FEEDBACK

MLA – FOSTERING PROSPERITY

MARCH/APRIL 2020

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MEAT & LIVESTOCK AUSTRALIA

FEEDBACK

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

Cover (page 6): *Queensland beef producers Ray and Leah Vella, pictured with their children Kayla, Beau and Kurt, are among the MLA advocates telling their story, in their words, to consumers.* Image: Jessica Howard.

Have your say!

We'd love to hear from you

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A NOTE FROM THE MD...

Welcome to the March/April edition of *Feedback* magazine.

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

Have a question for me?
Jason Strong
MLA Managing Director
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Resilience in the face of natural disasters

Bushfires raging at the start of 2020 meant the incredibly challenging conditions for Australian producers continued. On the back of the severe drought conditions, it was easy to wonder when it was ever going to end. Then, seemingly without any great warning, we have had the most widespread rain event we have seen in Australia for a number of years. It's not yet drought breaking and not everyone has had significant falls, but it's one of the clearest demonstrations we have of the massive extremes we can experience in Australian agriculture. Developing our resilience and better tools to predict, respond to and manage the changing conditions has to continue to be a key part of our investment on behalf of the industry.

What I've been working on

2020 got underway with a flurry of activity around setting up a dedicated response team to support producers impacted by the bushfires.

We are also in the thick of our planning cycle which includes the next *Annual Investment Plan*, the next MLA *Strategic Plan*, the connection to the *Red Meat 2030* plan and our support and contribution to the industry efforts reviewing the Red Meat Memorandum of Understanding.

My priorities over the next few months

The next few months are a critical time of year. In addition to the planning activities for next year, we have to ensure our programs of work are on track for delivery by June. We also have to continue the consultation process for our planning activities that will be instructive for how we focus our programs of work next year.

Singapore

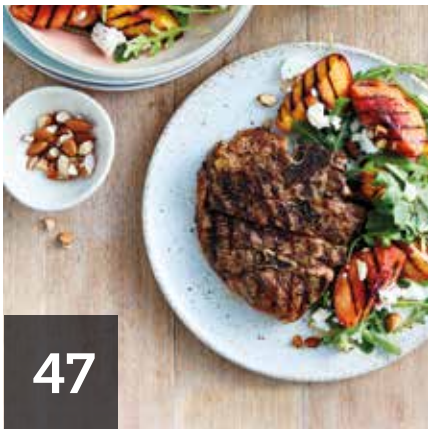
Where I've been

- MLA office in Singapore in January for a Regional Managers meeting, planning the international activities with Andrew Cox, the new GM for International Markets.
- Presenting to the Climate Change Authority Board. The industry approach and progress with Carbon Neutral 2030 (CN30) was very well received.
- Canberra for Red Meat 2030 implementation planning and Senate Estimates.

Where I'm going

- Central Queensland to get a firsthand understanding of pasture dieback's impact – early March
- Northern Territory Cattlemen's Association's annual conference in Alice Springs – 27 March
- Global Food Forum in Melbourne – 25 March

CONTENTS



Lamb inspiring Aussies to put down the phone

MLA's annual summer campaign for Australian lamb urged Aussies to look up from their screens and share the lamb.

The campaign set out to remind a tech-obsessed nation – distracted by their phones, screens and social media – to seek out real-life connection and unite over delicious Aussie lamb.

As well as a TV ad, the campaign included digital, social media and radio content, in-store point-of-sale material and outdoor advertising.

Recipe website Taste.com.au is also encouraging Aussies to get together and cook some tasty lamb – see page 47 for one of the summer lamb recipes. ■

Check out the summer lamb ad at:
australianlamb.com.au
facebook.com/australianlamb
youtube.com/australianlamb

The latest R&D direct to your inbox

Are you missing out on the latest research and development (R&D)? MLA is making project results more accessible with a new monthly e-newsletter, *R&D Round-Up*. This e-newsletter provides a short and sharp look at the latest research published by MLA, summarising projects in an informative and easy-to-read format. ■

To subscribe to *R&D Round-Up* and other updates, visit:
mla.com.au/enews

Containment considerations

With many producers impacted by bushfires and drought looking for options to manage livestock, on-farm containment feeding is proving to be extremely valuable to reduce stress on animals and people. MLA asked Livestock Systems Scientist and University of Western Australia Adjunct Professor, Dr David Masters, to share his top tips for setting up a containment feeding system, including economics, infrastructure and stocking density and nutrition. ■

Read them at:
mla.com.au/containment-feeding-tips

Lock in LambEx

Registrations are now open for the biennial lamb industry event, LambEx, supported by MLA. This year, LambEx will be in Melbourne from 1–3 July.

The event celebrates all that is great about Australia's sheep and lamb industries. It features a program of outstanding speakers and provides the opportunity to network with all sectors of the lamb value chain.

Don't miss the LambEx preview in the next edition of *Feedback*. ■

Visit **lambex.com.au** for more information and to register.

LambEx 2020

Making progress on sustainability

The Australian red meat industry is making great progress on sustainability. Here are some of our achievements so far:

Greenhouse gas emissions from the Australian red meat industry have **FALLEN 57.6%** since 2005[1].

The Australian red meat industry's contribution to national emissions has **MORE THAN HALVED** from 21.4% in 2005 to 10.4% in 2016[2].

Red meat + Manufacturing **THE ONLY MAJOR SECTORS** in the Australian economy to **REDUCE EMISSIONS** since 1990, with red meat making by far the greatest reduction[3].

65% LESS WATER used to produce a kilo of beef in Australia since 1981. The latest research indicates it takes **515 LITRES** of water to produce a kilo of beef[4].

Red meat producers manage **HALF OF AUSTRALIA'S LAND MASS**. Most of this land isn't suitable for crop production – in fact, < 8% of Australia's land mass is suitable for cropping[5].

More information: goodmeat.com.au

Sources: [1,2,3] MLA *2019 State of the Industry Report*
[4] goodmeat.com.au/environmental-sustainability/faqs/how-much-water-does-it-take-to-produce-1kg-of-beef/
[5] agriculture.gov.au/abares/aclump/land-use

Fire recovery help on hand

Two new initiatives have been announced to assist producers with their recovery and rebuild after recent bushfires.

Bushfire Recovery Sponsorship Program:

This provides financial and in-kind support of up to $2,500 per event for industry events (held before 30 June 2020) which increase awareness and adoption of information and resources to support producers recovering from bushfires.

For more information and to apply for **MLA's Bushfire Recovery Sponsorship Program**, visit **mla.com.au/bushfire-sponsorship**

Back to Business:

This initiative allows producers in fire-affected regions to access up to three free one-on-one sessions with a local farm business consultant to help put their business back on track.

During the sessions, producers will be given tailored support to assess their current situation, work through the key issues and opportunities, and prioritise what actions to take.

For more information on **MLA's Back to Business** program, email: backtobusiness@mla.com.au

Red meat holds firm in trade negotiations

The Australian red meat industry is continuing to work towards liberalisation of restrictive market access in the European Union and the United Kingdom.

Under the leadership of the EU/UK Red Meat Market Access Taskforce, the current Australia-EU Free Trade Agreement (A-EU FTA) negotiations and talks regarding an Australia-UK Free Trade Agreement (A-UK FTA) are providing opportunities for trade reform.

EU negotiations underway

Australia has a long history of trading with Europe, with the Australian red meat industry even developing dedicated supply chains to meet the EU's market-specific requirements.

Despite this focus, Australian red meat exports are constrained by the EU via disproportionately low-volume import quotas and high above-quota tariffs.

Australian exporters only have country-specific access to a 7,150 tonne high quality beef quota (with a 20% in-quota tariff) and a 19,186 tonne combined sheepmeat/goatmeat quota (with zero in-quota tariff).

Taskforce Chair Andrew McDonald said ongoing A-EU FTA negotiations are an opportunity to modernise these access conditions and address the uneven playing field Australia faces compared to other global red meat exporters.

UK trade talks

The red meat industry remains equally optimistic about future trade agreements with the UK.

With the UK officially leaving the EU on 31 January 2020, it's now able to commence trade discussions with other parties, including Australia.

Transition arrangements will apply for the remainder of 2020, with Australia's current beef and sheepmeat access to the EU (incorporating the UK) remaining unchanged. During this period, the UK can commence (but not implement) other trade agreements.

The industry Taskforce will ramp up its advocacy, in partnership with the Australian Government, to pursue a trade-enhancing agreement with the UK.

Looking ahead

The separate but parallel A-EU FTA and A-UK FTA negotiations have the potential to provide additional export opportunities for the Australian red meat industry, with large numbers of consumers demanding high quality imported beef and sheepmeat.

To keep up to date with the latest market access news, subscribe to MLA's free *Global Markets Update* e-newsletter: **mla.com.au/enews**

Turn to page 46 to meet MLA's new Market Access Manager for Europe, Mary Johnson

Producers go back to school

In a small room at MLA's head office in Sydney, Greg Newell is fielding questions from a group of enthusiastic primary school children.

It's a far cry from the NSW beef producer's day job, but one he sees as critical to build and maintain community trust in Australia's red meat industry.

Greg is one of a growing number of MLA advocates who's telling his own authentic story to bridge the divide between producers and consumers.

MLA's Communications Manager for Community Programs, Fiona Thompson, who works with these advocates to develop their skills, said producers play an important role in connecting to the community.

"People really want to hear what producers do and what they have to say," she said.

Over the past three years, the way MLA engages the community with agriculture has evolved in response to a demand for 'real people and real stories'.

"We need to give people the information they want to hear, rather than just what we wanted them to know," Fiona said.

"We need to tell stories that make them feel great, not just about the product, but about the people and how they produce it."

This is where the advocates come in. MLA provides personal and professional development, such as social media training, so they can tell their stories and connect with their communities.

Virtual classroom

One of the programs which has transformed under MLA's new approach to community engagement is the virtual classroom.

Students from all around Australia have the unique opportunity to interact directly with producer advocates via live video stream while taking part in educational activities, quizzes and even interacting with other schools. Each curriculum-linked lesson is tailored to the guest producer advocate, including photos, videos and props from their farm.

"This really brings the virtual classroom to life as the kids love being able to ask questions," Fiona said.

The program started in two schools in 2015 and by 2019 had grown to reach 241 schools and 9,438 students from Kindergarten to Year 6.

Students receive information before the lesson and activities to complete afterwards.

Fiona said the overarching goal is to give children an appreciation of where their food comes from in a fun and interactive way. ■

Fiona Thompson
E: fthompson@mla.com.au

goodmeat.com.au
MLA virtual classroom booking site:
mlavirtualexcursions.com

Meet the a

MLA producer advocate Greg Newell during a virtual classroom presentation.

Greg and Lauren Newell

MLA advocate Greg Newell and his wife Lauren have been sharing their story as paddock-to-plate producers for a decade.

"Two of my passions are to encourage the next generation to take on farming and to promote our industry," Greg said.

The Newells produce grassfed beef at their property 'Linga Longa', near Wingham, NSW, and sell directly to consumers online and through farmers' markets in Sydney.

Greg was invited to become an MLA advocate because of his on-farm practices (such as regenerative farming), his industry involvement and his strong social media following, as well as his presence in key Sydney markets.

Greg and Lauren share what they do on-farm through social media, Taste of Sydney events, consumer interactions and, most recently, MLA's virtual classrooms.

Through these online classrooms, students not only learn how producers such as Greg care for their animals and use technology, but they can also ask them about what it's really like to live on a farm.

dvocates

"Our presentation can be anything from showing drone footage of our farm to discussing animal welfare, to explaining how much a cow drinks or how many hours a day they eat," Greg said.

"To be able to visualise these things is very important for children."

Greg would like to see other producers out there engaging with their community.

"The advocacy role can be daunting but because we know our facts, it's not so bad. Having confidence and belief in our product makes the job much less scary."

He believes the best approach is to be truthful, ethical and positive about the product.

"Advocacy is really reverse activism as you get to tell the truth about what really happens on your farm. The best voice from our industry is your own voice."

Greg Newell
E: info@buymeat.com.au

The Vella family

Ray and Leah Vella see their MLA advocacy as an opportunity to tell the story of how beef is produced on their property 'Bald Hills' at Marlborough, Queensland.

Ray, a former Nuffield Scholar, became an MLA advocate in 2012 after he was asked to speak at Beef Australia.

More opportunities to speak followed, and he always puts his hand up.

"There's no one else out there telling my story. If I want someone to do it, why not me?" Ray said.

Although he's happy to answer any question, most people he speaks to usually want to know about product quality, animal welfare and traceability.

"There are no subjects that are too tough.

"People don't know what goes on, so if you can show them and tell them, they are genuinely interested. We're telling our own story in our own words.

"We keep it professional and hopefully we gain some respect out of it.

"Quality and traceability always matters to consumers; they want to know we maintain a high level of quality at a domestic and export level.

"The more we put ourselves out on social media, the more traceability will come into play."

Ray and Leah both use Instagram (@rvella79 and @leahvella) to provide followers with a close-up, unfiltered view of their day-to-day life at Bald Hills. ■

Vella family
rlvella@bigpond.com

Ray and Leah Vella with their children Kayla, Beau and Kurt.
Image: Jessica Howard

Mental health support

Fierce bushfires, floods and ongoing dry conditions mean 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, check out the resources below or head to: **mla.com.au/mental-health**

Talk to someone

Lifeline:

Lifeline provides suicide prevention and personal crisis support via a 24-hour hotline, text service and online chat function.

Call: 13 11 14
Text: 0477 131 114
lifeline.org.au

Virtual Psychologist:

Do you find it too hard to talk face-to-face or over-the-phone about your mental health? Virtual Psychologist offers a free text/online service so you can get help wherever, whenever.

Text: 0488 807 266
virtualpsychologist.com.au

Beyond Blue:

Beyond Blue offers phone, live chat, email and online forum services for anyone who just wants to talk – no problem is too big or small.

Call: 1300 224 636
beyondblue.org.au

How to support others

Is someone you know struggling with their mental health, or have you noticed they're not acting like themselves? Check out the resources below for help with supporting someone who's doing it tough.

Recognising the signs:

Before you attempt to have a conversation with someone about their mental health, it helps to know the symptoms. Find out more at: **beyondblue.org.au/the-facts**

How to ask 'R U OK?'

R U OK has compiled a quick, simple guide on how to have the conversation with a friend, family member or colleague who you suspect might be struggling: **ruok.org.au/how-to-ask**

Supporting someone with a mental health condition:

Do you know of someone with a diagnosed mental health condition or have you recognised something isn't quite right? A comprehensive guide to help you support them can be found at **beyondblue.org.au** (search 'supporting someone with depression or anxiety').

Self-help

If you'd prefer to access support online, there's a whole range of resources and tools out there to help you get back into a positive mindset.

Black Dog Institute:

The Black Dog Institute's online clinic provides a free mental health assessment tool. After the assessment, you'll receive a personalised report with suggested support services and resources. For your free online mental health assessment, head to: **onlineclinic.blackdoginstitute.org.au**

You Got This Mate:

You Got This Mate is a website which provides action-focused tips and information to help rural men reach their best possible mental health. For the full list of practical resources, visit: **yougotthismate.com.au/resources**

Beyond Now:

Beyond Blue's 'Beyond Now' is a suicide safety planning app to keep you safe through tough times. Create your personal plan by downloading **Beyond Now** from your phone's app store.

Coping with fire, drought and flood

Drought, fires and floods have plagued Australian farm businesses for hundreds of years – but that's not to say they don't have a significant impact on our mental health. Here are some tips and tools to help you cope with the stress of these natural disasters.

