mla Your levies at work // April 2014

Feedback

Going one better

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LambEx 2014 tackles tough industry issues

Australia's Lambassador Sam Kekovich will celebrate 10 years of loving Australian lamb at LambEx 2014, to be held in Adelaide, 9–11 July.

Registrations are now open for the MLA sponsored event which will focus on the big ticket items influencing the sheep and lamb industry's future.

Sam will take part in the first night welcome function and speakers at the conference will include United Kingdom food marketing researcher Professor David Hughes and MLA Global Marketing General Manager Michael Edmonds, both of whom will examine changing consumer preferences and the on-farm practices needed to meet evolving market requirements.

United States rancher and radio broadcaster Trent Loos, who challenges producers to be 'agvocates' in their own families and communities, will return to LambEx.

Local experts on the program include Thomas Food International's Darren Thomas talking about how producers can capitalise on market opportunities; MLA's Manager Eating Quality R&D Dr Alex Ball on new generation sheepmeat eating quality; JBS Innovation Manager Graham Treffone on robotics in processing and Sheep Industry Consultant Dr Jason Trompf on improving profit margins.

The LambEx registration package includes a two-day conference, a welcome function, optional breakfast sessions with the Grasslands Society of Southern Australia or Sheep Genetics, the AWI GrandsLamb Dinner and the Gallagher Recovery Breakfast on Friday morning.

A range of registration options are available, including early-bird discounts for producers and students who book by 1 June and group registration discounts.

View the full program and register at **www.lambex.com.au**

Young lamb industry advocates are invited to enter a LambEx competition, being run in association with the Australian White Suffolk Association, by 'building the lamb value chain of the future' projects. The best projects will be displayed at Lambex and the three categories are high school/undergraduates; honors, MSc and PhD; and early career professionals under 30. More information is on the LambEx website or contact the convenor Bruce Hancock at: bruce.hancock@sa.gov.au

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Cover: MLA Challenger Lachlan Hughes with his wife, Anna, and son William. Photo by John Elliott.

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Speeding up Johne's disease diagnosis

After more than a decade of research in Australia and overseas, sheep and cattle producers now have a rapid diagnostic test for Johne's disease.

The new Johne's disease (JD) test reduces waiting times for a diagnosis from three months to one week, decreasing the risk of further disease spread and reducing stress on affected producers.

The test, known as the High-Throughput-Johne's assay (HT-J), was developed by researchers from the University of Sydney and the NSW Department of Primary Industries (DPI).

The research was part of a five-year, $6.4 million JD project led by Sydney University's Professor Richard Whittington and funded by the MLA Donor Company in partnership with Animal Health Australia. The research team included Dr Karren Plain, Dr Ian Marsh and many collaborators across the livestock sector in Australia.

According to Richard, the test's development threw up plenty of challenges for the team.

"This test is the culmination of at least a decade of very difficult research here and elsewhere," he said.

"Most animals become infected with JD in the first one to 12 months of life, but don't show signs of disease for years.

"They only shed minuscule amounts of bacteria in their faeces, which makes it very hard to detect, but they are capable of infecting other animals and other properties if sold.

"The challenge for us has been to try and detect the smallest quantity of JD bacteria in faecal samples."

After being approved by the Sub-committee on Animal Health Laboratory Standards, the HT-J test underwent a trial by fire when Bovine JD was discovered in North Queensland in November 2012.

Intensive use of the new test revealed weaknesses, including the delivery of inconclusive results, which prompted industry-wide collaboration from researchers and laboratory technicians to quickly refine the HT-J.

MLA's Animal Health and Biosecurity Project Manager, Dr Johann Schröder, said the test allowed affected producers to more quickly adopt corrective/remedial management strategies.

"The more quickly you can get a JD diagnosis, the more quickly you can stop further spread of the disease," Johann said.

"It also reduces stress on producers – they no longer have to wait three months to find out if their property is affected or not."

Richard emphasised that the new DNA test removed the delays associated with the culture test, but was not foolproof.

"Producers must work closely with their relevant veterinary services to interpret test results at a herd/flock level, and then properly deal with Johne's disease," he said.

Top: Research assistant Adelyn Bolithon stores faecal samples before testing at -80°C.

Below: University of Sydney Johne's disease research team laboratory manager Anna Waldron performing the initial steps of the testing procedure.

3 months
for diagnosis with old JD test

1 week
for diagnosis with new JD test

$7.68/DSE
average economic loss due to ovine Johne's disease

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Developing agriculture's brains trust

MLA invests more than $1 million each year in Australia's education system to attract and retain scientists to meet industry's R&D needs. In competing for the best and brightest, is Australia's cattle and sheep industry getting the best 'bang for its buck'?

MLA commissioned an education pipeline review in 2013 to measure the return from investments in school programs, undergraduate and postgraduate scholarships, postdoctoral fellowships and researcher travel grants.

The review team surveyed 150 stakeholders (university leaders, students with MLA scholarships and their supervisors, and industry leaders) and identified the major challenges as:

- → a declining number of students in agricultural science
- → a significant proportion of scientists nearing retirement age
- → universities restructuring courses to focus on general science, at the expense of agricultural science
- → fewer Australian students contemplating Masters or PhD studies

Agribusiness adviser Mike Stephens, who led the review, knows the value of education. He left school when he was 15 to jackaroo but is now, decades later, completing his Masters.

