's market insights, the main shoppers of Australian red meat in the US are:



Family-first food lovers: Grassfed beef is predominantly purchased by mothers aged 30–40. These shoppers are socially connected, care about their own and their family's health, and are tuned in to environmental and ethical issues.



Protein progressives: When it comes to lamb, it's a more varied group, largely made up of ethnically diverse millennials. They're the biggest market segment and their hunger for lamb is driven by a need for novelty and connection to their cultural traditions and heritage.

Raising the steaks

The iconic Gibsons Steakhouse is one US restaurant group which has sunk its teeth into Australian grassfed beef.

Based in Chicago, it was a traditional American steakhouse chain, complete with dark décor and its own US Department of Agriculture certification for corn-fed Angus.

However, when it opened its most recent restaurant in 2018, Gibson's switched things up and opted for lighter options, including Australian grassfed beef (clearly identified on their menu) and Wagyu.

"They wanted to appeal to a wider demographic, including younger diners and women who are looking for more choice and healthier options – and it worked," Catherine said.

"Australian grassfed steaks outsell Gibson's USDA steaks and are now offered in all of the group's 14 restaurants."

It's just one example of how US foodservice operators are tapping into all Australia has to offer.

"The US foodservice magazine *Flavor & The Menu* tipped 'Australian' to be one of the top 10 dining trends for 2020," Catherine said.

"Australian-based restaurants and cafes are popping up all over, driven by our café culture and fresh, healthy take on food, as well as our 'comfort foods' like meat pies."

Flying the Aussie flag

MLA's market insights show US consumers look to chefs and influencers for meal inspiration, so MLA is tapping into this foodie culture to promote informed and educated red meat choices to their diners and followers.

Last year, two chef ambassadors designed a dining experience inspired by their MLA-hosted trip to Australia.

Over three nights, 175 chefs, journalists and influencers sampled Australian beef and lamb, paired with visuals, a soundtrack and even smells such as burning pepperberry bush.

These diners represented 8,000 restaurants and 11 million monthly readers. Their social media posts from the dinners generated 750,000 likes, shares and comments.

Retail inroads

Australian red meat may be winning over diners, but US retail is a harder market to crack.

"The US grocery space is complex and crowded, with hundreds of options ranging from large warehouse-style retailers to specialty high-end stores to discount chains," Catherine said.

It's further complicated by the lack of legal requirement for retailers to identify country of origin on beef packaging (there is on lamb but it tends to be in very fine print) combined with shoppers' deep patriotism and belief that domestic is better.

"MLA's research found most meal purchasing decisions are made before consumers set foot in a store, but it's hard to capture shoppers' attention, as proteins don't really have a good online presence," Catherine said.

"It's hard to make raw meat look appealing in retail online catalogues, so we see the opportunity to improve red meat's digital connection with consumers."

MLA is working with suppliers and retailers to try innovative strategies such as 'shopbot' apps which provide tailored meal inspirations and guide consumers through their shopping decisions, to match their dinner plans to red meat cuts.

'Shoppable recipes' was another tactic trialled last year to influence consumers during their digital decision making.

When consumers searched recipe ideas for lamb or grassfed beef, a 'buy now' ad for True Aussie proteins appeared with a function to put Australian lamb or grassfed beef items into their online cart. This resulted in around 25,000 items being added to shopping carts. ■

✉ Catherine Golding
E: cgolding@mla.com.au

US



US population

2019: 366.4 million
2023 projection:
377.1 million

Australian beef exports to US (2018–19)

Volume: 259,149 tonnes shipped weight (swt)
Value: \$1.9 billion

Australian sheepmeat exports to US (2018–19)

Volume: 79,257t swt
Value: \$936.5 million

US consumption

26.4kg of beef consumed/capita/year

0.6kg of lamb consumed/capita/year

The US is one of the largest global consumers of animal protein.

Two-thirds of US shoppers are looking for healthier options and while conventional beef sales were relatively flat in 2018, retail grassfed beef saw the strongest sales growth of more than 12%.

Lamb remains a niche and unfamiliar protein to almost 40% of US consumers, driven by the lack of familiarity, taste concerns and limited knowledge on how to prepare it; however, consumers are becoming more willing to try lamb.

Trade agreements with Australia

Australia–United States Free Trade Agreement (AUSFTA)

Want to know more? Check out mla.com.au/market-snapshots for a more in-depth look at key markets.

Hats off to Erin



To celebrate International Women's Day 2020, MLA profiled women from across the Australian red meat supply chain to find out their greatest achievements, their best advice and why they love what they do. To read all their stories, visit mla.com.au/international-womens-day

Here, *Feedback* puts the spotlight on MLA Director Erin Gorter.

When it comes to hats, Erin certainly has a few.

She's a leading rural industry consultant, until recently was a sheep and grains producer in south-west WA, and runs her own business providing business and industry management advice and skills to rural areas.