Fire:

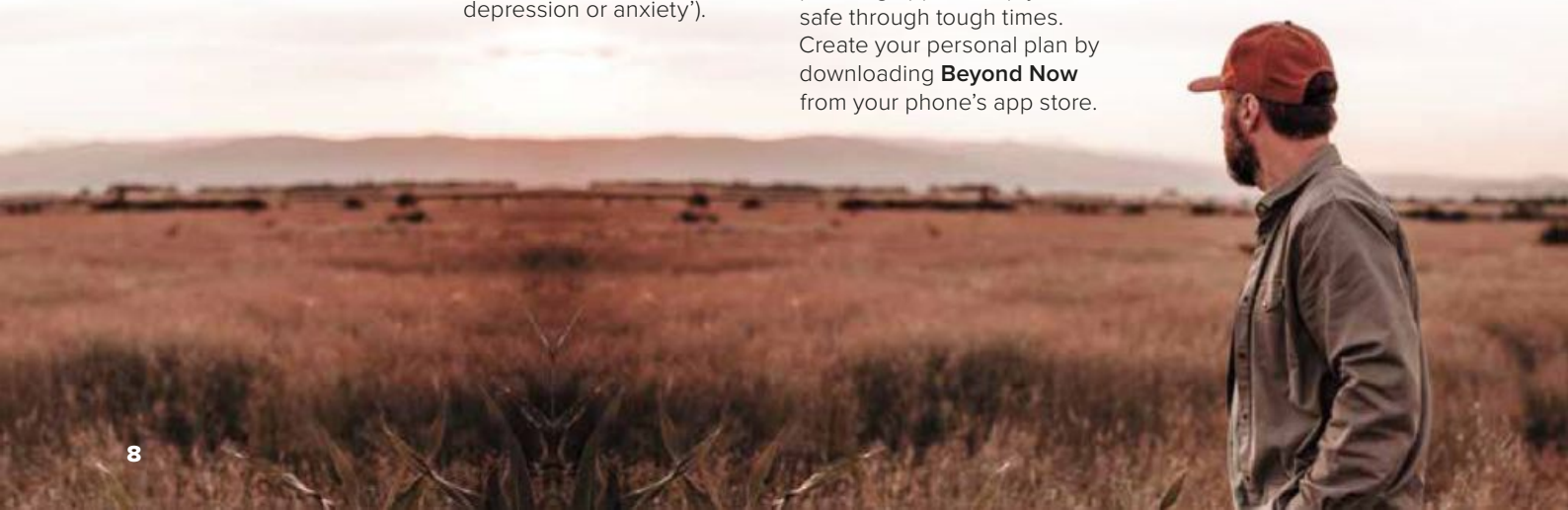
It's important to distinguish between common reactions to bushfires and signs you need additional support. To find out more, visit **beyondblue.org.au** and search 'bushfires'.

Drought:

Hear from other producers and advisors about how you can focus on your mental health when there's no rain on the horizon: **yougotthismate.com.au/resources/podcasts/coping-with-drought/**

Flood:

Lifeline has compiled a toolkit to help you manage the stress of floods and other extreme climate events. Visit **lifeline.org.au** and search 'recovering after a natural disaster'. Click on the first toolkit listed. ■



ON FARM

RESEARCH IN ACTION

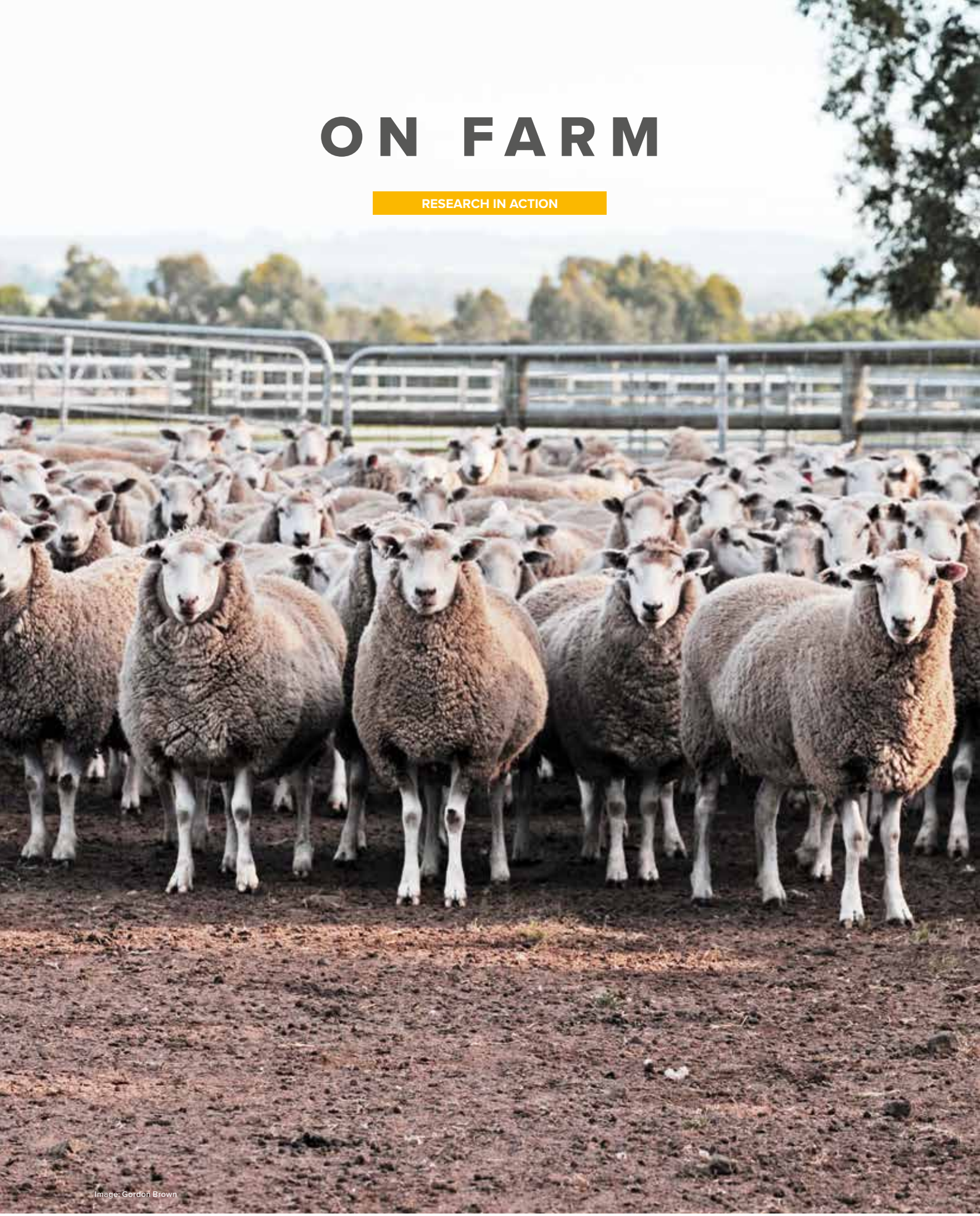


Image: Gordon Brown

Fire recovery action plan: four priorities to tick off your list

The 2019–20 bushfire season was early, far-reaching and it hit hard.

It came especially early for New England beef producer Stuart Austin, who manages Wilmot Cattle Co, based at 'Wilmot', Ebor, NSW.

On 6 September 2019, a fire flared up in the Guy Fawkes River National Park on Wilmot's western boundary.

Fanned by strong winds and fuelled by unseasonably dry pastures (Stuart recorded just 437mm last year, in a region which typically receives 1,200mm), the fire quickly swept across Wilmot and into neighbouring properties.

Although Stuart had experienced grass fires during his time in the NT, it wasn't a scenario he expected at Wilmot, where he and his wife Trish had, only the day before, notched up three years of management.

The holistic approach to pasture management at Wilmot, centred on an intensive, rotational grazing system, proved a blessing and a curse.

With just two mobs of cattle which were used to being moved, it was easy to shift them into the yards for safety and none were lost.

However, the property had a high fuel load and was highly developed with around 100 paddocks, so there was significant damage to fencing and water infrastructure, and 2,500ha was burnt.

Losing half their available feed placed immediate pressure on how to manage stock.

"Before the fire we were going through a very dry run, but we knew it was dry and we had plans in place," Stuart said.

"We knew our sale program, we knew what feed we had available, we knew how many head we could handle, we were in control.

"The fire took that control completely away and knocked me for six."

Here Stuart shares his experience with bushfire recovery:

Develop an action plan

Stuart said his head was spinning for the first couple days after the fire. He spent this time driving around the property to get his head around the damage and develop an effective plan.

"We got a map of the property, marked out what was burned, wrote down our priorities and set weekly goals. This was especially important for fencing, as it made a huge task much less daunting."

Stuart's top four priorities were:

1. Livestock

The decision was made to sell any cattle that didn't have sufficient feed.

"The initial response was to sell our trade cattle as they're more liquid, but when I sat back and had a clear think, we decided to offload our breeders instead.

"The rationale was simple: the young trade cattle had much lower feed requirements, so we turn-over more and generate more cash flow.

"In our situation, it didn't make sense to hold on to cattle which would take longer to improve in value. We needed to re-join, carry them through to weaning and preg-test before they went up a class in value."

Burnt paddocks were completely rested through spring and summer.

Wilmot received 152mm of rain over summer (well down on their expected 100mm/month but enough to re-establish some feed) and Stuart has seen pastures start to regenerate, without any inputs.

"Every little bit of rain helped and the summer-dominant species such as fescue, cocksfoot, phalaris and kikuyu have recovered well."

In early January, Stuart started to give these paddocks a very light graze to stimulate further growth on the back of recent rainfall. He doesn't expect they'll be back to full production until next spring.

2. Water

Wilmot's water-monitoring technology had a role to play in the rebuild.

"We run Farmbot tank monitors and it alerted us to issues, such as where tank levels were dropping because pipes had melted," Stuart said.

"We used this technology to prioritise repairs and monitor tanks refilling as we repaired leaks, greatly reducing the time it would have taken to physically check each tank."

SNAPSHOT: **Wilmot, part of Wilmot Cattle Co,** managed by Stuart Austin, Ebor, NSW

Area: 1,820ha

Enterprise: Trading and breeding Angus cattle

Livestock: 300 trade cattle, 150 breeders

Pasture: Summer fescue, cocksfoot, phalaris and kikuyu

Soil: Volcanic basalt soils

Rainfall: Historically, 1,200mm; only 437mm in 2019

There was extensive damage at Wilmot, however this staff house survived the blaze.

3. Fencing
Manageable goals saw the fences repaired or replaced within six weeks.

While Stuart did take the opportunity to make some minor realignments during re-fencing, he said the main lesson learned was to reassess infrastructure materials.

"In this area, split wood posts are commonplace, so by default we ordered the same. In hindsight, I should have taken a bit more time to think about exactly what we needed, so in future we will probably use all steel posts and end assemblies when replacing fences," he said.

4. Support
"The offers of support we received after the fire were really overwhelming," Stuart said.

"It's the nature of our industry to not take 'charity', but I can't stress enough the importance of accepting some help.

"It takes many hands to rebuild, so think about what you'll need and draw on who is most readily willing and able to contribute. It might be BlazeAid, it might be friends, it might be people in your networks who understand your business and what you need to get back on track."

Six weeks after the fire, Stuart and Trish hosted a district party to bring their community together to talk, reflect and support each other. ■

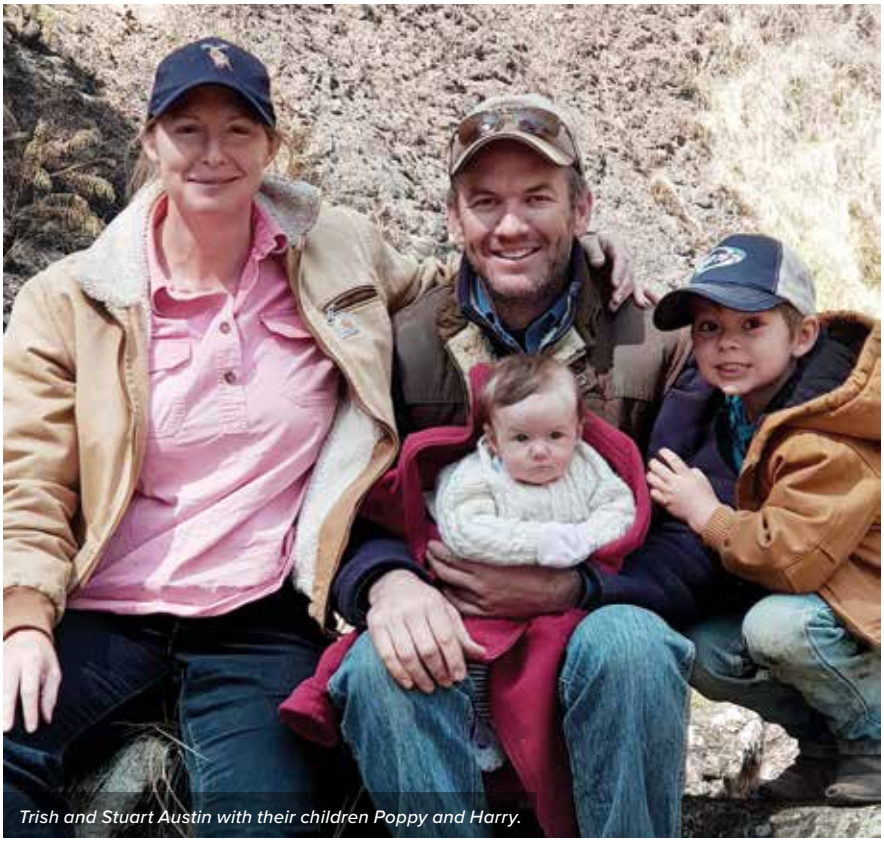
Stuart Austin
E: stuart@wilmotcattleco.com.au

Wilmot Cattle Co: **wilmotcattleco.com.au**

BlazeAid: **blazeaid.com.au**

MLA's feed demand calculator: **mla.com.au/feeddemandcalculator**

Fire recovery resources: **mla.com.au/bushfire-recovery**



Trish and Stuart Austin with their children Poppy and Harry.

LESSONS LEARNED

Stuart shares the key take-aways from his bushfire recovery experience in the hope it will help others who have gone through similar devastation.

1. Take some time. Don't expect to achieve anything for a few days, beyond the immediate needs of livestock. Your mind and body need time and space to process what's happened.

2. Make a plan and prioritise.
Livestock: How many can you afford to keep? What feed is available? Do any require vet assistance or euthanasia? Do you need an excavator to bury the losses? Reach out for donated fodder. It is there for you to access, so please do.

Water: As essential as feed, try to restore your water system as soon as you can if it's been damaged.

Fencing: This will be a long haul. Chunk it down into small stages as weekly goals make the task less daunting. Start with the boundary and work your way through your priorities from there. BlazeAid are an incredible resource so choose to use them if you wish.

Support: Acknowledge it will take many hands. Think about what you'll need and who is most willing and able to contribute.

3. Get some rest. If you're thinking about getting one more thing done before going home to your family, ask yourself if it matters if it's done tonight or if it can wait until morning. The love and support of your family is what you need most right now, and so do they from you.

4. Keep an eye out for your mates. Keep talking. Stop for a yarn whenever you see them. Check in on them.

CLIMATE

Autumn actions around the country

On the back of another hot, dry summer across much of Australia, producers need to prepare for late autumn and winter feed gaps.

Here, advisors from all over the country share their tips to guide livestock management decisions through autumn and into winter.

Ed Riggall

Director/consultant, AgPro Management, WA

In the west, our seasonal break is generally early May, so consider:

- Your exit strategy for the season. Ask yourself these questions:
  - How much groundcover/water/feed will I have come late April?
  - How can I grow more feed when it does rain?
  - Can I keep water up to the cattle/sheep?
  - How late can I sell cows-in-calf, and what sheep can I sell?
  - What's the stocking rate potential and how's it going to be adjusted?
- Using containment paddocks to defer grazing pastures and manage erosion.
- Developing a feed and water budget. Set dates for when you will purchase grain. Do you have time to cart water (be realistic)? If lambing early, do ewes have access to dams or troughs?

"Don't do it on your own. Call a professional, join a producer discussion group or talk to a farming friend or neighbour."

Ed Riggall
E: ed@agpromanagement.com

MLA's calculators to evaluate stocking rate, feed requirements and animal health:
mla.com.au/tools

Useful apps for your smartphone:

Condition Scoring of Sheep
(Western Australian Agriculture Authority)

Lambing Planner
(Western Australian Agriculture Authority)

Drought Feed Calculator (NSW DPI)

James Whale

Farm business and livestock consultant, Meridian Agriculture, south-west Victoria

- Develop supplementary feeding programs for weaners and adult cattle.
- Consider higher rates of feed and higher quality feeds for young cattle to lift weight gain efficiency.
- Determine appropriate rations to achieve condition score targets in breeders and reduce risk of metabolic disorders such as grass tetany.
- If pasture is no longer providing a significant contribution to daily nutritional requirements, use containment areas.
- The decision of when to return stock to pastures should be influenced by:
  - autumn rain events and pasture growth
  - ability to meet winter pasture targets (determined by feed budgeting forecasts)
  - time of lambing
  - methods used to transition animals back to pasture diet.

"Irrespective of containment decisions, appropriate supplementary feeding of breeding ewes during late winter and early autumn is critical. The true cost of inadequate nutrition during pregnancy can be very large and the need to determine appropriate feeding levels for varying situations cannot be overstated."