"Some agriculture sectors historically focused on 'doing' rather than achieving a formal education," Mike said.

"But agriculture has become very sophisticated and its profitability and productivity is now driven by innovative technologies and complex management strategies."

Mike said targeted investment in education gave industry access to knowledge and skills in specific areas, such as parasitology, genetics, pasture management, biometrics and economics.

"The review recommended MLA targets later-career people, who are already established in the industry but may not be able to commit to further study without financial support," he said.

Dr Jim Rothwell, MLA's Sustainability R&D Program Manager, said MLA took a long-term view on science education.

"Reviewing our investment in education ensures we continue to fund development opportunities for scientists," he said.

"This positions industry to access the RD&E required to achieve improved practices across a diverse range of disciplines, from animal health to farm profitability."

Project dashboard: Education pipeline review

Financial contributions to the project:
$85,000

MLA levies: **50%**

Government: **50%**

Start:
February 2013

Finish:
September 2013

Completed

The project is part of MLA's objective to:

Increase productivity across the supply chain.

Read about MLA Scholarship recipient Linda Cafe and her cattle research on page 11.

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Tune in to phosphorus trial

You can learn more about producer trials assessing the effects of phosphorus supplementation on young cattle in a new MLA video.

At Glenflorrie Station in the Pilbara, Murray and Aticia Grey, who are featured in the video, are measuring the impact of phosphorus supplementation on the growth and reproductive performance of their young cattle. The property is part of MLA's Producer Demonstration Site (PDS) program.

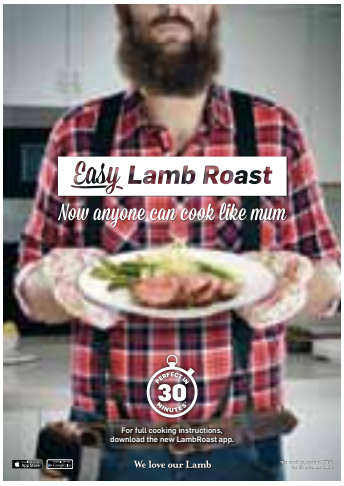
As soil phosphorus levels are an issue in the Pilbara, and many cattle are deficient in the mineral, the Greys are assessing whether mineral supplements could increase their maiden heifer calving percentage from around 60% to 80%.

In addition to increased conception rates, the cows' weight should also improve – further adding to the financial benefits of using supplements.

To watch the video go to: **www.youtube.com** and search for 'Phosphorus supplements'

Read more on the PDS and Glenflorrie Station at **www.mla.com.au/phosphorus-supplements-for-fertility**
Download MLA's *Phosphorus management of beef cattle in northern Australia* manual at **www.mla.com.au/phosphorus-management**

Easy does it *for autumn lamb*



Cooking a lamb roast can take just 30 minutes and you don't need to be a mum to pull it together. That's the message behind MLA's easy lamb roast marketing campaign for autumn.

The campaign, builds on last year's main message of promoting lamb roasts which can be cooked quickly and easily by anyone, making them an ideal meal choice for any day of the week.

"While lamb roasts are revered by consumers as a favourite meal they are typically seen as time-consuming to prepare and something mum might make for a special occasion," said MLA's Regional Manager Australia, Lachlan Bowtell.

"There are lamb roasting cuts like rump or topside that can be cooked in about half an hour and that's what the campaign focuses on. Helping consumers realise that a roast isn't time consuming or hard to cook is a step towards changing consumer habits to place lamb roasts on the 'everyday' menu, not just on weekends or special occasions."

The campaign began on 30 March with the return of last year's successful television commercial featuring a stereotypical leather-clad, tough-looking biker displaying out-of-character motherly affection and cooking a lamb roast for his biker family.

"Research found the ad communicated the message very well that a lamb roast can be cooked by someone other than mum and by re-airing last year's commercial we can reach a wider audience in prime time viewing slots while maximising our investment last year in creating the original ad," said Lachlan.

5,000

people visited MLA's easy lamb roast website during the 2013 autumn campaign to access roast cooking times

The campaign runs for four weeks. It is supported by a range of marketing collateral including posters and pack stickers, recipe editorials as well as radio spots and recipe dispensing panels in major shopping areas.

A lamb roast mobile app is available for download to provide consumers with roasting cuts information and relevant cooking times for the cuts.

The app can be downloaded from the iTunes store **www.apple.com/au/itunes**

View the commercial at **www.beefandlamb.com.au**

Try an easy roast. See page 33.

Lachlan Bowtell, MLA
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Project dashboard: Autumn lamb campaign

Financial contributions to the project:

$1.2 million (marketing)

MLA levies: **100%**

Length of project:
One month

Finish:
Mid-April 2014

The project is part of MLA's objective to:
Grow domestic demand for beef and lamb.