On top of that, since 2015, Erin has been a Director of MLA, MLA Donor Company and Integrity Systems Company, as well as Chair of MLA's Remuneration Committee and a member of the Audit and Risk Committee.

She's also a director of agVivo and the WA Grower Group Alliance and the immediate former Director of Primary Industries Education Foundation Australia.

That's not all, as last year she began the Australian Rural Leadership Program and the Australian Institute of Company Directors (WA) Director Pipeline Program.

It's no surprise this industry multi-tasker was honoured as the WA Rural Industries Research and Development Corporation Rural Women's Award Runner Up in 2010. ■

Q:

How did you get to where you are today?

By saying yes to opportunities that come my way – specifically the ones which helped me to understand more about activities and opportunities which happen beyond the farm gate and benefit producers' businesses.

I also actively listen to all around me. Everyone has something valuable to give.

Q:

What has been your smartest decision?

Saying yes and giving it a try. Many years ago I was asked to be a producer representative on the WA committee of Sustainable Grazing Systems. I was invited to attend a meeting to see what I thought, as I was unsure of what I could possibly offer. What did I know which could add value to a research program? I said yes and I was hooked. The decision led to a deeper knowledge and understanding of our livestock systems than I could ever have imagined and connected me to a network of people around Australia who have become valued colleagues and friends. It was also a smart decision to trust other people's confidence and belief in me. I've not looked back since that day and now I try to be the person who helps give other people the sort of opportunities which started me on this ride.

Q:

What advice would you give your younger self?

Learn to have confidence in yourself (easy to say, but hard to do). If someone thinks you can do it, you probably can – so just say yes. Also, aspire to learn something new every day, even if it seems random or trivial.

Q:


Where can we find you when you're not at work?

Driving down a country road with the windows down, checking out who's growing what in their paddocks. Although, I'd likely still be thinking about and planning 'work' – as that's what I enjoy. When I really want to clear my head, there's nothing better than a ride in the paddocks on the motorbike.

Q:

What's something most people don't know about you?

I'm a qualified primary school teacher, although that seems like a lifetime ago.

 Erin Gorter
E: eringorter@agvivo.com.au

Cosy up to **this Italian**

As the days get shorter and cooler, warm up with an Italian favourite – osso buco. You can find more hearty beef meal ideas at australianbeef.com.au

Osso buco with basil pesto

Serves: 4 • Preparation: 10 minutes • Cooking: 100 minutes

4 pieces osso buco
1 tablespoon olive oil
500ml beef stock
1 onion, diced
2 carrots, diced
2 x 400g cans cannellini beans, drained and rinsed
1 bouquet garni (see tip)
1 cup chopped green beans

Basil pesto
2 cups basil leaves
¼ cup pine nuts
1 clove garlic, chopped
¼ cup olive oil
40g parmesan, finely grated
Lemon wedges, to serve, optional

1. Preheat oven to 180°C.
2. Pat osso buco dry with paper towel, brush with oil and sprinkle with salt and pepper. Heat a large cast iron pan with a lid over high heat and brown osso buco on both sides.
3. Add stock, onion, carrot, beans and bouquet garni. Bring to the boil, cover meat with a piece of baking paper and then the lid and place in oven for 1.5 hours or until beef is very tender.
4. Add the green beans for the last 10 minutes of cooking.
5. To make the pesto, place basil, pine nuts and garlic in a small food processor and process until finely chopped. Add olive oil and process until smooth. Stir through parmesan and season with pepper and salt if needed. Add lemon juice if desired.
6. Divide vegetables and sauce between four bowls and top each with a piece of osso buco and a dollop of pesto.

TIPS

- Bouquet garni is a small parcel of herbs, usually bay leaf, lemon peel, thyme and rosemary, but you can use whatever you have on hand.
- If you're short on time, substitute basil pesto with a store-bought jar version.





Extra, extra read all about it

You don't have to wait for the next edition of *Feedback* magazine to get all your red meat industry news.

MLA has a range of free e-newsletters which deliver updates, resources and market information direct to your inbox.

To sign up go to mla.com.au/enews and select the e-newsletters of interest to you.

Here's what's on offer:

FRIDAY FEEDBACK:

News, views and advice from MLA delivered straight to your inbox every Friday. It covers relevant and seasonal topics, industry news, producer case studies and on farm tools.

PRICES & MARKETS:

The latest news, analysis and trends for domestic and export markets each week, including information on buyer and competitor activity and trends.

R&D ROUND-UP:

A short and sharp look at the latest research published by MLA, summarising projects in an informative and easy-to-read format.

GLOBAL MARKETS UPDATE:

Distributed monthly, it offers the latest international marketing news and insights from Australia's key red meat and livestock export markets.

GOATS ON THE MOVE:

The latest developments in MLA's goat program and the goatmeat industry delivered on a quarterly basis.

THE QUARTERLY FEED:

MLA's specialist e-newsletter for lot feeders with news and insights from MLA's feedlot research, development and adoption program.