James Whale
E: jwhale@meridian-ag.com.au

Lifetime Ewe Management:
lifetimewool.com.au/LTEM.aspx

Pasture budgeting tools: **evergraze.com.au**

More Beef from Pastures: **mbfp.mla.com.au**

Geoff Niethe

Principal, Niethe Consultancies, northern Australia

- Monitor sale prices and do a feed budget. Prepare to sell turn-off cattle if feed quality is deteriorating. Perform faecal NIRS on dung samples if unsure of diet quality. Establish the best time to join based on the 'green date', annual pasture availability curve or markets.
- Heifers: Conduct foetal ageing and retain those which conceived in the first 42 days of joining, after selecting on temperament.
- Main breeders: Conduct foetal ageing and identify early and empty breeders. Prepare breeders that aren't pregnant for sale. If feed supply is short or there are surplus breeders, prepare breeders that have conceived late in the season for sale. Adjust stocking rate according to long-term carrying capacity goals.
- Use an accredited vet/tester for foetal ageing – it's the best tool to manage reproduction.
- Assess disease risk (leptospirosis and pestivirus) and vaccinate if required.
- Prepare to wean. Continue to reduce breeder numbers in response to anticipated feed shortages. Ensure breeders are at least in condition score 2.5 to maximise re-conception rates after next calving.

"A rational decision-making approach assesses all essential data. It may not always be the right decision, but it was the correct choice at the time based on the best information available."

Geoff Niethe
E: g.niethe@bigpond.com

EDGE courses (Grazing Land Management, Breeding and Nutrition): **mla.com.au/edge**

Forage budget calculator: **mla.com.au/feedbudget**

Condition scoring: **mbfp.mla.com.au** (Module 5)

MLA Tips and Tools on reproductive performance: **mla.com.au/reproductiveperformance**

Purchase bulls using Breedplan EBVs for reproduction: **genetics.mla.com.au**

Col Paton

Director, EcoRich Grazing, southern Queensland

Jill Alexander

Jill Alexander, Director, Applied Ag, southern Queensland

- Pastures are fragile after poor growing seasons and late starts over the past few years – they'll need careful management over several seasons to avoid continued decline and to allow recovery.
- Establish the current land condition of all paddocks and monitor closely.
- Achieve recovery by resting pastures from grazing for all or part of the growing season. Ensure high-value sown pastures and those in reasonable condition are allowed to set seed before grazing.
- Paddocks in very poor condition may need to be used as sacrifice paddocks while others recover.
- Use forage budgets now to determine stock numbers that can be carried from April through to the 'production point' next growing season, which is 3–6 weeks after the start of the season. Do a mid-dry season forage budget to check you're on-track and stock are in satisfactory condition.
- Where there's pasture remaining, consider feeding a high-energy supplement to reduce grazing pressure and extend grazing times.
- Wean early and sell or agist older and larger cattle; cull non-pregnant breeders.
- Many producers have downsized their herds recently, so only core stock numbers remain on many properties. Restocking with too many too early could result in irreversible damage to pastures and compromise future carrying capacity.

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EDGE courses (Grazing Land Management, Grazing Fundamentals, Breeding and Nutrition): **mla.com.au/edge**

Feed budget calculator: **mla.com.au/feedbudget**

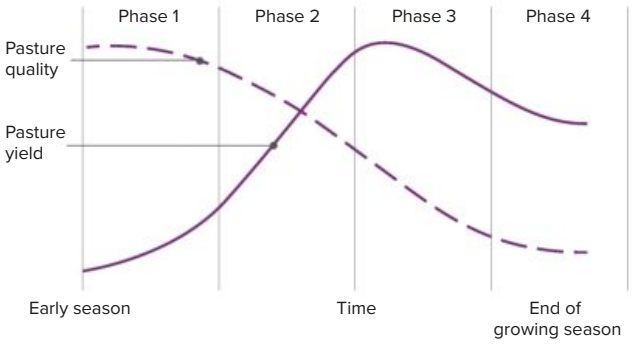
MLA's Profitable Grazing Systems: **mla.com.au/pgs**

CLIMATE

David Harbison

Principal advisor/agronomist, DR Agriculture, central-west NSW

"As an agronomist I focus on my livestock clients' key asset: their pasture base. Key to managing the pasture base is understanding the pasture growth curve."



- **Pick your grazing time:** If perennial grasses have emerging green pick, avoid grazing before the plant reaches growth phase two. Grazing in phase one slows growth, limits overall pasture production and reduces plant persistence. Avoiding grazing until March/phase two, when it has enough 'solar panel' to absorb energy and really take off, will produce more pasture and healthier plants.
- **Be on the front foot:**
  a. Extensive bare ground and brought-in hay and fodder can lead to a weed explosion, so put strategies in place to manage an increased weed burden.
  b. Monitor and address soil fertility through soil testing.
  c. Be aware of the risk of phalaris staggers, particularly if grazing reshooting phalaris.
- **Grazing crops:** If the season allows, timely sowing of winter forage crops is a good option to produce available feed more quickly than a recovering perennial pasture and fill the feed gap.
- **No rain?** Keep preserving your key asset. Know your best pasture paddocks and continue to stay off them. If feeding stock, use containment feeding or sacrifice paddocks.

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Understand pasture curves:
MLA Grazing EDGE courses: **mla.com.au/edge**
Pasture assessment courses: **mla.com.au/pgs**

Deb Scammell

Consultant, Talking Livestock, SA

- For late autumn/early winter calving, monitor condition score of breeders through pregnancy, feed to target condition score 3.
- Feed budget and ensure supplementary feed is available for late-pregnancy cows if there's a late seasonal break.
- Set sales/growth targets for last season's calves.
- Ensure adequate magnesium is available to breeding cows/lactating stock over winter to avoid grass tetany issues.
- Pregnant ewes: Manage nutrition through the autumn feed gap. Conduct supplementary and paddock feed budgets to meet energy requirements for ewes during mid/late-pregnancy. Monitor condition score in early/mid-pregnancy to ensure they can be at condition score 3+ prior to lambing.
- If scanning, manage singles/twins and dry ewes effectively. Consider how many containment pens/paddocks are required for targeted nutrition.
- Calculate a feed budget (using proper rations) to ensure ewes/cows are fed to a condition score target. Both supplementary and paddock feed need to be tested, primarily for protein and metabolisable energy (ME) content. Consider mineral lick *ad lib* if deficiencies are identified.
- Prepare lambing paddocks even if stock are being fully supplementary fed in containment. Ewes need access to a small paddock with adequate shelter.

Deb Scammell
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Condition scoring:
Sheep – **lifetimewool.com.au/conditionscore.aspx**
Cattle – **mbfp.mla.com.au** (Module 5)
Pasture assessment courses: **mla.com.au/pgs**

Basil Doonan
Principal consultant, Macquarie Franklin, Tasmania

- **Cash flow issues:** Try to avoid deficits or make provision with the bank if significant upside to short-term increases in debt.
- **Scenario planning:** Look at options for the business for the next 12–24 months. Incorporate ongoing drought conditions, changes in enterprise or land purchases, variations in stocking rate and new technology opportunities.
- **Feed budget:** Consider seasonal issues and marginal cost and marginal revenue decisions. Aim to increase pasture cover over autumn/winter in preparation for calving and lambing. This is evaluated using a monthly feed profile matching predicted feed supply to demand, primarily through:
  - increasing rotation length (usually pushing out from 45 to 60 days and then as long as possible)
  - destocking by selling animals based on achieving target pasture cover
  - applying nitrogen to increase autumn growth
  - applying gibberellic acid to increase winter growth
  - feeding supplements to maintain the appropriate level of intake
  - managing body weight of animals to meet ideal calving and lambing condition
  - identifying lambing paddocks and allocating to mobs.

"At this time of year, we also try to get our clients to take a break, to have everyone fresh for calving/lambing."

Basil Doonan
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Feed budgets: **mla.com.au/feedbudget**
MLA Business EDGE: **mla.com.au/edge**

Focus on feeding and finance

Farm business consultant John Francis has two pieces of advice for southern producers this autumn: if you're feeding stock, don't give up before the season break; and if you need finance to restock after the break, apply now.

As a director at Holmes Sackett with clients throughout south-east Australia, John warns the period before a seasonal break can be a 'mental low point'.

"In southern Australia we expect this to be a time of low feed quality, with residual feed from spring carrying livestock through to the break," John said.

"The primary objective is to make sure energy requirements are adequate for each livestock class on hand."

However, this is when he said the pressure can take its toll.

"When livestock feeding consumes a large proportion of your time it can be difficult to remove yourself from the operational mindset to make rational decisions.

"Typically, autumn is when the daily grind of feeding can become physically and mentally draining.

"During dry times, selling in autumn can be costly as high supplementary feed expenses have usually already been incurred and livestock prices are discounted at this time of year."

John said the solution may involve talking to someone outside your business – for example a bank manager, accountant or other advisor – to help maintain objectivity and ensure you're not making an emotive decision.

Be finance-savvy

For producers looking to restock after the break, John warned additional scrutiny and bank risk assessments in the wake of the banking royal commission may mean it takes additional time to receive approvals.

"Start financing applications now and be realistic about the time it will take," he said.

"That way, you will be ready to restock when the break arrives."

Advice for bushfire-affected producers

John said some of his clients who were impacted by recent bushfires have found comfort in making decisions and taking action.

"One of my clients had two-thirds of their total area burned out and was on the phone to me within 10 hours of the fire," he said.

"He wanted to talk through his options: should I hang on to my cattle, should I sell, can I custom feed, who is available to help?

"He had a clear objective – he didn't want to feed them himself on his place – and by getting support to make those decisions early he said he now felt confident about the path forward and could just 'get on with it' and start rebuilding infrastructure." ■

John Francis
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Holmes Sackett director John Francis speaking at a client benchmarking meeting in southern NSW.

REPRODUCTIVE EFFICIENCY

Scanning makes sense

Want more lambs? Producers who use pregnancy scanning can better manage the nutritional requirements of twin and triplet-bearing ewes, as well as enhance marking percentages.

A project funded by MLA and AWI aims to increase national lamb marking percentages by two percentage points and the survival rates of twin-born lambs by five percentage points – or an extra 700,000 lambs weaned a year.

Associate Professor Forbes Brien (pictured below), a Research Fellow with the University of Adelaide's School of Animal and Veterinary Sciences, is leading the research.

He said the project aims to improve use of pregnancy scanning by addressing barriers to adoption, strengthening the business case for scanning, and working with scanning contractors to enhance the accuracy and use of the technology.

"We estimate around 40–50% of the Australian flock is being scanned, but some producers may not scan every year," Forbes says.

"The relatively low level of adoption of scanning technology by producers is one of the key factors preventing good nutritional management of pregnant ewes.

Scanning ewes for the number of lambs can guide preferential management.

"Only around half who are using scanning are looking at how many lambs a ewe is carrying, in addition to whether ewes are pregnant or not."

Does it pay?

Forbes said some producers may not be convinced of the business case for scanning, and some farms may not be set up to manage a lot of smaller flocks.

However, he said there's a strong case for scanning for single/multiple lambs and subsequently managing twin-bearing and triplet-bearing ewes according to their nutritional requirements.

"Studies on twin-bearing Merino ewes have shown if you can get the ewe to lambing with a condition score of 3.2, compared to 2.3, you increase your lambing percentage from 115% to 142%," Forbes said.

"The survival of twin-born lambs from birth to marking also increases when the ewes were in better condition, from 57% to 71%."

Producers who don't scan for single/multiple lambs will end up providing the same levels of feed to a flock that has different nutritional needs.

They may choose to manage the flock to the animals with the highest nutritional needs (twin and triplet-bearing ewes) and overfeed the dry and single-bearing ewes.

Or they may pick an average and run the risk that twin and triplet-bearing ewes aren't getting enough nutrition.

"In times of drought, in particular, many people are having to contain their stock to almost full feeding.

"If you can accurately tailor your feeding to different nutritional requirements, you are going to be well ahead."

Other benefits

As well as a tool to fine-tune feeding, scanning can be used to age the foetuses and organise flocks according to lambing dates, particularly if flock size is not an issue.

"There are advantages in knowing what's going to be born early or late, particularly when allocating limited resources.

"If you can organise the flock within a two-week window, you can manage the lambs more appropriately for marking and weaning, and streamline management and welfare outcomes." ■

Seven tips for better scanning

1. Joining should ideally go for five weeks (but no more than six weeks)
2. Use teaser rams to get ewes cycling for when the main rams go out
3. Stop supplementing one to two days before scanning and withhold food and water the night before for best scanning results
4. Ensure enough help is available on the day to keep ewes moving past the scanner
5. Good yards and panels allow scanned ewes to be divided into management groups based on scan results
6. Avoid scanning when ewes are wet or daggy
7. Competent scanners are in demand, so book them early

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Four steps to lift lambing

When it comes to increasing lambing percentages and lifting lamb survival through to marking, a precision approach is best.

That's the tip from Lyndon Kubeil, Agriculture Victoria's BestWool/BestLamb Leader, who helps producers implement management changes to optimise ewe nutrition, husbandry and lambing percentages.

Lyndon said there are four areas to focus on to prepare ewes for a better lambing outcome:

- know your feed resources
- measure to manage
- prepare and allocate paddocks
- manage mob size.

1. Know your feed resources

Prepare your feed budgets early and don't get caught short with ewes in late pregnancy, because feed gets harder to find and more expensive as the season progresses.

"Producers should ensure they have enough supplies to get through to at least the end of May," Lyndon said.

"There'll be a lot of sheep in containment this year, or heavily supplemented, so work out exactly what's needed."

Twin-bearing ewes in late pregnancy require around 15% more energy per day than single-bearing ewes.

Producers should understand the standard reference weight of their ewes as it helps to inform their decisions about feed allocation and budgeting.

Regardless of whether you choose lick feeders or trail feeders, Lyndon said there are simple strategies to reduce lamb mortality.

"When trail feeding, try to feed towards the middle of the day. If ewes have lambed overnight, this gives them time to bond with their lamb earlier in the day and, if they're separated, they have more daylight hours to mother up.

"With trail feeders, I also recommend putting out as much good quality hay as possible because it takes the edge off a ewe's hunger and they're then more inclined to bond with their lamb rather than run to a grain trailer."

2. Measure to manage

Pregnancy scanning to assess how many lambs a ewe is carrying is the best way to understand her feed requirement (see story page 16).

"Pregnancy scanning is the key link. It's the best management tool we have to gear up our precision sheep management.

"It allows us to understand which ewes are carrying singles, twins and triplets so we can allocate feed resources accordingly."

While there's an additional cost for scanning for number of lambs versus just scanning for wet/dry, Lyndon said it's not significant in terms of what can be done with the information.

"The benefits are understanding which ewes are carrying twins and singles, so the extra cost is absolutely justified as it allows you to manage them to achieve appropriate lamb birth weights and ewe condition score targets and improve your survival rates."

3. Prepare and allocate paddocks

When allocating paddocks, identify ewes with the highest needs for the best paddocks from a pasture quality and quantity point of view. Paddocks should be prioritised as follows:

1. Twin-bearing maiden ewes
2. Twin-bearing mature ewes
3. Single-bearing maiden ewes
4. Single-bearing mature ewes.

"If you have a paddock that has high feed quality and quantity, shelter and privacy, allocate them to your maiden twins.

"They're the ones which will have more problems with disturbance because they've never lambed before," Lyndon said.

4. Manage mob size

Lyndon said if all other conditions are right, mob size was 'the icing on the cake'.

Mob size research funded by MLA and AWI showed smaller mob sizes for twin-bearing ewes decreased the risk of mismothering.

In the study, economic modelling demonstrated how reducing mob size at lambing is often justified even if paddock subdivision is required.

The optimum mob size for twin-bearing ewes is 40% to 50% of a single-bearing ewe mob.

"With twin-bearing ewes, we're trying to get the mob size as low as is practically possible for your enterprise. You can realise an extra 2–4% of lambs marked by reducing mob size," Lyndon said. ■

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MLA Mob Size Project
mla.com.au/lambing-density

Lifetime Ewe Management
rist.edu.au/lifetime-ewe-management

Managing ewes
mla.com.au/ewes

Wean More Lambs
makingmorefromsheep.com.au/wean-more-lambs/index.htm

REPRODUCTIVE EFFICIENCY

Producing more lamb per

Tim and Bek Lubke, Strathview Maternal Genetics.
Image: Kim Woods

NSW producers Tim and Bek Lubke's focus on early puberty, triplet-bearing ewes and lamb survival has resulted in many of their maternal composite ewes weaning 100kg of lamb in 100 days.

The Lubkes, who operate Strathview Maternal Genetics at Henty, are participating in a trial as part of an MLA project led by Murdoch University to evaluate best management practices for triplet-bearing ewes and lamb survival.

Their goal is to produce ewes which wean their lambs above their body weight at 100 days.

Analysing four years of their own triplet lambing data has shown the Lubkes that slightly lowering the condition score before ewes give birth, supplementary feeding and increased birth weights all contribute to higher survival rates in triplets.