Farm on film

MLA has produced a new practical video showcasing how hard-seeded, annual pasture legumes are providing flexibility in crop-pasture rotations in Western Australia's south-west. The video is filmed at cattle and sheep producer Simon Stead's property at Esperance. Simon is joined on the video by researcher Bradley Nutt. The video complements the *Feedback* articles on pages 24–26. View the video at **www.mla.com.au/hard-seeded-legumes**

In full view

The Hamilton Meat Profit Day held on 19 February 2014 at Hamilton, Victoria, presented producers with tools to run productive and sustainable businesses to 2025 and beyond. Webcasts, recipes and recommended reading from the event are available at **www.mla.com.au/HamiltonMPD**

The WA Meat Profit Day held on 3 April 2014 at Port Denison, Western Australia, stimulated and challenged producers to achieve greater levels of productivity through showcasing cutting edge technology in livestock production systems and practices that can have an immediate impact on producers' businesses. Webcasts from the event are available for viewing at **www.mla.com.au/MPD-WA**

Business management

Benchmarking – more than just a set of numbers

Benchmarking is a widely recognised business tool which can help agricultural producers achieve their business goals and boost profitability.

It can identify opportunities to improve the financial performance of individual enterprises within a business, while benchmarking as part of a group can help provide additional motivation and confidence to implement different strategies. When a producer then compares their position with the industry average it can help identify the potential for their business.

To make change based on benchmarking results the first thing is to understand what they are telling you about your business, according to Bush AgriBusiness consultant Ian McLean.

Ian delivers MLA's BusinessEDGE course to northern cattle producers and has also developed the Business Analyser benchmarking tool specifically for the northern pastoral industry.

He said benchmarking allowed producers to step back from a business they may know inside and out, and see it from a different perspective.

"The information it provides then helps them identify where to focus their attention in their business, and where not to," he said.

"I have analysed a business where costs were initially a concern, but we found that low costs were actually a big strength for that business.

"Instead, by analysing all the data, we found there was room for improvement in herd productivity, so were able to identify where to focus attention and make change."

Ian said people who go through the process of benchmarking are motivated to change.

"Change is easier to make because the producer emerges from the process with a good understanding of the results, so they can make their own informed decisions," he said.

"That's very different from someone coming in and telling you you're doing something wrong and need to do it a different way."

Sandy McEachern from eastern Australia's largest agricultural benchmarking firm, Holmes Sackett, works with individuals and producer groups, with their database split about 50:50 between the two client types.

Their longest running benchmarking group is currently the Flinders Island Productivity Group, operating since 2002 (see story on pages 8–9).

"The group situation is not for everyone, but it has worked well for this group," Sandy said.

"They meet regularly and all know each other's financials, which means they really understand each other's businesses and can give good advice.

"If I stand up the front and suggest a way to change, there can be scepticism in the room, but if it's backed up by someone who's already doing it, the suggestion gains a lot of credibility."

As well as helping producers identify opportunities for change and growth on the property, benchmarking can help open the lines of communication with business partners, such as banks and financiers.

Westpac's Head of Agribusiness Susan Bower sees value in producers undertaking benchmarking as it helps them analyse every aspect of their business and identify how they are positioned against peers and industry leaders.

It also provides the opportunity for business partners to be involved in the business analysis, assisting producers with their management plans with both parties clear on expectations and outcomes.

"If people are engaging in activities such as benchmarking it shows a real drive by them to better understand their business, where they're going and what their end goal is," Susan said.

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Top to bottom: Ian McLean, Sandy McEachern and Susan Bower

Benchmarking 101: getting started

As Sandy McEachern said, group benchmarking isn't for everyone, so how do you get started if you want to benchmark as an individual producer?

Step one is to establish how your business is performing, then measure it against published industry benchmarks.

There are a number of free, online tools developed for specific industries that can help you get a clear picture of your enterprise's performance. These include:

- Making More From Sheep - Module 1 - Plan for Success **www.makingmorefromsheep.com.au/plan-for-success**
- More Beef from Pastures - Module 1 - Setting Directions **www.mla.com.au/mbfp/setting-directions**
- MLA's cost of production calculators **www.mla.com.au/calculators**

Free data sources include:

- Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) **http://apps.daff.gov.au/MLA**
- Department of Environment and Primary Industries Victoria Livestock Farm Monitor Project **www.dpi.vic.gov.au/agriculture/beef-and-sheep/livestock-farm-monitor-project**

If you would prefer to have a third party assist you, there are a number of agribusiness consultants and advisors offering benchmarking services who are accredited by the Australian Association of Agricultural Consultants (now known as Ag Institute Australia). Find out more by visiting **www.aginstitute.com.au/index.html**

In Western Australia you can find an accredited consultant by visiting **www.aaacwa.com.au**

MLA's BusinessEDGE is a two-day financial and business management training workshop for northern beef producers. For details, visit **www.mla.com.au/edgenetwork**

Gathering the information

As a starting point, producers need the following information for benchmarking:

- A list of all assets and liabilities and their values
- A whole year report from their accounting package
- The number of labour days worked by owners, contractors and employees in a year on each enterprise
- Rainfall and land description
- Opening and closing: livestock numbers; grain and fodder inventory
- Number of females joined
- Main month of lambing/calving
- Records of sale transactions through the year including: number sold, weight at sale, price received, selling costs, month of sale and kilograms of wool/head
- Crop areas
- Grain yields

Business management

Cattle, calculators and cashflow

Flinders Island cattle and sheep producer Scott Anderson believes benchmarking is critical to the success of his business.

Scott and his wife Anna run a 35,000 DSE dryland beef and lamb enterprise on two properties.

In 2002 Scott helped start the Flinders Island Productivity Group to provide continuous education and business development for local producers.