"Some Strathview triplet-bearing ewes have the ability to wean more than 100kg of lamb at 100 days, making them the most profitable sheep on the farm," Tim said.

"Our focus is not to have all our sheep bear triplets, but there is ground to be made up in terms of lamb survival.

"Our separated triplet mobs are returning on average 208%, and the best we've achieved is 216% in 2015."

In 2018, 18% of the flock were scanned in lamb to triplets. Ewes had an average body condition score of 3.8 at joining and recorded a scanning percentage of 198% and weaning of 176%.

"We sowed sudangrass on summer rain and the ewes were able to put on a lot of condition," Tim said.

"The next year we went back to condition score 3 and the scanning percentage was 176%."

Preferential management

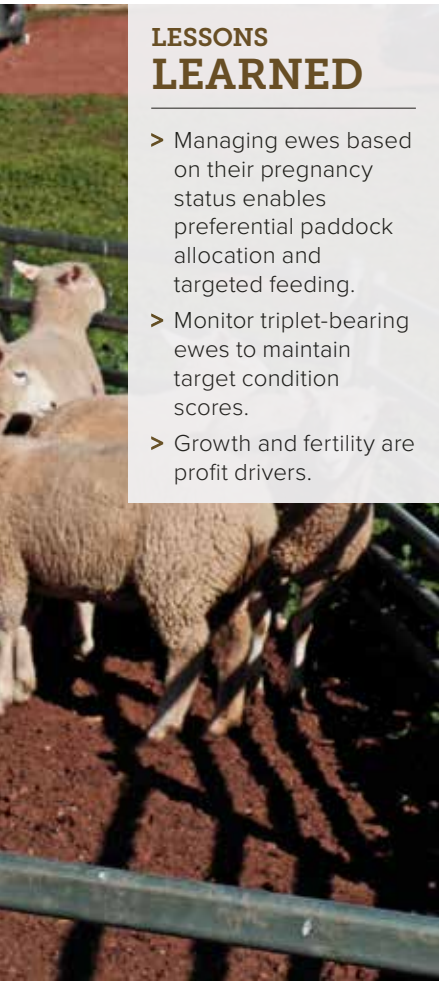
Strathview ewes are joined for five weeks from mid-February at 2% rams, for a July–August lambing.

The Lubkes aim for body condition scores between 3.2 and 3.4 to ensure a scanning result in the 180–190% range.

They monitor triplet-bearing ewes to maintain condition scores at 3–3.2 for lambing (slightly lower than the twin-bearing ewes) to avoid casting or ewes becoming too fat.

"We traditionally lamb the twin-bearing ewes down at 11 ewes/ha while the triplet-bearing ewes are given more space."

hectare



LESSONS LEARNED

- Managing ewes based on their pregnancy status enables preferential paddock allocation and targeted feeding.
- Monitor triplet-bearing ewes to maintain target condition scores.
- Growth and fertility are profit drivers.

Tim said assisted births in the triplet-bearing ewes was higher (4.5%) than the twinning mob (0.05%).

"There's a lot more ground we can be making up to achieve better survival rates if we know how to better manage the ewes," he said.

"Extra monitoring before and during lambing is now standard practice for our triplet-bearing ewes to deal with any lambing sickness that arises."

Under the Murdoch University trial last year, triplet-bearing ewes were run under four different feed regimens before lambing.

Groups of 26 ewes aged from three to six years received either:

- low feed on offer (900kg of dry matter (DM)/ha) plus 700g/head/day of barley and lupins
- low feed on offer plus 200g/head/day grain
- high feed on offer (1,500kg DM/ha) plus 700g/head/day grain
- high feed on offer plus 200g/head/day grain.

Condition scores were recorded before trial entry at three weeks before lambing.

The ewes were assessed again at weaning to record their condition score and lamb survival.

Tim said the best result was the ewes with high feed on offer/low grain, who had 242% lambing.

Their average condition score going into lambing was 3 and the average condition score at weaning for this mob was 2.9.

"The adjustments I'll make in response to this trial is to reduce mob sizes back to at least 50, as we are currently running our commercial triplet-bearing ewes at about 80 per mob."

Reproductive efficiency

The Lubkes' target profit drivers are growth and fertility, and selection has also been focused on steadily reducing ewe body weight without losing frame.

"We've been working on reducing adult body weight for improved feed efficiency without sacrificing growth, fertility and early maturity in ewe lambs," Tim said.

"While the overall average growth in the stud slightly dropped – along with our ewe adult weights (from 72kg to 71kg) – on average, fertility in the flock has risen."

The Lubkes also genetically select for positive fat and muscle to maintain production in drought conditions.

Strathview ewe lambs are joined at a critical mating weight of 45kg and selected on early puberty.

Lambs are run on lucerne until at least 35kg live weight and then finished on grain until 8–10 months of age. In recent years, the Lubkes have sold grainfed wether lambs at export weights of 30kg dressed, in the light of strong export prices over the trade market. ■

A ewe with triplets at Strathview.

SNAPSHOT:

Tim and Bek Lubke, Henty, NSW

Area:
971ha across three properties

Enterprise:
Coopworth sheep, commercial flock joined to White Suffolk and Poll Dorset rams

Livestock:
2,500 commercial composite ewes, 300 stud ewes, 200 stud ewe lambs

Pasture:
Grazing wheat and canola, oats and lupins

Soil:
Red sandy clay loams

Rainfall:
550mm

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Improving lamb survival: **mla.com.au/lamb-survival**

Making More From Sheep: **makingmorefromsheep.com.au/wean-more-lambs/index.htm**

Over the fence

In this series, *Feedback* follows a group of 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 third instalment of the 2019–20 series.

The Lord family are regretfully unable to continue contributing to this series of *Over the fence*. MLA thanks the Lords for opening the gate to their business and sharing their story in *Feedback*.

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

The Mitchells shore their ewes in January and took this as an opportunity to also conduct pregnancy scanning.

SEASONAL CHALLENGES:

It was dry during the harvest period, which was good, but it also meant we had a lot of total fire ban days, which slowed us down. Although we're allowed to harvest on total fire ban days, we choose not to. In the future, we may have to monitor the harvest fire index because, as it is, it's difficult to get any momentum going. So for this year we'll consider this and decide what we're going to do.

WHAT'S ON MY PLATE:

We started feeding sheep in January–February. The stubbles had kept them going until then. We also shore ewes in January and conducted pregnancy scanning.

In February we put some wether lambs into feedlots as they were not up to saleable weight by the time we ran out of bean stubbles. We put the rams in with the ewes in mid-February for a July–August lambing.

In the past, a hot dry summer usually meant a wet winter, but we haven't had that for a couple of years. Five out of 10 years, we're too wet here. It should be better than last year for ground cover.

LOOKING AHEAD:

The big goal for this year is succession planning with my brother David and his wife Peggy, and my parents John and Pam. My parents are both 72. They moved off the property into town some time ago and David and I have been running the farm, although Dad still helps out with moving sheep on occasion.

My brother and I are at an age where we need to have separate finances and know where each of us is heading. I love sheep; David loves cropping. We've had discussions to date about how we can have two farming models that will work, so we need to work out which land goes to which person, and what the allocation of farm debt to land will be.

We'd like to try to complete the process among ourselves, but we're open to the idea of working with a third party if it becomes necessary. Dad and his brother went through the process 20 years ago and, while it was done quickly, it could have been a little smoother. We'd like to build on the lessons of that process. I really enjoy the sheep side of the farm, so if we can, we would like to manage to split with the parts that work for each enterprise. ■

THREE ACTIVITIES OVER THE NEXT TWO MONTHS:

> Feedlot wether lambs
> Joining
> Sowing

Andrew Mitchell
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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

SEASONAL CHALLENGES:

We had an extremely dry and late start to the wet season up until the start of the year. This followed on from low rainfall over the 2018–19 wet season. Because of this, it's been very challenging and gave us no rest on watering, moving and supplementing cattle.

WHAT'S ON MY PLATE:

After receiving good rain, we put out wet season phosphorus lick and started our early maintenance program. Over January–February we rotated full-time staff for their holidays. We're making our work health and safety (WHS) and workplace induction procedures more involved and structured this year, both for new employee inductions as well as those who are ongoing. We're finalising this for the 2020 casual staff arrival in March.

MY GO-TO TOOLS AND RESOURCES:

I've been using Safe Farms, our go-to for farm WHS. I also attended the Rural, Regional and Remote Women's Network of Western Australia workshop 'Champions for Change' which aims to tackle sexual harassment in the agricultural industry.

LOOKING AHEAD:

We'll be consolidating our recent expansion into two new Aboriginal subleases in 2018 and 2019. Procedurally, we need to streamline the larger management requirements into the business. We'll have larger areas to cover and will also be employing local community members from the properties for seasonal or long-term mustering and station work, so managing the human resources here also.

We've recently purchased and are installing a large number of Farmbot remote water-monitoring devices. This allows us to check the water at any water point in real time. The system will also alert us if water levels drop below designated levels. Solar-powered bores means we don't need to travel to fill generators with diesel anymore, so one of our largest costs now is water monitoring, due to the distance we have to travel to manually check the water points. We hope these Farmbot devices will make a big difference to our cost structure in this area.

Finally, we're looking at installing and upgrading the cattle yard infrastructure to make cattle handling more safe and efficient throughout the properties. ■

THREE ACTIVITIES OVER THE NEXT TWO MONTHS:

- Starting our early maintenance program
- Finalising WHS and induction procedures for new casual staff
- Installing Farmbot remote water-monitoring devices

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Safe Farms WA
safefarms.net.au

The Rural, Regional and Remote Women's Network of Western Australia
rrrnetwork.com.au

Image: Stephanie Coombes

COMPLIANCE

Hungry for eating quality

Ensuring consumers enjoy a great eating experience is paramount for Victorian beef producer, Jock Richmond.

He uses the Meat Standards Australia (MSA) Index to benchmark the eating quality outcomes of his Angus cattle.

Jock is the fourth-generation of the Richmond family to run Rose Grange Pastoral Company at Little River, near Geelong.

MSA: a valuable business tool

Jock has produced MSA cattle for nine years and was the 2019 MSA Excellence in Eating Quality Most Outstanding Beef Producer for Victoria for Band 1 (producers consigning large volumes) based on his MSA compliance of 97.7% and average MSA Index of 62.97.

Jock said the carcase feedback provided by MSA had been a valuable business tool which he used to inform herd management decisions.

"We run 900 Angus females and turn off grass-finished steers and cull heifers annually for MSA," Jock said.

"We have a split calving – 40% of our herd calve in autumn and 60% calve in spring.

"We're in the JBS Farm Assurance Program. All of our cattle are bred and finished on the same property and sold off to target a 300–330kg carcase weight."

Cattle are run predominantly on a mix of phalaris, clover and ryegrass pastures, with supplementary silage in the summer and cereal hay in the winter for fibre. The Richmonds produce their own hay and crops for cattle.

Steers are finished on an oat-lucerne mix or on straight grazing oats or grazing wheat.

The ins and outs of the Index

"We use the myMSA platform to access carcase feedback and tools, and the first thing we always look at is our average MSA Index," Jock said.

The MSA Index is a number between 30 and 80 and is a weighted average of the predicted MSA eating quality scores of 39 MSA cuts in a carcase. It is a standard national measure of the predicted eating quality and merit of a carcase.

"Our ultimate goal is to average an MSA Index of 65, which is pretty high, but we like to be between 60 and 65 if we can," Jock said.

"I'm a big believer that if we can maintain the eating quality of our meat for the end user, it augers well for our product. A good eating experience is paramount, no matter what you're eating.

"We're constantly tweaking things.

"If we look at the Index and see that our Index is down a bit, then we'll go through the feedback and pull it apart to see if a batch of steers were, for example, lower in intramuscular fat or if the eye muscle area was back.

"If our Index isn't where we're aiming for, then we want to know why."

Jock said genetics are important in improving eating quality, with bulls selected for a range of estimated breeding values including 600-day weight gain, eye muscle area and intramuscular fat data.

Importance of nutrition

For Jock, the key to managing cattle for MSA compliance is nutrition.

"A big thing for us is ensuring the animals don't have any setbacks at any stage of their life from a nutritional point of view, which is not easy when you experience bad seasons," Jock said.

"The weaning process is a stressful time for a calf, so it's really about minimising stress and making sure nutrition is as good as we can possibly get it at all times." ■

SNAPSHOT:

Jock Richmond, Rose Grange Pastoral Company, Little River, Victoria

Area:
3,220ha

Enterprise:
Beef, prime lamb and cropping production

Livestock:
900 Angus females, 7,000 ewes

Pasture:
Phalaris, clover and ryegrass pastures, grazing cereals

Soil:
Clay loam

Rainfall:
575mm

Jock Richmond
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For more information about the MSA system, visit: **mla.com.au/msa**

To look at your own carcase feedback and use the MSA Index calculator, visit: **mymsa.com.au**

Jim Gaylard, Trawalla property manager, Rose Grange Pastoral Company, Little River, near Geelong.

Feedback key to compliance

Using estimated breeding values (EBVs) and carcase feedback to build a refined herd has provided a solid basis for SA beef producer Andrew Johnson to achieve high rates of compliance with Meat Standards Australia (MSA).

Andrew is the second generation of the Johnson family to run 'Mount Boothby' near Tintinara in the state's south-east. He's been a registered MSA producer for 10 years.

Andrew won the Most Outstanding MSA Producer in SA category for Band 2 (producers consigning smaller volumes) in the 2019 MSA Excellence in Eating Quality Awards.

He achieved MSA compliance of 92.7% and an average MSA Index of 64.69.

Benchmarking is key

Andrew said the carcase feedback provided by MSA, accessed through **mymsa.com.au**, has helped him achieve performance targets.

He uses this feedback to improve herd management decisions, meet supermarket specifications and achieve outstanding compliance.

myMSA provides producers with the opportunity to benchmark their compliance and MSA Index performance with national, state and regional performances. It also provides a suite of easy-to-use reports to look at individual carcase attributes, with the functionality to download carcase data to import into on-farm systems.

Andrew runs a self-replacing herd of 400 Angus females, turning off milk vealers early to target around 400kg liveweight. The rest are grown out to finish to a heavier carcase, and sold at 12 months.

"They're run predominantly on improved lucerne-based pastures with a mix of clover and grasses, providing a combination of protein and energy. We supplementary feed hay when necessary," he said.

"Matching pasture production and feeding regimes to manage lactation intervals in good seasons allows us turn off animals earlier and heavier."

Andrew believes if everything goes right from an on-farm management perspective (assuming there are quality controls throughout the supply chain) feedback data can be used to achieve 100% compliance.

"We're constantly tailoring and targeting our breeding herd based on EBVs, with calving ease, eye muscle, development, weaning weights and carcase weights

Andrew Johnson, Mount Boothby Pastoral Company, Tintinara.

key focuses when selecting genetic stock," Andrew said.

"Previously, we would have selected breeding stock purely on subjective measurement of obvious traits, but this risked going too far with certain parameters, throwing other traits unknowingly into and out of the herd.

"Selecting stock for a range of traits allows for objective measurement. Understanding this data from fertility and growth rate perspectives allows us to make more informed decisions to ensure we meet performance targets.

"We use the myMSA platform to access this carcase feedback and the tools to guide on-farm decisions."

Low stress, high compliance

In addition to genetics and nutrition, Andrew recognises the importance of well-handled cattle. Low-stress stock handling is another important element in their production system.

For Andrew, the key to managing cattle for MSA compliance is through adopting sound business principles.

"If we can adopt some principles of intensive agriculture including breeding plans, EBVs, feeding regimes, nutrition, growth rates and cash flow requirements throughout our extensive operations, we'll produce a more compliant product," Andrew said.

"The MSA program helps us see which cattle are meeting market specifications, allowing us to achieve performance targets and a return on investment."

Andrew encourages other producers to get on board with MSA and make the most of the valuable information and feedback data that's provided to producers as part of the process. ■

Andrew Johnson
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For more information about the MSA system, visit: **mla.com.au/msa**

To look at your own carcase feedback and use the MSA Index calculator, visit: **mymsa.com.au**

SNAPSHOT: **Andrew Johnson,** Tintinara, SA

Area: 7,000ha

Enterprise: Beef, sheep, pigs and cropping

Livestock: 400 Angus breeders, 7,000 ewes

Pasture: Improved lucerne-based pastures with a mix of clover and grasses

Soil: Sandy loam and clay loam

Rainfall: 425mm

INNOVATION

A tropical feedlot ambition

Stewart Borg investigates semi-confinement feeding at Grupo Bom Futuro, Mato Grosso, Brazil, during his MLA-supported Nuffield Scholarship research trip.

Building a feedlot in Queensland's tropical north isn't a challenge for the fainthearted.

Soaring temperatures, stifling humidity, ticks, flies, cyclones and floods call for ingenuity, planning and determination – three traits trail-blazing producers such as Stewart Borg are known for.

It may sound ambitious, but Stewart is using lessons learned from his MLA-sponsored 2018 Nuffield Scholarship to make it a reality. His goal is to build a more profitable business structure that:

- generates consistent, year-round cash flow
- creates more marketing control
- provides a buffer to seasonal events such as droughts and floods.

Stewart, who runs a commercial and seedstock Brahman herd at Sarina with his wife Sarah and their young family, is prepared to try new things.

In recent years, the Borgs have shifted their business model from producing feeder cattle (350–400kg) to supplying the more lucrative live export market (500kg plus) as well as feeding for 100 days to grade MSA.

"With the growth in protein demand from China and Vietnam, ramped up by pork shortages caused by African swine fever – and we haven't seen anywhere near the full impacts of that yet – I think finishing cattle for export is our most profitable option," he said.

As well as backgrounding 1,000 steers on corn and sugar cane silage, the Borgs currently use permanent pens at several feedlots to custom-feed their own cattle.

However, they see the opportunity to capture more value by finishing cattle themselves and plan to have their own feedlot operational by next year.

"We've got 810ha of farming country so we're confident we can supply most of the feed inputs required to run a 2,000-head feedlot with a 7,000-head annual turnover," he said.

"We'll be able to supply a portion of the cattle from our Brahman-based commercial herd and we will buy in or contract-feed the rest."

US influence

Stewart's Nuffield experience, during which he visited farms and feedlots in The Netherlands, Ireland, California, Mexico, Brazil and New Zealand, and met with policy makers in Washington DC, has influenced his feedlot design and future operations.

"It was an incredible opportunity, the US in particular," he said.

"After touring their feedlots, I'm convinced corn is the ration of choice. We've got the ideal climate to grow it and steam-flaked corn is the most productive feed ration for its higher energy value and better feed conversion.

"Learning more about high-moisture corns and other storage options was a real eye-opener."

Stewart said, while the ration choice is clear, steam-flaking corn in Australia is expensive.

"Our operating costs are so much higher than in the US, where liquid petroleum gas (which supplies the energy for steam-flaking) costs about 20% of what it costs in Australia.

"Our infrastructure costs far more as well," he said.

Stewart has crunched the numbers and estimates he would need to feed 10,000 head/day to achieve the economies of scale required to justify the cost of steam-flaking corn.

"We can't do that, so we've had to look at ways of reducing our energy costs instead," he said.

The answer has been renewable energy.

Central to the Borgs' feedlot is a 288m x 32m open-sided shed with a raised, ridge-capped roof which not only provides stock with protection from the elements but also hosts more than one hectare of solar panels that will feed power back into the grid.

While Stewart's intention is to eventually steam-flake corn using solar power, he's also keeping an eye on new technology such as infra-red if it proves to be a more economical alternative.

When the feedlot is operating at full capacity, the cattle will work their way through about 7,000 tonnes of grain a year, or about 20 tonnes/day.

Risk management

The feedlot will also provide a risk management strategy to weather the north's highly variable seasons.

In 2017, during Cyclone Debbie, the Borgs received 1,500mm in a single day – leaving two-thirds of their property submerged and resulting in some stock losses.

"The feedlot, which is built to withstand cyclonic conditions and is well above historic flood levels, will protect cattle from exposure during rain events and periods of high heat and humidity," Stewart said.

Pastures

When he visited cattle enterprises in Brazil, Stewart was impressed with the performance of Mulato II, a tropical hybrid Brachiaria species which he now grows for Heritage Seeds.

"It's the highest-protein grass in Australia; even after seed production and being cut for hay, it ranges from 14.5 to 21%, depending on the stage of growth," he said.

"It's very summer-dominant and requires a lot of water, but we've managed to finish cull cows on it within a month."

Marketing

"It was very sobering to see that, no matter where I went – the US, Europe, South America and later Asia – Australians are the most efficient farmers in the world, but we have the worst terms of trade," he said.

"In Ireland, about 50% of the farm income comes from subsidies; in Brazil the government is totally focused on agriculture; and the US has cheaper energy, fuel and other input costs.

"When our feedlot is running at capacity, our labour will be supplied by family and a few employees. The same feedlot in the US would have 15 to 20 people and in Indonesia, 200 people," Stewart said.

As part of his Nuffield Scholarship tour, Stewart also visited several Indonesian feedlots to explore live export opportunities.

"The take-home lesson from that trip was the huge disconnect between Australian producers and the Indonesian market," he said.

"More of us need to go over there and bridge that gap to ensure we're supplying what they want, highlight the importance of a quality, disease-free product and not leave doorways open to low-cost competitors." ■

LESSONS LEARNED

- Steam-flaked corn, commonly fed in the US, is the most productive lot-fed ration for its higher energy value and better feed conversion.
- Embracing renewable energy such as solar power can help overcome cost barriers.
- Mulato II, Australia's highest protein grass, will finish stock quickly but has high moisture requirements.
- There is plenty of information available – we have incorporated information from other feedlot operators (in Australia and overseas), animal nutritionists, government, MLA and the Australian Lotfeeders Association.

Stewart and Sarah Borg with their daughters Chelsea, Heidi, Gwen and Madelyn.

SNAPSHOT:

Stewart and Sarah Borg, 'Marklands', Sarina, Queensland

Area:
2,833ha

Enterprise:
Commercial and stud Brahman herd, trade cattle

Livestock:
200 registered breeders, 1,200 commercial breeders joined to Brahman or Charolais bulls, 1,000 backgrounding steers, some Brahman-based trade cattle

Pasture:
Pangola, signal grass, humidicola, saltwater couch and Hymenachne grass

Soil:
Highly varied with heavy loam, creek flats, red volcanic and grey loam

Rainfall:
2,200mm (wet season: 1,625mm in two months)

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Beef cattle feedlots: design and construction
mla.com.au/cattle-feedlot-design

MLA BeefSpecs calculator
mla.com.au/beef-specs

Scholarships
nuffield.com.au
mla.com.au/scholarships

Finding more dollars in grass

When Piers Dumaresq returned to his family's Tasmanian farming business in 2013 after 15 years as an economist and professional investor, he expected to easily identify key profit drivers and opportunities for growth.

Instead, he found he needed to learn much more about grass and grazing systems, so he turned to MLA programs to drive a dramatic increase in production and turnover.

As a result, he's lifted ewe numbers from 2,000 to 4,500 without reducing other enterprises in the mixed farming business, which includes poppies, cattle, cropping and pasture production.

Piers started with a Lifetime Ewe Management course and then moved into an MLA Profitable Grazing Systems (PGS) Pasture Principles program with Macquarie Franklin's Jason Lynch.

While his cropping systems were profitable and stable, limited by rotation and irrigation capacity, he saw the need to grow the sheep business.

"At the time, there were plenty of market signals telling us to produce more lambs," Piers said.

"I believed growing our sheep enterprise would be easy, but in reality I knew nothing about grazing systems or managing pastures.

"It was pretty overwhelming. I quickly realised we had to go back to basics.

"Pasture measurement and feed budgeting are now the two most crucial tools in our business and they drive everything.

"Knowing how to grow and use grass allowed us to grow our business."

Overcoming challenges

As his knowledge of animal feed requirements and plant morphology grew from the PGS program, which uses a mix of group and one-to-one learning, Piers identified his first stumbling block – infrastructure.

"One of the great mental blocks to overcome is thinking you need small paddocks to successfully graze pastures, when really what you need is consistently sized paddocks."

With paddocks ranging from 5ha to 100ha, the first task was to install more stock water infrastructure and fence larger paddocks into smaller ones, to make each paddock roughly 20ha.

This increased feed utilisation and simplified the grazing system.

"Investing the capital was easily justified with the return on investment exceeding 30% per year."

With better knowledge of plant growth, Piers moved the focus from improving pastures to making existing pastures perform better with well-managed, timely grazing and good soil nutrition.

Piers Dumaresq assesses pasture quality with his Pasture Principles coach, Jason Lynch.

Images: Steve Lovegrove Photography

He said accurate feed budgets were a powerful tool and enabled him to plan well in advance of requirements to secure additional feed or book stock into processors.

"Pasture Principles, through PGS, gave me the tools to drive growth in our business through better management of grass.

"Business growth would have taken much longer if we hadn't learnt how to budget for feed and manage grazing for full pasture utilisation."

As a new entrant to farming, Pasture Principles helped Piers form networks, learn

from other producers and develop a valuable relationship with his coach, Jason Lynch.

"He knows our business and what we're about. We can crunch the numbers and model all likely scenarios as the season shapes up."

Piers is putting his economist hat back on for the next stage of business growth.

While turnover and profitability have increased with growth, the cost of production has risen, so Piers is analysing areas for efficiency gains to return greater profit to the bottom line. ■

A matter of principle

The Pasture Principles program provides producers with a set of guiding principles to manage their pastures confidently, regardless of the season, situation or system.

The program is delivered as a two-day theory workshop followed by six on-farm practical coaching sessions over a 12-month period.

Producers learn:

- the relationship between plant requirements, leaf emergence rates and pasture growth
- plant morphology and the relationship with pasture quality, quantity and plant persistence
- how to measure and predict pasture growth
- how to allocate pasture on a dry matter basis using robust feed budgeting
- how to plan animal requirements for maintenance, growth, pregnancy and lactation.

SNAPSHOT:

Managers: Piers and Martin Dumaresq,
Longford, Tasmania

Area:
1,600ha

Enterprise:
Prime lamb production, poppies, processing peas, ryegrass seed, clover seed, vegetable seed and fodder crops for finishing lambs

Livestock:
6,000 breeding ewes, 120 cows

Pasture:
Dryland ryegrass/cocksfoot/sub-clover and irrigated fodder clovers and ryegrass. Future dryland pastures will be single species (such as ryegrass or cocksfoot) to fit with MLA Pasture Principles guidelines and changing climate.

Soil:
Mainly shallow clay loams but highly variable

Rainfall:
600mm

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Pasture Principles: Macquarie Franklin **macquariefranklin.com.au**

Contact your Profitable Grazing Systems state coordinator: **mla.com.au/pgs**

REPRODUCTIVE EFFICIENCY

Breeders key to top-notch weaners

Managers Sarah and Bryce Foster at Esmerelda Station.

A strong focus on managing weaners – as well as investing in wire and water – is part of a concerted effort to lift productivity at Esmeralda Station in north Queensland and the results are positive.

Esmeralda was purchased by the Cunningham Cattle Co (Gunn Agri) in 2016 and is managed by Bryce and Sarah Foster.

The station is a breeding block, with weaners sent to the company's southern properties.

Weaner management at Esmeralda Station begins with the breeders, who receive year-round lick to maintain condition and, as a result, fertility.

"From May to December we use a dry-season lick which is high in urea to keep up their protein," Bryce said.

"The wet-season lick is high in phosphorus – we actually keep it out all year to provide minerals and proteins to keep the cows' body scores up."

Wet season management

In-season calves are born after October, at the start of the wet season, so the surge of feed at Esmerelda means they're ready to be weaned by the first muster around Easter.

"We pregnancy test on the first round of mustering and take out the cows which will calve out of season," Bryce said.

"Those are segregated so they can be fed up."

They leave the second round of mustering as late as possible at the end of the dry season, then pull off these late calves. Anything above 80kg comes off.

The weaners are then drafted and processed when they're mustered.

"They're all tagged with electronic ID, backlined, vaccinated, branded, weighed and drafted into lines depending on their weight," Sarah said.

There are two strategies for weaner management:

1. Calves under 180kg are retained in the yards and fed with pellets, molasses and hay, while the larger weaners only receive molasses and hay.

   "They're weighed again within a week of being pulled off mum, so we can see what they're doing," Sarah said.

2. Anything weighing above 180kg is sent south for finishing.

   "Basically, we try to send them off as quickly as we can – if they're gaining weight and are healthy, we truck them out."

Northern management tools and workshops

Weaner management

- MLA Tips & Tools: Weaner management in northern beef herds. Download from **mla.com.au/weaner-management**
- Nutrition EDGE workshops: **mla.com.au/edge**

  1 April – Katherine, NT

Breeder management

- MLA Tips & Tools: Managing heifers before joining: **mla.com.au/reproductiveperformance**
- Upcoming Breeding EDGE workshops: **mla.com.au/edge**

  12 March – Karratha, WA
  17 March – Broome, WA

- CashCow: Northern Australian beef fertility project: **mla.com.au/cashcow**

Business management

- Upcoming Business EDGE workshops: **mla.com.au/edge**

  7 September – Quilpie, Queensland
  10 September – Tambo, Queensland

Paddock development

Paddock Power Project: **futurebeef.com.au/projects/paddockpower**

The Fosters' focus on a well-managed breeding herd is lifting weaner performance.
Images supplied by Bryce and Sarah Foster.

Maintaining growth

Esmerelda Station is one of the northern grazing businesses taking advantage of livestock management strategies based on research and development through a partnership between MLA Donor Company and Elders.

The three-year pilot project provides producers with easier access to MLA's research outcomes, tools and resources and could pave the way for similar programs nationally.

The Fosters have drawn on advice from their local Elders agency in Townsville to meet the nutritional requirements of their weaners.

Their criteria included pellets with a milk supplement to support smaller calves and they settled on a high-protein, high-energy feed. This feed underpins growth rates for Esmerelda's weaners, which can be above 1kg/day.

Sarah and Bryce were also mindful of the labour requirements of feeding out.

"We use pellet feeders and buy the pellets in one tonne bags, and we also have a 10,000L tank for molasses. We can put a lot out at once, which makes life easier," Sarah said.

Breeder management

Esmerelda's approach to weaning is designed to lift reproduction rates, which they have achieved – boosting weaning rates by 17%.

Pulling calves off as soon as possible gives breeders a greater chance to improve condition and conceive again.

As with many northern businesses, bulls stay in the paddock all year.

"We're not there yet with controlled joining, but basically the season does it for us," Bryce said. "The cows don't cycle until it rains."

Temperament and conformation are the main criteria for retaining heifers, as well as reproductive performance.

"We give heifers three months to join and if they don't preg-test in calf the first year, they're out. We also preg-test the dry cows. Any dry and empty breeders go."

Pregnancy testing at mustering is an important component of this strategy, so Bryce and Sarah can manage breeders based on pregnancy status.

Infrastructure

Infrastructure is the final piece of the puzzle of their approach to management.

This includes regular maintenance of fences to ensure cattle stay in their designated paddock. They avoid fencing across rivers to reduce the risk of fences washing away in floods and have fenced off sections of river frontage.

"We fence to manage the cattle properly and to spell the country, so we can look after it and make the most of the feed," Bryce said.

"We also make sure water troughs are clean and cattle have plenty of water." ■

LESSONS LEARNED

- Weaner management begins with breeder management.
- Year-round access to licks to keep up protein and minerals helps maintain body condition and lifts fertility.
- Weaning as soon as calves are above 80kg helps cows get back into condition quickly.
- Young weaners need good supplements to achieve rapid growth.

Bryce and Sarah Foster
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SNAPSHOT: Managers: Bryce and Sarah Foster,

Esmeralda Station, between Croydon and Richmond, Queensland

Area:	Enterprise:	Livestock:	Pasture:	Soil:	Rainfall:
400,000ha	Beef cattle	About 18,000 Brahman breeders	Northern forests	Sandy soils	790mm (not received in past 10 years)

Unleash your sub-clover's super power

The 'superhero' of the southern feedbase, subterranean clover (sub-clover) has huge potential to boost livestock production – when it's managed well.

The good news is, this isn't hard, according to Cam Nicholson of Nicon Rural Consulting, who partnered with Southern Farming Systems (SFS) to develop MLA-funded feedbase management tools for producers.

"Understanding sub-clover's lifecycle and ensuring the right grazing strategies to support good seed set and plant renewal will guarantee highly productive sub-clover pastures," Cam said.

"It's not hard – producers just need to measure and monitor their pastures and stock according to the lifecycle stage."

Cam and SFS research officers Lisa Miller and Jess Brogden have developed a series of technical fact sheets on establishing, maintaining and utilising sub-clover.

Lisa said it's crucial – particularly in existing pastures – to ensure plants set seed and to optimise conditions for seed to successfully germinate.

"Under favourable management, the germination of sub-clover can be greatly increased," she said.

"A single sub-clover plant can be manipulated to produce more than 100 seeds."

Cam said maximising seed set begins in winter, with the aim of maximising leaf production through winter and early spring to maximise potential flowering.