Some of the group's members began benchmarking with Holmes Sackett and, while membership has been fluid over the years, the benchmarking group currently stands at 10 members.

"Benchmarking allows you to closely analyse your business and focus on what really matters," Scott said.

"You basically do a cost-benefit analysis on everything you do."

The Flinders Island benchmarking group has achieved a 1% higher average return on assets than the Holmes Sackett database average (established from data collected from clients across southern Australia), a figure Scott attributes to the group's high production per 100mm of rainfall and land values.

"Even though we have a good range of enterprises and producers within our group, we're probably running very similar systems now," Scott said.

"The land prices are also lower than comparable areas in Tasmania or Victoria – we're discounted for our perceived isolation.

"That isolation is mostly felt in freight costs which, for cattle, are about $30 to $40 more per head than producers in Tasmania or Victoria pay, but probably similar to costs faced by isolated producers on the mainland."

Scott said the first few years of benchmarking were dedicated to ironing out the big issues in members' businesses.

"There were big changes, such as time of calving, time of lambing, time of sale and target weights for sale," he said.

"But after about five years you start to drill down into the overheads and the little things you can refine, such as fodder conservation through feed budgeting.

"One of the greatest things we've been doing in the last few years is more seasonal feed budgeting. This has allowed us all to look for opportunities, such as buying in trade cattle if the season looks right.

"Our enterprise was previously a straight breeding enterprise, but benchmarking has given us the extra knowledge and confidence to add stock trading to our enterprise mix."

Scott first started benchmarking as an individual in 1996, but sees more value in benchmarking as a group.

Fellow member Liz Grimshaw agreed and said the group situation provided different perspectives on both technical and financial issues, and was also a source of emotional support.

Liz and her husband Michael run a 900-cow beef breeding enterprise on 'Clifton' and joined the benchmarking group 10 years ago.

"Benchmarking as a group is invaluable, particularly as our group doesn't hide any figures," Liz said.

"That openness makes it an incredible learning tool and everyone is willing at any stage to be on the phone and talk issues through.

"We also spend a lot of time visiting each other's farms and discussing the technical aspects of farming, so it's also about learning in action."

Holmes Sackett Director Sandy McEachern works with the benchmarking group and visits the island twice a year.

He said participation in the group had allowed the members to build considerable business acumen, leading to more profitable businesses.

"The Flinders Island group has become close knit and all speak the same language, and they respect people who can turn a business around – they know those are the best managers," Sandy said.

"The group has become very business focused and understand the compromises that need to be made to get a business to perform well.

"They understand the difference between achieving technical perfection and achieving the highest margin, and that is often a difficult concept for producers."

Right: Flinders Island Productivity Group members and keen benchmarkers Scott and Anna Anderson. Photo by Jaga Lipski.

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A dot in the ocean

Flinders Island is the largest of the 52 islands in the Furneaux group, located between Wilson's Promontory in Victoria and Cape Portland in Tasmania. It is roughly 75km long and 40km wide and has around 800 permanent residents. Annual rainfall averages 700mm. There are approximately 50 livestock producers on the island.

Snapshot

Flinders Island Productivity Group, Flinders Island, Tas.

Membership: 30 farm businesses, of which 10 benchmark

When the group was formed: 2002

Types of enterprises represented: Mainly beef with some prime lambs and wool

Average farm size: 1,200ha (range 600–2,000ha)

Average herd size: Approximately 750 breeding cows, plus sheep enterprises

Average annual stocking rate: 18 DSE/ha over the mix of enterprises

Business management

Taking up the benchmark challenge

One way to focus on business productivity is to understand where the business is at – either through benchmarking or analysis – and then determine where you want it to head. The MLA Challenge has been working with the Challengers on how to set targets to drive change and growth in their businesses. Here we learn more about the difference it has made to the two Queensland Challengers.

Lachlan Hughes

What business targets have you set during the MLA Challenge? Our targets are all related to improving the efficiency of our operation and include: 85–90% weaning rate, 280kg weaning weight (240kg minimum); bull and breeder body condition scores of 2.5 to 3 at joining; increase carcase yield through improved bull genetics and reduced dark cutters.

What decisions have you already made to help reach those targets? We're implementing controlled mating and now have a 12-week joining. We've split younger heifers and older cows into separate lines so we can provide them with specific supplements. We've preg-tested all our cows and drafted them into calving groups, to tighten up the calving window.

With the help of our mentor, Robert Gill, we've also assessed and culled our bulls and purchased 20 new bulls with better genetics.

What resources have you found useful to help you make decisions? MLA's Rainfall to Pasture Growth Outlook Tool and the Stocktake Plus phone app have been extremely helpful. I've used a lot of information from the Future Beef website, specifically on nutrition and pasture management for drought recovery. MLA's new *A national guide to describing and managing beef cattle in low body condition* has been very useful during this dry spell.

How can producers get started and set targets for their business if they don't have a mentor? This is a hard one, because the biggest thing I've got out of the Challenge has been the mentoring. I think we need to consider using more consultants in our business as we move forward, because it helps bring another trusted perspective when decisions are being made. There is also a wealth of information in the MLA tools. If you don't understand something in them, just ring someone from MLA.