"Contrary to what many may think, maximum sub-clover leaf production is achieved by frequent heavy grazing rather than light grazing and long periods of spelling," he said.

"When sunlight reaches the crown of the sub-clover plant it stimulates leaf production, whereas shading reduces leaf production.

"Sub-clover's prostrate growth means the plant is well adapted to frequent heavy grazing, but does make it susceptible to shading, particularly by upright grasses." ■

Lisa Miller, SFS
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The fact sheets can be found at: **mla.com.au/sub-clover**

RESEARCH IN REVIEW

PROJECT NAME

The More Sub-clover Package (part of the Feedbase Adoption Plan, which is the next stage of the Feedbase Investment Plan)

KEY FINDINGS TO DATE

- There is significant opportunity to improve how sub-clover pastures are managed.
- Producers and advisors can use simple techniques to assess, monitor and support the growth of sub-clover.
- Failure to manage the seed bank is a leading cause of sub-clover decline.

Not all heroes wear capes

Here's why sub-clover deserves its superhero status:

- It maintains its high feed quality throughout the growing season.
- If well nodulated, it fixes nitrogen that can be used by grasses and other broadleaf plants.
- A tonne of sub-clover dry matter (DM) can produce up to 25kg of nitrogen/ha/year.
- In the vegetative stage, the green material is highly digestible, exceeding 75%, with correspondingly high energy contents above 11 MJ ME (megajoules of metabolisable energy)/kg DM and around 30% protein.
- Even though the pasture declines in digestibility as it dries off, it still maintains a high crude protein content.
- The seed and burr of sub-clover is also high in protein.

Five steps to productive sub-clover

Here are the key management strategies for productive and persistent sub-clover:

1. Seed softening and preparation for germination

To promote effective seed softening (from the hard shell surrounding the sub-clover seed), the seed coat needs to experience fluctuations in temperature.

Excessive dry matter on the soil surface prevents temperature fluctuations and seed breakdown and leads to low germination.

Toxins can leach into the soil from dry perennial grasses and annual weeds, especially silver grass, to become a natural herbicide to reduce competition.

Take action: To achieve hard seed breakdown and reduce the toxic effects, leave 1,000kg dry matter (DM)/ha in the paddock at the autumn break. This is equivalent to about two handfuls of loose litter scraped from within a 0.1m^2 area.

2. Germination

A pasture of adequate sub-clover (40% sub-clover content by late winter) relies on the successful germination of 20–30kg/ha of seed or 30–45 plants in 0.1m^2.

Softened sub-clover seed germinates once cumulative rainfall is 20mm.

Ideally, grazing should be avoided until the plant has a minimum of three trifoliate leaves, as this is when the plant becomes well anchored.

Take action: Spell paddocks based on where increasing clover content is the priority.

3. Vegetative growth

Grazing stimulates leaf production by enabling light to reach the crown of the plant. A flower is eventually produced at every leaf site.

A plant that is closely grazed will have smaller leaves but more of them (which optimises seed production) and will produce more flowers, but a plant that is lightly grazed may have bigger leaves but will produce fewer flowers.

Grazing to 1,200–1,400kg DM/ha supports leaf production for sub-clover flowering and enables perennial grasses to recover.

Take action: Graze frequently and maintain optimal ground cover down to 1,000kg DM/ha to increase sub-clover content.

4. Flowering

Leaf production reduces once flowers appear on the sub-clover runner and energy is directed into filling the seed rather than growing leaves. Grazing flowers removes the plant's ability to produce seed.

Take action: Reduce grazing pressure at flowering to maximise seed production.

5. Burr burial

As flowers mature, they form burrs, which are essential to sub-clover survival. Each plant will have five to 12 runners with six burrs on each runner. Each burr contains three to four large seeds. Burrs buried in the soil are more likely to germinate successfully in subsequent years, but burrs on the soil surface are at risk of being eaten by livestock or insects and their establishment is affected as the root dries out at germination. Only 1% of the seed eaten from surface burr survives the chewing and digestion process.

Take action: Avoid overgrazing to the point where the surface burr is grazed.

Digging up an old challenge

Older cultivars of sub-clover can contain oestrogenic compounds which cause infertility in grazing animals.

Cultivars such as Yarloop, Dwalganup, Geraldton and Dinninup can cause two forms of infertility in ewes – one can often be resolved by removing ewes from the oestrogenic pastures, while the other leads to permanent infertility and increases in severity with continued exposure (clover disease).

The chronic form of clover disease is associated with dystocia (difficult births), uterine prolapse and postnatal mortality of ewes and lambs. The effect is cumulative, so lambing percentages will continue to drop from one year to the next.

Wethers may also experience problems on oestrogenic clovers over time due to enlarged bulbourethral glands, which may lead to death.

A project by the University of Western Australia, co-funded by MLA Donor Company, is determining the extent of high oestrogen 'bad' clovers across southern Australia. MLA has also partnered with Agriculture Kangaroo Island (AgKI) and MacKillop Farm Management Group for the Good Clover, Bad Clover project, to implement effective management of clovers. ■

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Good Clover, Bad Clover
Lyn Dohle, PIRSA
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For case studies and practical management strategies visit **mackillopgroup.com.au** and search 'clover'. A fact sheet on Good Clover, Bad Clover is also available at **sheepconnectsa.com.au/factsheets**

BUSINESS MANAGEMENT

Diversity: the key to a resilient business

Understanding your enterprise's profit drivers is a non-negotiable skill for young producers if they're to maximise opportunities and adapt to seasonal variability.

That's according to NSW producers Justin and Amy Dickens, who credit this approach with their ability to grow and diversify their business despite a run of tough seasons.

The couple run seedstock cattle, sheep trading and lamb lot feeding operations across neighbouring properties, 'Coolah' and 'Greenvale', near Yeoval in central-west NSW.

Justin and Amy Dickens with their sons Jack and Mitchell.
Image: Clancy Job

Resilience in any season

This diversification reflects their efforts to build a business that's resilient regardless of season.

"Over the past 10 years, we've received our long-term average rainfall, but the majority fell in three great years, closely followed by three terrible years," Justin said.

"We quickly realised we needed to be adaptable in our decision making and implement robust systems to maximise our ability to leverage every opportunity.

"When we get high rainfall years, we need to be proactive and convert this rainfall into profit.

"We've refined a trading model focused on maximising return per DSE (dry sheep equivalent) annualised. Grass is a perishable item and we must keep it actively growing while we have moisture available.

"We try to maximise herd impact and pasture utilisation, then introduce rest to allow pasture recovery."

Disaster to diversity

Amy and Justin faced no shortage of challenges in the early days, such as having to re-sow 160ha of pasture after they lost it to unpredicted heavy rainfall, but these shaped their business.

They recognise the value of turnover and having high cash flow in a low-equity business.

Diversifying into a Speckle Park cattle seedstock enterprise using embryos imported from Canada has allowed the couple to maximise their return from grass.

As they build their breeding herd, they're mindful not to let their seedstock enterprise take up more than 50% of overall carrying capacity, so they have room for other classes of stock to readily sell in a dry period.

"Protecting our land resource is critical. We've containment-fed our recipient cows for the past two years, and weaned calves early at around 4–5 months," Justin said.

"We've learnt a lot from doing this, including what not to do, and it has strengthened our decision-making processes." ■

Justin and Amy Dickens
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Justin and Amy shared their business resilience insights when they spoke at MLA's Business EDGE Young Guns workshop in Dubbo in February. To find a Business EDGE Young Guns workshop near you: **mla.com.au/edge**

SNAPSHOT:

Justin and Amy Dickens, Yeoval, NSW

Area: 1,020ha

Enterprise:
Speckle Park cattle stud, sheep and lamb feedlot

Livestock:
Speckle Park cattle, commercial sheep flock

Pasture:
Temperates (lucerne, phalaris), barley and oats for cattle, canola for lambs

Developing drought-resistant sub-tropical grasses, such as digit grass

Soil:
River flats through to ranges

Rainfall: 650mm

LESSONS LEARNED

- Establish a robust business which captures the potential of good years to reduce the financial and mental stress of dry years.
- Education and mentorship are important. Use resources available to you, including other people, to develop your business acumen and financial literacy.
- Focus on where you want to go and set clear goals.
- Prioritise forward planning, decision making, good communication and reporting.

Put the edge on your business

A two-day MLA Business EDGE workshop helped beef producers Steven and Cindy Scott to objectively assess their enterprise performance and improve efficiencies on-farm.

According to the Scotts (pictured), the workshop – presented by John Francis from Holmes Sackett – was a valuable tool to not only sharpen their business minds, but also broaden their outlook.

Taking emotions out of decision making

Cindy said the biggest change made since completing the workshop is the rigour she and Steven now apply when making decisions about enterprise expenditure.

"The more financially literate you are, the more effective your decision making is likely to be" Cindy said.

Steven agreed, adding it was necessary to take the emotion out of decision making.

"Emotion clouds objectivity, so to do a rigorous assessment of your business, you need to separate lifestyle factors from the business and also question 'accepted wisdom' associated with traditional farming practices," he said.

"Ideally, you should only look at the numbers, or engage a consultant who pushes you out of your comfort zone by challenging and questioning all aspects of your business."

An example is the Scotts' recent experience of conducting a cost-benefit analysis to assess whether they should cut drought-affected crops for hay or take them through to harvest and maintain ground cover.

"We decided to let the crops run through to grain because the figures worked better," Steven said.

"Decisions like these have an impact on profitability, so you need to make the time to think them through."

Steven said if you consider the value in farming operations and the large amount of money outlaid annually, the importance of generating the highest possible returns becomes clear.

"The costs in agriculture can blow out very quickly," he said.

"Our benchmarking figures allow us to monitor the areas that affect our costs of production and then decide what changes are required. You have to look at all options objectively."

Setting up for success

As a result of attending Business EDGE, the Scotts upgraded their accounting software and reporting systems to better equip them for analysis.

"The course emphasised the difference between tax compliance accounts and financial management accounts," Cindy said.

"The compliance accounts are used as an estimate of tax liability only, while the management accounts analyse existing information to tell you what's going on in your business."

Business EDGE workshops also look at the difference between profit and profitability, as well as the relationship between profitability and growth.

A spreadsheet tool is provided to help participants assess investment decisions. ■

LESSONS LEARNED

- Financial literacy improves decision-making skills.
- Base business decisions on rigorous assessment of the figures, not on emotion.
- If you engage a financial consultant, ensure they push you out of your comfort zone by challenging and questioning all aspects of your business.

SNAPSHOT:

Steven and Cindy Scott, Henty, NSW

Area:
2,000ha

Enterprise:
Seedstock and commercial Angus cattle, cropping

Livestock:
900 Angus breeders, average 17,000 DSE

Pasture:
Improved pastures, phalaris/ sub-clover mix

Soil:
Mainly loam, also gravelly red brown earths at top of hills through to heavier-setting grey clay types on lower country

Rainfall:
Average 550mm, but highly variable

Business EDGE Young Guns:

- 2–3 April, Broome, WA
- 7–8 April, Tamworth, NSW
- 8–9 June, Brisbane, Queensland
- 10–11 June, Mudgee, NSW
- 22–23 July, Adelaide, SA

Business EDGE:

- 24–25 June, Clare, SA
- 22–23 July, Winton, Queensland

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mla.com.au/edge
mla.com.au/events

INVASIVE SPECIES

Reporting back on wild dogs

***Feedback* is putting the spotlight on invasive animals and the tools available to help manage them. Here's what you need to know about managing wild dogs.**

Dingoes were brought to Australia from Asia by Aboriginal people approximately 4,000 years ago and, since European settlement, have been interbreeding with domestic dogs. Wild dogs are now a declared pest in most states.

The challenge

Wild dogs mainly prey on native wildlife, but they are also a problem for producers through predation and disease transfer, causing at least $89.3 million/year in damage to the livestock production industries (estimates range from $48 million to $111 million).

Each state's wild dog action plan is aimed at providing important guidance to help producers formulate effective, best practice, humane management programs.

What can producers do?

Nil-tenure approach: This approach acknowledges that wild dogs don't recognise property boundaries and encourages community-driven, collaborative control programs. Talk to your local agriculture department or government agency to connect with established groups, learn basic wild dog management skills and get professional support.

Common control tools: Baiting (1080 and PAPP, canid pest ejectors), trapping, shooting, exclusion fencing and guardian animals are the most commonly used tools, and are often used in combination as part of a coordinated control program. PestSmart's *Glovebox Guide for Managing Wild Dogs* is a great resource to find out which tools will work best for different situations.

Remember, wild dog management is a state jurisdictional responsibility, so requirements differ depending on where control is being carried out. Check with your local group and/or state department before starting a control program. ■

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pestsmart.org.au

Tools

Do you have a wild dog problem? Here are some useful online tools to get it under control.

Before you start, get involved in WildDogScan: **feralscan.org.au/wilddogscan**

Log your sightings and impacts and see what other wild dog activity is happening around you to better inform your management strategy.

Visit PestSmart, **pestsmart.org.au**, for detailed advice on management strategies such as:

- ground shooting of wild dogs
- using padded-jaw traps and cage traps
- a field guide to poison baiting wild dogs and foxes
- ground baiting of wild dogs with 1080
- aerial baiting of wild dogs with 1080
- canid pest ejectors
- guardian dogs best practice manual
- cost-effective fencing for areas of high conservation value
- catalogue of fence designs.

For information on exclusion fencing in Queensland, visit: **notjustafence.org**

Industry action

The National Wild Dog Action Plan was developed in 2014. It's supported by the federal government and industry, and outlines the principles of best practice management for wild dogs.

To ensure a coordinated approach to ethical pest control, MLA's investment in this area is largely through its support of the Centre for Invasive Species Solutions.

MLA also supports the adoption of best practice wild dog management activities by co-funding a national wild dog management coordinator and three wild dog coordinators in northern and western Queensland, appointed in 2018.

Sheep and cattle projections for 2020

MLA has released the 2020 sheep and cattle industry projections, providing insights on the Australian red meat supply chain based on analysis of domestic and export markets.

Sheep

The national flock decline is expected to continue, falling 3.5% to 63.7 million head by June 2020, representing the lowest national flock since 1904.

Sheep slaughter is forecast to decline 22% to 7.2 million head and lamb slaughter to decline to 21 million head.

Despite poor conditions, average national carcase weights improved in 2019 and are anticipated to do so again in 2020.

Lamb carcase weights are forecast to rise 2% to 23.8kg/head, with the growing prevalence of supplementary feeding or lot feeding lambs, improved pasture availability and strong price incentives to feed lambs to heavier finished weights.

Lamb production is forecast to remain stable at 500,000 tonnes carcase weight (cwt), despite a decline in slaughter.

Global markets continue to reflect strong demand and constrained supplies from Australia and New Zealand, the two dominant sheepmeat exporters; however, uncertainty regarding global trade policy and China's appetite for meat imports due to African Swine Fever and coronavirus should not be disregarded.

Australian lamb exports are forecast to break records again – lifting 2% to 288,000 tonnes shipped weight (swt), while mutton shipments are forecast to decline 22% to 143,000t swt.

Cattle

The national beef cattle herd is expected to fall to its lowest level since 1992, down to 24.7 million head, representing a cumulative fall of 12.4% since June 2018.

Adult cattle slaughter in 2020 is forecast to fall 15% to 7.2 million head, with an expected tightening of supply as the year progresses.

Production is forecast to be down 13% to 2.1 million tonnes cwt. However, carcase weights are expected to increase 3% to average 292kg/head. This is due to an anticipated increase in the grainfed portion of turnoff and expected lower female slaughter if the herd shifts from contraction to rebuild, assuming a return to average seasonal conditions.

The lot feeding sector has maintained more than one million head of cattle on feed over the last seven quarters and this is set to continue in 2020, despite potential for higher feed and feeder costs.

Despite all of the pressures on producers, global demand for beef has remained robust.

The impact of African Swine Fever in China reshaped the global meat trade as more product was directed to the China market. Australian beef exports to China grew by 85% and the market emerged as Australia's largest market by volume.

Demand for beef from other key markets around the world remains robust, but buyers must now compete more fiercely. ■

Read the full 2020 projections at:

Sheep – **mla.com.au/sheepprojections**

Cattle – **mla.com.au/cattleprojections**

INNOVATION

Objective measurement: what it really means to your

MLA-funded research estimates that by 2040, more than $420 million/year could be poured into the red meat industry from the full adoption of objective measurement technology.

So what does that mean for Australian red meat businesses and how soon will the benefits start flowing down the supply chain?

MLA Manager – Co-innovation and Objective Measurement, Richard Apps, and MLA Program Manager Value Chain Technology, Chris Ruberg, share how producers and processors will start to see benefits from objective measurement and industry feedback in the next 12 months.

Precise yield data

Dual Energy X-ray Absorptiometry (DEXA) objective measurement systems in red meat processing plants will continue to be developed with lean meat yield (LMY) and optimised cutting data.

"Moving to DEXA gives two to three times the capacity to describe differences in carcase value because of the more accurate measurement," Richard said.

Several plants will soon start issuing LMY data on a per head basis from DEXA, including JBS Bordertown, JBS Brooklyn, Gundagai Meat Processors, Frew Group and the WA Meat Marketing Cooperative.

"Some lamb processors who've been using MLA's Livestock Data Link (LDL) app have already been providing LMY data back to producers, based on an industry algorithm," Richard said.

"They've been priming their supply base for a couple of years with this information and as soon as practical will switch to a DEXA-based figure."

According to Chris, this will help to better describe the true value of a carcase and enable the processing sector to develop new pricing mechanisms, such as yield-based grids.

An intramuscular fat probe is among the technologies being tested to objectively measure eating quality traits.

"Over the past 12 months, beef producers supplying the Teys Rockhampton plant will have noted preliminary LMY data on feedback sheets, based on an algorithm," Chris said.

"However, over the next 12 months, beef producers may see even more precise LMY data flowing from the first beef DEXA system, which will be calibrated using a mobile medical computed tomography (CT) system."

Producers can use this precise yield data to fine-tune genetics and husbandry practices to optimise on-farm productivity.

Precise chiller sorting

Lamb processors can benefit from more precise chiller sorting, increased boning room efficiency and more effective allocation of carcase to market.

They'll also benefit from a better understanding of grid compliance performance from their supply chains and will be able to offer valuable feedback to producers.

"At the moment, with so much variation in livestock, carcases and subjective assessments, it's giving rise to inefficiencies," Chris said.

"More precise objective measurements and the addition of yield and eating quality measurements will give processing plants the opportunity to group carcases in a more optimum way."

Objective eating quality

Over the next 12 months, systems will be introduced to use grading cameras to objectively measure eating quality

business

traits in beef, such as marble score.

Systems to measure eating quality in lamb, such as intramuscular fat (IMF), will be introduced over the next two years.

Technology providers are vying to demonstrate capability, including:

- IMF probes based on multispectral reflection and optical coherence tomography
- eye muscle imaging cameras
- industrial CT scanning.

"Differentiating our premium products on objective eating quality is a game we can win in global markets," Chris said.

Carcase value calculators

A lamb carcase value calculator is being developed. The ability to estimate right down to individual cut weights in a carcase will enable the gross profit to be modelled for different carcase types.

"A first-version calculator for beef carcase value has also been developed," Richard said.

"We'll be enhancing it in 2020 as we get major cutting trials underway and as the transportable CT scanner is used for DEXA calibration in Rockhampton."

Expanding beef boning automation

"There's really only one robot in the world doing advanced X-ray guided beef carcase cutting at the moment and that's at JBS Dinmore," Chris said.

"Teys Rockhampton has a very big beef boning automation initiative underway and they're now working with automation providers to design those cutting modules.

"As with precise robot automated lamb carcase cutting, the cost-benefits are substantial for producers and processors."

Education and support

MLA is working with the supply chain to help producers understand how to extract value from the new data created by objective measurement.

This includes through the Profitable Grazing Systems adoption program's pilot lean meat yield and eating quality workshops, hosted by processors for sheep producers.

Supply chain officers are also working with processors to provide assistance and feedback to ensure smooth, profitable flow of livestock from production to finishing to processing.

"Processors and producers will be assisted by the Advanced Livestock Measurement Technology (ALMTech) Supply Chain Group to prepare for these exciting developments," Chris said.

"Decision support tools and mechanisms to bring producers onboard will be introduced in a timely manner so no-one gets left behind." ■

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MLA final report:
mla.com.au/objective-measurement

DEXA:
mla.com.au/dexa

LAMBPLAN:
sheepgenetics.org.au

BREEDPLAN:
breedplan.une.edu.au

MLA Genetics Hub:
genetics.mla.com.au

Profitable Grazing Systems:
mla.com.au/pgs

Getting the most out of objective measurement

Five things producers can do now

1. Use LAMBPLAN: LAMPLAN indexes balance eating quality and production traits. An eating quality index is available for rams from flocks that participate in LAMBPLAN.

2. Use BREEDPLAN: IMF and retail beef yield estimated breeding values (EBVs) are available. Use these genetic tools to enable you to select for intramuscular fat as an eating quality trait and yield.

3. Monitor yield: understand where your lambs rank for yield and remember that higher is not better, as this can compromise eating quality. Selection for yield and eating quality must be balanced.

4. Build relationships: develop closer relationships with processors so you can better understand compliance of your carcases, be proactive in an improvement program and be prepared for potential new pricing mechanisms.

5. Talk to seedstock suppliers: have similar discussions with your ram or bull breeders, so your genetic supplier understands these issues as well.

INNOVATION

Meat enters the dry age

Dry ageing meat is nothing new, but as consumers seek unique and interesting food experiences, dry aged beef and lamb are back on the menu.

The technique was the only way meat was aged until the 1970s when wet ageing took over with its efficient handling, better yield and hygienic features.

Industry investment through MLA to support adoption of best practice dry ageing techniques is underpinning the resurgence.

Dry ageing has been reinvigorated in the past five years to add flavour and value to older animals, and the value chain appears open to this opportunity.

More than 40 producers, chefs, foodservice industry members, processors and meat retailers attended a recent workshop hosted by MLA at Melbourne restaurant, A Hereford Beefstouw.

Long Huynh, MLA's Project Manager Market Access Science and Technology, said dry ageing isn't a magic process to improve meat quality.

"It needs to start with good quality meat and you're simply adding more quality to it," he said.

Dry ageing pioneer Tim Burvill, who operates Melbourne and Adelaide's A Hereford Beefstouw restaurants with Scandinavian partners, has one of the largest dry ageing facilities in Australia.

"A lot of people want to have higher-end steak-eating experiences and dry ageing offers that opportunity," he said.

Tim places consumer expectations for dry aged beef between the experience of eating wet aged beef and Wagyu.

While dry aged beef and mutton has found a permanent place on the menu at A Hereford Beefstouw, Tim is trialling txuleton (pronounced 'choo-leeton') beef.

Txuleton is a specialty from Spain's Basque region where old and fat dairy cows (up to 18 years old) are processed and dry aged.

Tim is processing seven to nine-year-old Holstein Friesians and comparing the dry aged eating quality with that of similar-aged Angus and Hereford cows. The project will establish supply chains which add value to older animals, traditionally not processed for high-end consumer markets. ■

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Check out MLA's new guidebook on the dry ageing of red meat: **mla.com.au/dryageing**

Recipe for dry aged red meat

Ageing time: 28 days is the suggested minimum to gain the characteristic flavour profile and desirable tenderness. Dry ageing for longer improves meat flavour.

Temperature: Aim for a temperature range of -0.5 to -1.5°C. Storing meat at low temperatures controls bacterial and fungal growth. However, the lower the storage temperature, the slower the enzyme action which tenderises meat and controls microbial growth, so the tenderisation process and flavour improvement take longer.

Relative humidity: Target a relative humidity range of 75–85%. If the humidity is too high, the surface doesn't dry, which promotes bacteria and mould growth; if it's too low, it can result in excessive evaporative loss (yield loss).

Air flow: Constant air flow around the entire cut enables even drying and minimises spoilage. Aim for a minimum air velocity of 0.2–0.5m/s.

Ultra violet (UV) radiation: UV radiation can be used in the air filter in the chillers to improve the air quality and reduce contamination. UV radiation at wavelengths of 200–300 nanometres is effective at killing or damaging microorganisms. However, the light shouldn't shine on the meat as it can cause discolouration. ■

Getting better with age

Here's what two chefs who attended the Melbourne workshop had to say about the uptake of dry aged meat in Australia:

Chef Barney Cohen from Nomada in Fitzroy said his customers want an experience they can't buy in the supermarket.

"Lamb ribs, rump and neck have all been big sellers for us. We find it really hard to move racks or tenderloins so it shows customers want a unique experience."

Chef Jesse Gerner fronts Tigerbird International, which operates Melbourne restaurants including 'Anada', 'Bomba' and 'Nomada'.

"People want to try something different. We're really into mutton. We've served quite a bit of it and the customers really like it."

Image: Long Huynh

Mutton on the menu

Don't be too quick to let go of your older ewes – new research is looking into the emerging trend of dry aged mutton and how producers could one day take advantage of potential premiums.

Pilot research on dry ageing sheepmeat with SA-based restaurateur Tim Burvill soon evolved into a new MLA-funded project to examine if dry aged mutton could be a lucrative market for Merino producers.

Potential for premiums

University of Melbourne researchers Professor Robyn Warner, Hollis Ashman and Melindee Hastie managed the project, which found meat from five to eight-year-old Merino ewes was desired by consumers and could attract a premium price of $35/kg.

The project focused on:

- gathering market insights
- developing a best practice process for dry ageing sheepmeat by testing the eating quality and willingness of consumers to pay for it
- the needs of consumers and end users.

It involved processing 81 multi-purpose Merino ewes (supplied by Ben Duxson of Marnoo, Victoria) aged between three and eight years old, and dry and wet ageing the carcases for two, four, six or eight weeks.

"The multi-purpose Merino is an animal bred for wool and meat production with genetic traits supporting both. After 2,000 or 3,000 happy days on earth, our ewes may no longer be of value for reproduction but, as they were bred for their meat as well, can offer a high-quality carcase," Ben said.

"Dry ageing was seen as a means of improving the eating quality of sheepmeat now considered mutton and helping it become a niche eating experience."

Put to the test

Taste testing using the Meat Standards Australia tasting protocols was conducted with 540 consumers (from a range of different cultural backgrounds) eating their way through 3,240 samples of loin and leg cuts.

As a group, the consumers weren't able to detect the difference between wet and dry aged mutton; however, on segmenting the groups by cultural heritage, it was found those of a European heritage preferred the dry aged meat.

Market research found Asian and Australian consumers identified dry aged mutton as a premium offering. While Australians tended to enjoy it more as a standalone ingredient, Asians saw it as a component of a dish. Australians were also keener on the leaner cuts, while Asian consumers went for marbling. Both groups rated the rack and loin cuts highly.

Cooking for cut

The project also engaged chefs to develop cooking and usage recommendations and to showcase the product to foodservice. They found mutton had different cooking requirements to lamb and was ideally suited to slow braise and *sous vide* cooking techniques.

"A challenge we had was to optimise the value from dry ageing a whole carcase, so the project established ideal ways to use every cut. For example, rumps were ideal for *sous vide* and mince was a good option for convenience and versatility," Melindee said.

The research found a high-yielding carcase with a fat score of 3 or more was ideal. To minimise shrinkage, dry ageing a whole mutton carcase is advised; however, there's no benefit to dry ageing shanks as they lose too much yield.

Supply and demand

Ben Duxson, who participated in the taste testings, was blown away by the quality of the product and said this research paves the way for a producer or processor with scale and capacity to create a high-quality product.

"I'd love to do it but I think once the product gets out there, the demand will be pretty big and you need to have plenty of old ewes consistently available to supply the market," he said. ■

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Tim Burvill
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RESEARCH IN REVIEW

PROJECT NAME
Dry aged sheepmeat: A new opportunity

RESEARCH ORGANISATIONS
The University of Melbourne and William Angliss Institute

FUNDING ORGANISATIONS
MLA Donor Company and WA Department of Primary Industries and Regional Development

GOAL
To find the optimal process for dry ageing sheepmeat, test eating quality and willingness to pay, and understand the voice of the consumer and the end user with a focus on utilising WA-produced Merinos.

BUDGET
$311,300

DURATION
July 2017 – April 2019

KEY FINDINGS TO DATE

- Consumers like the taste of dry aged sheepmeat and are willing to pay $35/kg for it.
- Carcase fat score has the greatest influence on dry aged carcase yield.
- Different cooking techniques are required to maximise the flavour of mutton, compared with lamb.

INNOVATION

Building brands that benefit producers

What do beef, agri-tourism and Victoria's spring racing carnival have in common?

They're all part of a creative marketing approach by Tasmanian processor Greenham to deliver value back to producers.

Greenham is drawing on support from MLA's Collaborative Marketing (CoMarketing) Program to develop and implement marketing and business development activities for its beef brands, including the iconic Cape Grim Beef.

Greenham's marketing and communications manager Trevor Fleming said this collaboration has enabled the company to develop an agritourism experience to showcase Cape Grim Beef to foodies and foodservice professionals.

They draw on the CoMarketing Program to bring international butchers and chefs to Australia to see firsthand where the beef is produced, as well as to develop the agri-tourism experience, which launched in December.

Visitors can tour Cape Grim properties where the beef is grown, meet producers and learn about grassfed beef production, then finish the experience dining on Cape Grim Beef at the historic Highfield Estate. There are also cooking classes with renowned chefs and pop-up dining events on offer, showcasing beef.

"There is real value in having butchers and chefs meet producers and see and taste the beef," Trevor said.

"As soon as they come and see it, all the pieces of Cape Grim Beef come together in their minds.

"They become advocates and ambassadors for the product. They see it is a real story – they see the grass, see the cattle."

Strategic marketing

Growing a red meat brand takes effort, energy and money, regardless of how established it is.

This is where MLA's CoMarketing Program helps create opportunities for processors and, in turn, the producers who supply cattle into the brand.

Cape Grim Beef is one of six branded beef lines produced by the Australian-owned Greenham through their two processing companies, Greenham Gippsland and Greenham Tasmania.

The agri-tourism experience is one aspect of the Cape Grim Beef marketing program that will be partially funded via the CoMarketing Program.

Greenham is taking a strategic approach to how they use the program, by targeting marketing toward the specific needs of their different brands.

"It depends on the maturity stage of the brand," Trevor said.

"Cape Grim Beef is a mature brand which has been around for 13 years, so we focus on solidifying brand loyalty, compared to our new brand, Bass Strait Beef, where we are specifically building brand awareness," Trevor said.

"It's a massive project to create a new brand from scratch, so we used CoMarketing to help develop a whole marketing strategy for Bass Strait Beef."

Greenham introduced the Bass Strait Beef brand to enable them to expand their market and have used strategies such as sponsoring events to grow awareness.

"We sponsored a race on the Caulfield Guineas Day – the Bass Strait Beef Steaks – which, including social media reach, put the brand in front of five million people."

Benefit to producers

Trevor said the opportunities created for Greenham through the CoMarketing Program helped them find niches in the premium beef space, which has a flow-on benefit back through the supply chain.

"If we get more money for meat cuts, we can pay more to producers for all the hard work they are doing on-farm," he said.

"It's about taking good quality meat out of the commodity stream and putting it into high-value markets."

For example, Greenham's 'Never Ever Beef Program' – a grassfed, humane-treatment label introduced in 2012 – has seen more than 3,000 producers benefit from the marketing opportunities it provides.

"With customer preferences pushing towards animal proteins that were as natural as possible, we had to build a supply chain program to source, certify and promote premium-quality, natural grassfed beef from breeders and finishers," Trevor said. ■

LESSONS LEARNED

- > Agri-tourism can help build consumer awareness of a brand and deliver direct benefit to producers.
- > Marketing strategies should reflect a brand's maturity.
- > Brands tap into niche markets, capturing more value for the supply chain.

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How does CoMarketing work?

The CoMarketing Program is an MLA initiative to collaborate with Australian red meat brand owners to market their brands in domestic and export markets.

Collaborative activities include:

- developing brand marketing strategies and effective marketing plans in response to market insights
- building consumer awareness and preference to purchase Australian-branded red meat products
- creating customer loyalty and sustainable brand growth
- delivering added value back down the supply chain to producers.

The most recent round of CoMarketing supported 264 beef, 38 lamb and six goat brands (as at December 2019).

Applications for marketing programs planned for 2020–21 open in May.

More information:
comarketing@mla.com.au

The rugged Tasmanian coastline of 'Western Plains', one of the properties which supplies cattle for Cape Grim Beef. Image: Brodie Peters

MARKET FOCUS

Aussie beef a cut above

William Liang (pictured), executive chef at A Cut Steakhouse in the Ambassador Hotel, Taipei, shares his insights into Taiwan's love of Aussie beef.

Q: Why is A Cut Steakhouse so influential in Taiwan's dining scene?

Exclusivity is the key to our charm. In 2015 we exclusively brought in Robbins Island Wagyu beef from Tasmania. In 2016, we exclusively introduced Cape Grim grassfed beef from Tasmania, and dry aged the cut. We're the first high-end restaurant in Taiwan to dry age grassfed beef and make it a success.