Andrew Miller

What business targets have you set during the MLA Challenge? We've been piloting a new MLA management tool to set targets for nearly every aspect of our business. One target in particular is that within three years we will have reduced the *Bos indicus* content in our calves to an average of 50% and be selling less than 10% of our cattle through saleyards.

What decisions have you already made to help reach those targets? We've made two major decisions. One is to purchase Angus bulls to reduce the *Bos indicus* content and maximise fertility, weight gain and market compliance. The other is to implement a three-month joining plan to produce an even line of cattle to assist with market turn-off.

What resources have you found useful to help you make decisions? One of the main resources we use is the Future Beef website. We pick and choose the information on the website that is most relevant and useful to us. For example, we've just spent half a day in the office reading all the information on 'Planning and managing a supplementary feeding program'. Other resources are our mentor Guy Lord, our peers and the MLA management tool.

How can producers get started and set targets for their business if they don't have a mentor? We feel the biggest obstacle we have had to overcome, and which has prevented us from setting specific and measurable targets in the past, is the lack of accurate information we had on our stock. Now that we're managing our cattle more intensively, with our three-month joining and pregnancy testing, it will be much easier to record and analyse that information. We also think it's important to surround yourself with other positive, progressive and open-minded producers.

MLA: 1800 023 100

MLA's Rainfall to Pasture Growth Outlook Tool: **http://rainfall.mla.com.au** // *A national guide to describing and managing beef cattle in low body condition:* **www.mla.com.au/lowbodycondition**
Future Beef : **www.futurebeef.com.au** // Stocktake+: **www.stocktakeplus.com.au**

Linda Cafe // *MLA scholarship recipient*

In profile | Building capability

With strong interests in natural horsemanship and animal behaviour, it's no surprise Linda Cafe (pictured) used an MLA-funded scholarship to research livestock temperament. Her involvement in the livestock industry started early, growing up on a cattle property outside Lismore, NSW, and has developed through industry research roles.

Why is your PhD valuable to the livestock industry? I completed a PhD in cattle temperament and its relationship with growth, feed efficiency, carcase and meat quality, and stress physiology. Temperament is a critical issue for the whole industry – it affects the safety of stock, people and infrastructure, as well as contributing to the quality of the end product.

Why was the three-year MLA scholarship important to you? It gave me the opportunity to complete a PhD that cemented my current research position. I was able to study full-time and really focus on the research. It would have been a slow progress studying part-time. I also had support from the Beef CRC III and NSW Department of Primary Industries (NSW DPI), so I could conduct my PhD on a large Beef CRC experiment, which provided more meaningful results.

What challenges face students who want to specialise in agriculture? Financial challenges can be a barrier to study, so access to reasonable scholarships where students can focus on their study full-time is a big support. Another challenge can be finding a job. Industry bodies can help by continuing their funding of livestock research into the future.

How do you currently contribute to the livestock industry? I have worked as a Livestock Research Officer with NSW DPI since finishing my PhD. I conduct research on the NSW DPI Angus muscling selection herd and keep my temperament and welfare research going.

Why is it important for industry to invest in education? Industry investment in agricultural science education is critical because it is a dynamic space with new challenges constantly emerging. If you look back over the past 100 years, research into nutrition, genetics and management led the industry forward. Interactions between researchers and producers – such as through MLA – is critical to identify solutions that fit different markets and production systems. Investing in researchers contributes to the future of the industry.

Career snapshot

1991: Completed a Bachelor of Agricultural Science (Animal Science), at the University of Queensland

1991–1996: Research assistant in ruminant nutrition, University of Queensland, part-time Masters in Agricultural Science

1996–2002: Rangelands Researcher with the then Northern Territory Department of Primary Industry and Fisheries at Katherine, working on MLA's North Australia project

2002–2010: Technical Officer with NSW DPI working on Beef CRC projects

2007–2010: PhD with MLA scholarship

2010–current: Livestock Research Officer with NSW DPI

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Read an article on page 4 about MLA's investment in education to attract and retain scientists to meet the industry's R&D needs.

Research at work

The latest on-farm strategies emerging from MLA's investment in research, development and extension

In this issue

18// **Planning for success**
Isobel Knight explains how to manage farm succession planning and work with different generations.

21// **Look after mum**
Early findings from the Lifting the Limits internal parasite control project.

24// **Good preparation**
How to get the most out of the investment in sowing hard-seeded legumes.

28// **Hot stuff**
Tips and techniques for getting observed heat artificial insemination right.

Drought **management strategies**

When *Feedback* first spoke to Blackall Queensland producers Simon and Christine Campbell (in the July 2013 edition) they were already managing their way through below average rainfall. Things did not improve over summer, with only a quarter of anticipated rainfall received from October to January.

Just 54.5mm fell in the four months, compared to an average 218mm for the same period over the past 111 years. This came on the back of a tough 2013, when just a third (171mm) of the Campbell's median rainfall fell.

In a scenario only too familiar for many, the Campbells have also seen markets decline, with prices back 20% for steers and 20–25% for heifers, with weights back by 15% for cattle sold earlier than usual.

"The beef cattle store market is generally weak around dry times, but this has been amplified for this drought by the approximately 500,000 cattle that had to be absorbed by the Australian market in the period after the former Australian Government cancelled live export permits to Indonesia," Simon said.

"This policy failure has put enormous pressure on producers in a dry time, particularly in northern Australia."

The Campbell's philosophy to be 'managers not victims' of their circumstances has been vital, allowing them to develop a resilient enterprise which is flexible in the face of their highly variable climate.

"While we have a stock production plan, we don't have a fixed stocking rate – except as a reality check," Simon said.

→

Drought management

→

"We aim each year to match stock numbers to available feed."

Their dry season decisions to wean early and strategically sell stock were underpinned by feed budgets.

"In our summer rainfall system, we are happy to feed and supplement stock into summer but we never take the risk of feeding out of a failed summer, because rainfall the following summer is unknown," Christine said.

"This requires us to focus a lot of attention at the end of this summer growing season (March/April) to see what numbers, if any, can be carried to next summer."

Early weaning

By weaning early, the Campbells protected first calf heifers that were calving in a separate window (August-November) to the normal herd calving window – a timeframe which can put pressure on a young mother. They tactically fed the cow/calf group a concentrated pellet supplement until the lightest calves could manage a supplemented weaning and cows were lively, if light.

Calves weaned in January 2014 were given 0.5kg/day of a feedlot-style 14% protein, 11 MJ/kg feed, plus full pasture access (some light green pick and ample roughage). Calves averaged 132kg/head at weaning so were not branded or dehorned before weaning, but all other operations were done including tags, vaccines and two separate drenches, two weeks apart.

By February calves were gaining 324g/day or 9.7kg/month. The Campbells then adjusted feed to achieve an optimum growth rate of 6kg/month, which – at 50¢/calf/day – was economically sustainable.

Strategic selling

The Campbells adhered to their normal all-season pattern of control joining and preg-testing all females, with empties sold. They implemented these selling strategies:

1. **Selling dry progeny:** These were mostly sold at 250–260kg range as opposed to normal season feedlot entry weights.
2. **Selling 30% of pregnant cows at eight months:** when they still had good cover and were legal to travel to works. The judgement was made that it was not cost effective, and there was insufficient pasture to feed all breeders. Pregnant stock are most vulnerable just prior to and after calving and have the highest energy and protein requirements. They also have known timeframes for first/last calf, and deadlines such as last date for trucking and earliest date for weaning.
3. **Gradually selling the lead of the remaining dry stock as progeny sales progressed:** this provided room, or capacity, so any light showers were beneficial. The Campbells used 15% urea supplements to raise weights of the remaining tail. There are now almost no dry stock left.
4. **Assessing and culling bulls:** age, physical fault and the annual semen test were criteria to reduce numbers back to the best possible sound bulls ready to join. Retained bulls were maintained on a low intake of a feedlot mix.

"Reducing numbers has allowed us to benefit from random light showers, which provided small volumes of green pick for short-term intake by stock spread across the property," Christine said.

The Campbells said decisions that still need to be made include the time of joining (taking into consideration breeder condition and the optimum time for calving at the end of 2014). They are also considering introducing a 50–60 day feedlot program for empty females, to improve fat cover and grid price.

"We have not yet trialled this tactical feedlotting yet, as the drought is so widespread that contracts and kill space may limit this opportunity," Simon said.

Lessons learned

- → Early weaning helped protect first calf heifers.
- → It's important to continually review pasture, stock condition, markets and feed costs.
- → In this drought, short and medium weather forecasts have been very unreliable for at least a six-month period.
- → Despite a quick drop in pasture protein during 2013, the decision to conserve dry feed has paid off. Retained roughage (supported by chance showers) enabled cows to be fed on 15% urea lick, not full feed. There is some luck in this as otherwise an energy supplement would have had to be fed.
- → Assessing stock classes separately allows cattle to be prioritised for sale or retention.
- → There is more learning yet to come, including how to manage the post-drought cashflow and operations back to sustainable levels.

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Tools

The Madden-Julian Oscillation (MJO), which monitors tropical weather fluctuations, has been a useful tool for the Campbells.

"The MJO has consistently been weak, and therefore suggests none, or low rain events. This has influenced our sales decisions," Simon said.

Another useful resource is the Department of Primary Industries (DPI)/Department of Agriculture, Fisheries and Forestry (DAFF) publication *Dry Season Management of a Beef Business* – Simon said the clear, concise section on early weaning is particularly valuable: "Everyone should have a copy."

The Madden-Julian Oscillation **www.bom.gov.au/climate/mjo**

Dry Season Management of a Beef Business, published by DPI/DAFF, edited by Russ Tyler, third edition (2008), **www.futurebeef.com.au/wp-content/uploads/Dry_season_mgt_of_a_beef_business_LowRes.pdf**

Sheep CRC

Delivering outcomes for the sheep industry

As the sheep industry looks to the next term of the Cooperative Research Centre for Sheep Industry Innovation (Sheep CRC), the research body will continue with its goal of increasing the productivity and profitability of Australia's sheep and wool industries.

Since the Sheep CRC's second term began in 2007, it has provided industry with new knowledge, tools and technology that have been adopted throughout the supply chain.

Along with major industry partners MLA and Australian Wool Innovation (AWI), the CRC has previously partnered with 19 other organisations to deliver research programs in sheep management and meat and wool quality, as well as managing the engine room of the industry's genetic revolution, the Information Nucleus Flock (INF).