Q: What can diners expect?

Our menus reflect the four seasons, with seasonal ingredients sourced from around the globe. Our signature dishes include Australian Wagyu beef rib eye, Australian Wagyu beef dumpling soup using intercostals and Australian beef tartare using oyster blade. We serve Tasmanian Cape Grim grassfed beef (from 60-month-old cattle) dry aged for 60 days, Westholme (Queensland) Wagyu beef rib eye and rib eye from SA's Mayura Station.

Q: What do your customers want to know, when it comes to food origin?

In recent years, what consumers in Taiwan care the most about is the food safety of the source.

Q: What motivated you to put Australian grassfed beef on your menu?

When I first tasted premium grassfed beef in Tasmania, I decided to introduce it to Taiwan, as grassfed beef has a different flavour profile from grainfed beef. We clearly describe on the menu that the beef is from Tasmania, Australia. It's because I appreciate the weather, the environment, the produce. The uniqueness and the story of a farm (beef brand), as well as the consistent quality, are important to me, it corresponds with A Cut Steakhouse's brand spirit.

Q: What is your message to Australian red meat producers?

Australia has a unique and special environment, please keep treasuring its gifts. I believe there's a tremendous opportunity for expanding growth of Australian high-valued beef products into Taiwan.

Q: What other red meat dishes do you serve?

We also serve Australian lamb (dry aged for 18 days), Japanese Wagyu beef, US Wagyu beef, Holstein beef and US grainfed beef.

TAIWAN DINE
FOR AUSTR

A love for dining out among Taiwan's wealthy and urbanised population has seen the island become a significant and consistent market for Australian beef.

Taiwan's beef consumption continues to increase, driven by a large young adult population with growing disposable incomes and more openness to western-style foods.

Between 2009–2019, beef consumption per capita increased 41% from 5.1kg to 7.2kg (Fitch Solutions).

As demand grows, Taiwan has increased its volume of beef imports by about 36% from 2014 to 2019, with total beef imports reaching an all-time high of 133,826 tonnes shipped weight (swt) for the 12 months to November 2019.

In 2019, Taiwan was the sixth-largest beef export market by value for Australia and the fifth-largest for the US.

Importantly, Australia's total beef export unit price (A$/kg) to Taiwan has been the highest among our top 10 export destinations for the past five years.

Dining-out culture

Foodservice is an important channel for Australian products, which go into Taiwan's mid-end casual dining as well as top-end fine-dining sectors.

MLA's Global Consumer Survey conducted in Taiwan in 2016 found Taiwan's dining-out frequency was high by global standards, with Taiwan consumers dining out for lunch and dinner at more than double the rate of Australians.

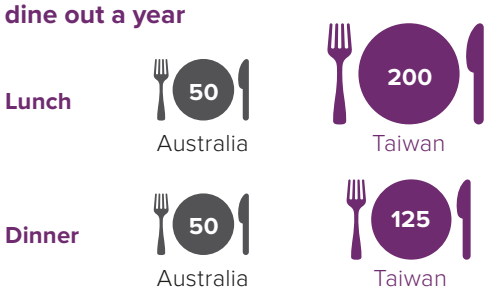
Around 70% of Australian beef exported to Taiwan goes into the market's foodservice sector, with shin or shank and intercostal cuts used in slow, wet cooking for local-style dishes and thin-sliced product used in shabu-shabu and hot pot-style recipes.

The western-style, fine-dining segment has grown in recent years, using premium beef cuts such as cube roll, rib eye roll, striploin, tenderloin and short rib. Some consumer segments have developed a preference for highly marbled beef such as US prime, Australian Wagyu and Japanese Wagyu, while others seek quality, leaner grassfed beef.

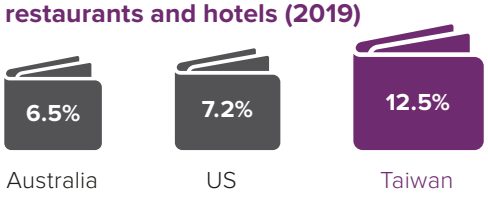
The outbreak of coronavirus has contributed to a decline in sales in the foodservice

RS GOOD NEWS
ALIAN BEEF

Number of times consumers dine out a year



Percentage of household spend on restaurants and hotels (2019)



Source: Fitch Solutions

sector. The hotel restaurant sector is especially impacted as many corporate events, conferences and wedding banquets have been cancelled, creating some market uncertainty.

Safety and quality key

Taiwanese consumers have high levels of concern about beef safety. Country of origin is a key way consumers judge a product's safety, and Australian beef has perceived strengths in safety and consistency of quality compared to other import suppliers.

Continued messaging on Australia's unique traceability and food safety systems will maintain Australia's advantage on the important attributes of safety and quality.

A marketing opportunity is articulating Australian beef's eating quality benefits of flavour, tenderness, aroma and juiciness. These qualities deliver an enjoyable experience, which is particularly important to building preference among younger and more affluent consumers, who consume more beef.

Taiwan's retail sector is quite mature by global standards, with Australian beef bought mostly from hypermarkets and supermarkets.

Global competitors

Although Taiwan's beef imports have grown in recent years, increased competition from the US, New Zealand, Paraguay and Japan is putting pressure on Australia's market share in different market segments. Each of these countries have been exporting larger quantities than previous years, with New Zealand and Paraguay also benefiting from zero tariffs.

Due to tight supply from Australia and strong demand from China, Australia's market share in Taiwan has been surpassed by the US for the past five years.

US beef commands a significant premium over Australian. In the year to November 2019, unit prices were 28% higher for US frozen beef and 37% higher for US chilled beef compared to Australian product.

This partly reflects the different mix of cuts and grades of product, with US chilled beef mostly comprised of 'special quality' boneless, prime or choice-grade boneless short rib, chuck eye roll and steak cuts.

US frozen product is made up of a higher proportion of prime or choice-grade short plate, chuck eye roll and oyster blade cuts, while Australian frozen is dominated by shin or shank, blade and manufacturing cuts. Taiwan has placed some restrictions on US market access. With US ground beef and internal organs ineligible for import due to lingering concerns relating to bovine spongiform encephalopathy, Taiwan only allows US beef products from cattle under 30 months of age.

In late 2017, Japanese Wagyu regained access to the market and in the year to November 2019, Taiwan imported 641 tonnes swt of beef from Japan, becoming one of Japan's largest markets and intensifying competition for Australia's higher-value grainfed exports in the foodservice sector.

Stronger communication about Australia's superiority in safety, quality, consistency, nutritional value and the wide range of product variety – from lean grassfed to highly marbled – will help convince Taiwanese consumers to favour Australian beef. ■

Joe Zhu
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TAIWAN

Taiwan population

2019: 23.8 million
2023 projection: 23.9 million
(Source: Fitch Solutions)

Australian beef exports to Taiwan

Volume: 28,995 tonnes swt
Value: A$48.3 million

Australian sheepmeat exports to Taiwan

Volume: 2,375 tonnes swt
Value: A$13.8 million
(Data for November 2018 to November 2019. Sources: DAWR, IHS Markit)

Taiwan meat imports

Taiwan has been a significant and consistent market for Australian beef over the past two decades and consumption is increasing. Beef imports reached an all-time high of 133,826 tonnes shipped weight (swt) for the year to November 2019. Australia's main competitor in the market is the US, followed by New Zealand.

Taiwan is a significant importer of sheepmeat but, due to a trade agreement with New Zealand, NZ product has preferential access over Australian, with zero tariffs applied.

Taiwan is Australia's second largest market for goatmeat with much of it consumed in specialised, traditional hot pot-style restaurants.

Trade agreements with Australia

None

Want to know more? Check out **mla.com.au/market-snapshots** for a more in-depth look at key markets.

INNOVATION

Welcome to The Meat Club

MLA has teamed up with an Aussie expat turned meat entrepreneur to take our quality beef and lamb into Singaporean homes.

The Meat Club website features curated recipes from local and expat home cooks in Singapore, including these delicious dukkah lamb cutlets.

When expat Aussie Amy Bell searched her new home, Singapore, for good quality red meat which didn't cost the earth, she came up empty-handed.

It was her catalyst to create The Meat Club, an online business importing premium fresh Australian red meat at a price accessible to families in Singapore.

Amy followed her husband Josh to Singapore in 2013 when he started a Mexican dining franchise, Guzman y Gomez, describing herself as a "typical trailing spouse".

Although the former lawyer initially worked in consultancy in Singapore, it wasn't until she became pregnant and found herself craving quality red meat that she headed down a new career path.

"The cost of buying red meat in Singapore was exorbitant," Amy said.

"For $100 you could get something very tasty, but the guilt factor spoiled the enjoyment altogether, and the quality of cheaper meat was too poor."

Amy conducted some market research on the landed price of beef in Singapore and realised there was a gap in the market for reasonably priced quality meat.

And so, in 2014, The Meat Club was born as an online store, home delivering Australian beef and lamb.

The business has now expanded to include chicken, pork, fish, sausages and vegetarian burger options.

"When I first launched the business, I definitely had an expat focus," Amy said.

"My experience told me expats have a first-mover advantage and are more likely to try something new based on information and trust alone.

"Locals have since come on board, but this took longer and involved education around provenance, steak cuts and how to prepare the meat."

A better diet

As with most developed countries, Singapore faces an increasing health burden of obesity and type 2 diabetes. In response to this, the Singapore government's Health Promotion Board has rolled out a raft of programs to encourage healthier eating.

"There's a trend towards more healthy, wholesome foods and people are becoming more conscious of having a balanced diet," Amy said.

MLA is working with The Meat Club to raise awareness of the health, welfare and sustainability benefits of Australian red meat.

Ellen Rodgers, MLA's International Business Manager for Southern Asia, said Amy is a thought leader, pushing the sustainability message to Singapore consumers while educating them about the nutritional

advantages of eating natural products, and knowing where that product has come from.

"Amy has created an Australian business that focuses 100% on Australian product," Ellen said.

"She believes in the industry and is eager to share this product with consumers across Singapore.

"She promotes farm gate-to-plate products with minimal handling, to ensure consumers are getting their products fresh and safe."

Business development

The Meat Club business model is evolving, with the addition of new revenue streams outside its own website.

Amy now works closely with online grocery store Redmart, owned by Lazada. Lazada is backed by Alibaba and is the number one online marketplace in South-East Asia. They've also launched into another grocery retailer, FairPrice Finest.

"It's been the most challenging and the most rewarding time since we started," Amy says.

Although the business has grown, Amy keeps the operation lean with just three people who focus on logistics and marketing.

Amy encourages Australian producers to recognise the enormous opportunity which exists in telling the on-farm story to markets such as Singapore.

"The farm-to-plate story is such an attractive one for consumers," she said.

"Consumers are interested in the provenance story and the producers' day-to-day lives.

"I'd love to launch a live webcam on our site, where customers can log in and see the weather, the animals and overall farming conditions.

"This would feed into the Australian story of free range, grassfed, hormone-free products." ■

Amy Bell presents at Like A Boss, a mentoring and networking event for women in business.

In 2019 The Meat Club took out the Small But Mighty Award and won the overall category for Readers' Choice in The Finder *Expatpreneur Awards. Pictured from left are* The Finder *magazine's publisher Eileen Chia, Amy Bell of The Meat Club and* The Finder *editor Sara Lyle Bow.*

Taking care of business

MLA assists The Meat Club with consumer insights and events, and True Aussie recipes and tutorials for the business's online content.

All Meat Club products are branded with the True Aussie brand and retail partners are supported to showcase True Aussie products in-store and online.

In addition, MLA Value Chain Solutions Manager David Carew is working with Amy on innovation, looking at new offerings for consumers outside the popular cuts, such as thin-slice and value-added products that are easy for consumers to cook at home.

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INDUSTRY INSIDER

From Boorowa **to Brexit**

Mary Johnson, outside the European Parliament in Brussels.

t's a long way from Boorowa, NSW, to London, but that's where you can find Mary Johnson these days.

Mary grew up on a sheep and cattle property on the south-west slopes of NSW, studied in Canberra and worked in Sydney before packing her bags for the UK earlier this year to take up the role of MLA's Market Access Manager for Europe.

Here, Mary explains how she's sharing Australian red meat's story on the other side of the world.

Q:

How did you end up working with MLA?

I didn't take the standard path into the red meat industry. I studied political science and English literature at the Australian National University in Canberra, so I could have ended up anywhere. When I graduated, I worked as a policy officer and communications adviser at the Cattle Council of Australia, where I worked on the International Beef Alliance program and developed an interest in trade policy and market access. From there, I worked within MLA's stakeholder engagement team, and three years ago I joined the trade and market access team.

This year, I've taken up a new role as Market Access Manager, based in MLA's London office. With free trade agreement negotiations between Australia and the EU as well as discussions underway regarding the future Australia-UK trading relationship, it's certainly an interesting time to be working in our markets.

Q:

Why is market access important?

More than 70% of Australia's red meat is destined for an international market, so the importance of maintaining and growing Australia's access to a variety of markets shouldn't be underestimated.

The more markets available for us to trade with, the more opportunity there is for our products to compete for the highest price.

In Europe and the UK, we're working with industry and the Australian government to secure improved access to markets we have a long history of trading with, but where our access has been constrained by low volume import quotas and high above quota tariffs. This makes it cost prohibitive to trade out of quota. Negotiations like these don't come around very often – so it's a once in a lifetime opportunity.

Q:

What are some of the challenges you've come across in your new role?

In Europe there are often misconceptions about the Australian industry and our production, particularly due to our geographic distance, so one of the challenges is addressing these misconceptions and telling our story. A large part of my role involves talking to Europeans about our industry's systems and programs such as National Livestock Identification System (NLIS), Livestock Production Assurance (LPA), Meat Standards Australia (MSA) and more recently the Australian Beef Sustainability Framework. These are so important to help us illustrate the realities of our production to our markets.

Q:

What's the best part about working in market access?

I'm really proud to tell the Australian red meat story, particularly about the people who make up our industry. It sounds a bit clichéd but producers work to ensure their product is of the highest quality – from the families who work every day to produce healthy, happy livestock on-farm, right through to our innovative and culturally diverse supply chain, all the way to a fork (or chopsticks or between two pieces of bread) somewhere in the world. It's always a privilege to show international guests the 'real' Australia, where the country hospitality is always second to none.

Q:

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

I love being outdoors, running and swimming, getting home to the farm and helping with stock work, entertaining friends and throwing dinner parties.

Q:

What is your favourite red meat dish?

At Christmas we made Matt Moran's brined and slow-cooked lamb shoulder which was absolutely delicious. I also can't go past loin chops or a rib eye on the barbecue with a big fresh salad.

Mary Johnson
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Peachy keen

Peach and rocket are the perfect sidekicks for these marinated lamb forequarter chops. You can find more easy meal ideas from MLA's summer lamb campaign at australianlamb.com.au

Lamb forequarter chops with grilled peach and rocket

Serves: 4 • **Preparation:** 15 minutes • **Cooking:** 20 minutes

4 forequarter lamb chops, trimmed
¼ cup olive oil
¼ cup lemon juice
2 tsp dried oregano
3 cloves of garlic, crushed
Salt and pepper to season
Extra lemon wedges to serve

Grilled peach and rocket salad

4 peaches, stones removed, quartered
150g marinated feta in oil (oil reserved)
2 tbsp red wine vinegar
1 tbsp lemon juice
1 tsp Dijon mustard
150g baby rocket leaves
½ cup almonds, toasted, chopped
Parsley leaves to serve

1. Pat dry lamb with paper towel. To make marinade, mix olive oil, lemon juice, oregano and garlic together in a bowl. Season with salt and pepper. Brush over lamb, cover and refrigerate for 30 minutes to 1 hour. Bring lamb to room temperature for 30 minutes before cooking.
2. In a small bowl, place ¼ cup of reserved oil from feta, red wine vinegar, lemon juice and Dijon mustard, season with salt and pepper. Whisk to combine.
3. Heat a chargrill pan over medium-high heat. Brush flesh of peaches with olive oil, place on chargrill pan. Cook for 2–3 minutes each side. Remove from heat. Increase heat to high.
4. Add lamb and cook in batches for 4–5 minutes each side until marks appear and lamb is cooked to medium. Set aside to rest for 5 minutes. Toss rocket and peaches in serving bowls, drizzle with dressing. Crumble over feta and top with toasted almonds and parsley leaves.
5. Serve lamb with salad and lemon wedges.

TIPS

- You can also use lamb leg steaks, lamb cutlets, lamb loin chops or lamb chump chops for this recipe.
- Pistachios, pecans and walnuts will also work well as a substitute for almonds.
- Mix up the salad by grilling pears or nectarines.

JULY 1-3
MELBOURNE

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