Sheep CRC Chief Executive Officer James Rowe said the collaborative approach had delivered for sheep producers in the form of new tools for use on-farm and improved management systems through training and extension courses.

"And, with new technologies for the meat and wool processing sectors, we hope to drive demand among consumers," he said.

The Information Nucleus Program (which has evolved to become the MLA-supported Industry Resource Flock) has been central to the CRC's activities, tying together a large multidisciplinary team. The program integrates sophisticated genetic design, measurement of a comprehensive range of more than 100 traits and genotyping using the 50k SNP-chip.

As well as taking the Australian sheep industry to the forefront in using genomic technologies, the 5,000-ewe INF, spread over eight locations, has been a resource for a range of CRC activities.

Progeny are continuously measured for growth, performance and product quality, with the data added to the MERINOSELECT and LAMBPLAN databases to enhance the accuracy of Australian Sheep Breeding Values used by industry.

"A reference population such as the INF is now recognised as a vital feature for developing and maintaining balanced genetic gain and genomic predictions for the hard-to-measure traits such as meat eating quality, as well as gaining a better understanding of genetics by environmental interactions for a number of different traits," James said.

Sheep CRC time line

2007

- → Information Nucleus Flock (INF) formed
- → Postgraduate enrolments start

2008

- → First drop of INF lambs
- → Promotion of ewe Pedigree MatchMaker system
- → Managing Scanned Ewe workshops begin
- → Start of first Lifetime Ewe Management (LTEM) training programs
- → Launch of dipstick test for *Haemonchus contortus*

2009

- → New Australian Sheep Breeding Values (ASBVs) for breech wrinkle and dags
- → First results of targeted treatment of parasites

2010

- → New traits developed for intramuscular fat, tenderness, retail colour and Omega 3
- → Genomics Pilot Project I begins
- → First workshop for pregnancy scanners
- → LTEM impact assessment results released
- → FlyBoss website launched
- → Flystrike workshops begin
- → First postgraduates graduate

Professor James Rowe said the Sheep CRC is delivering on its goals.

"With semen from each ram used at a number of different research sites, the design allows for accurate analysis of the impact of environment and management on the expression of genetic potential.

"It is estimated that with new genomic information now available from the Information Nucleus Program, it is possible to increase the rate of genetic improvement by more than 7% in meat breeds and around 20% for Merinos *."

The Information Nucleus Program has developed genomic predictions for new traits including lean meat yield, intramuscular fat and meat tenderness.

Accurate predictions of parentage and carriers of the horn genes will make it easier to document pedigree information and for Merino breeders to develop polled flocks.

Road testing

In the past three years, the Sheep CRC has run three Genomics Pilot Projects to test SNP panels as predictors of an animal's breeding value, validate DNA-testing protocols for commercial flocks and, more recently, evaluate commercial-scale DNA testing in ram-breeding enterprises.

The third Genomics Pilot Project saw more than 3,000 sheep from commercial flocks genotyped using DNA tests – half were used in large-scale programs and half by smaller breeders looking to genotype their best breeding stock.

At a subsidised rate of $50 a test, the 50k SNP test has provided breeders with genomic information upon which to base selection decisions, including for the hard-to-measure traits such as intramuscular fat, worm egg counts and number of lambs weaned.

Close to 20,000 tests for parentage and horn gene status, worth $17 each, have also been sold this year, providing producers with easy access to parentage information and horn/poll status for key breeding stock.

"Already producers are using both the full genotyping and parentage tests to identify young rams that meet their breeding objectives," James said.

"The potential of DNA technology has now progressed from being a great idea in the laboratory to a commercial reality – during 2013 genotyping tests were sold, without subsidy, at $50 a test and with no limitations on the number of tests a producer can purchase.

"It's now time for industry to take hold of these new tools to breed more profitable and productive sheep."

* *To fully understand the financial gains from these genetic improvements go to: www.sheepcrc.org.au/management/genetic-selection/proof-of-benefits-from-genetic-selection.php*

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2011

- Research Breeding Values developed for eating quality and tenderness
- Genomics Pilot Project II
- Flyboss website enhanced
- WormBoss workshops begin
- *Sheep – the simple guide to making more money with less work* released in WA
- Electronic Identification (EID) training course launched

2012

- First use of one-step method of using genomic data for estimating ASBVs
- Genomics Pilot Project III begins
- Launch of DNA test for pedigree and horn-poll status
- Cereal-sheep zone edition of *Sheep – the simple guide to making more money with less work* released
- Mob-based Walk Over Weighing commercialised
- RamSelect workshops begin

2013

- Commercial genomic testing delivered through Sheep Genetics
- LiceBoss website revamped
- *Sheep – the simple guide to making more money with less work* for high rainfall zones released

2014

- Third term of Sheep CRC is announced to run until 2019. Commonwealth Government funding of $15.5 million is supported with $45 million of cash and in kind support from 35 industry organisations

Sheep CRC

A lifetime of benefits

The Sheep CRC's research is not restricted to the laboratory – it has also moved into the classroom.

Courses such as Lifetime Ewe Management (LTEM) have delivered farmers large gains in productivity by managing ewes to condition score targets and increasing stocking rates. The delivery model has also earned praise as an effective way of achieving industry-wide outcomes.

The Sheep CRC, which is part funded by MLA, played a key role in initiating the LTEM courses in conjunction with Rural Industries Skill Training (RIST) in Victoria.

The LTEM program is based on small groups of just four or five members. Between the start of the program in 2007 and the end of 2010, more than 220 producers – managing nearly one million ewes – had completed it. Today that sheep number stands at more than seven million.

With funding from Australian Wool Innovation (AWI), there are now about 500 producers involved in nearly 100 LTEM groups nationally.

Dr Jason Trompf from JT AgriSource and colleagues studied the impact of the LTEM program and found participants increased their whole-farm stocking rates by 14% and lambs weaned by 11-13%, and decreased annual ewe mortality rates by 43%.

11–13%

average gain in lambs weaned after participating in Lifetime Ewe Management

"Basically, these improvements were consistent regardless of year, region and how innovative participants were at the beginning of the program," Jason said.

"Their estimated dollar benefits from LTEM – in terms of increases in number of lambs weaned/ha and reduced ewe mortality – exceed an additional $10/ewe/year."

Another training program initiated by the Sheep CRC has been a course for agricultural consultants. With the University of New England (UNE), the Sheep CRC developed the Graduate Certificate in Rural Science (Agricultural Consulting).

"The Sheep CRC and UNE have intentionally built this course to fill a real and growing gap for consultants and advisors right across agriculture, and particularly to support increased production and profitability in the sheep industry," CRC Education Program Leader Professor Steve Walkden-Brown said.

"We have also kept an eye on the future by supporting an active postgraduate program that will see around 30 PhD graduates entering the industry over the seven-year program and a further seven masters students. The CRC aims to produce 'industry ready' professionals through the postgraduate program and many of our graduates are already working in industry, research organisations and universities."

As well as formal training and education programs, the Sheep CRC has produced a number of tools to help producers and breeders make better informed management decisions in the areas of parasite control, breeding and nutrition.

New tools and training programs supported by the Sheep CRC

- Pedigree MatchMaker system
- Lifetime Ewe Management programs
- EID for Sheep Breeding
- Wool ComfortMeter and Wool HandleMeter
- RamSelect workshops
- Flystrike Management workshops
- High Performance Weaners course
- Managing Scanned Ewes workshops
- Feedlot Calculator
- Mob-Based Walk Over Weighing system
- WormBoss workshops and website: **www.wormboss.com.au**
- LiceBoss website: **www.liceboss.com.au**
- Bred Well Fed Well workshops: **www.mla.com.au/bredwellfedwell**

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Collaboration delivers for supply chain

Cutting-edge genetic research and close collaboration with the sheepmeat processing sector has increased lean meat yields and improved eating quality.

The amount of lean, saleable meat on a carcase is a key determinant of the value of a carcase to the processor and retailer; eating quality influences the price consumers are prepared to pay for different cuts of meat. Together, they set the value of each carcase that flows through the supply chain to sheep producers and breeders.

By improving both yield and eating quality, the Sheep CRC's meat quality research program has delivered productivity opportunities for the full length of the supply chain, according to Sheep CRC Meat Quality Program Leader Professor Dave Pethick.

"There was a common view in industry and some scientific circles that lamb is always tender, juicy and flavoursome, given its young age," Dave said.

"However, our research found that genetic selection for increased growth and muscling invariably leads to tougher and less flavoursome meat, even when employing best-practice meat-processing techniques. "

Early on in the research program, the Sheep CRC engaged with MLA and the Australian Meat Processing Corporation, as well as leading processing companies including JBS and WAMMCO, major retailers and sheep producers and ram breeders.

Gain in both lean meat yield and eating quality were now possible through the application of new genomic technologies developed in partnership with the CRC and its Information Nucleus program, which involved 19 research organisations, eight research sites, 11 laboratories and the measurement of nearly 18,000 lambs over a six-year period.

The increased gain through the application of the new genomic technologies is estimated to be about 10% per year. This gain, Dave said, if applied over more than 20 million ewes on an accumulative basis, would be one of the most important improvements in the sheep industry for a number of years.

10% **annual gain per ewe due to meat eating quality gene discovery**

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DNA with bite

Snapshot

Murray Long, Ardlethan, NSW

Property: 730ha

Enterprise: Pendarra White Suffolk Stud and member of the Superwhites group

Livestock: White Suffolk flock of 900 stud ewes

Soil: Red loams

Rainfall: 450mm annual average

Murray Long taking birthweights on his property. Image courtesy of Outcross Media.

Two syndicates of terminal sire breeders, Meat Elite and Superwhites, are implementing state-of-the-art breeding programs through commercial-scale use of new genomic technologies.

The focus for both groups is to use DNA testing to identify breeding animals carrying genes for tenderness and eating quality.

By placing meat quality traits at the forefront of genetic selection during ram breeding, these groups are moving to position their breeders as key suppliers of rams that meet consumer demands for tender and flavoursome lamb.

"Meat eating quality is too important to ignore. As consumer choice increases, you can't have your genetics years behind market demand," Superwhites' spokesman Murray Long said. Murray, from Pendarra White Suffolk stud at Ardlethan, NSW, is also immediate past President of the Australian White Suffolk Association.

The Superwhites and Meat Elite groups are two of the nine stud breeding operations participating in commercial-scale DNA trials through the Sheep CRC's third Genomics Pilot Project. The research program aims to define the most effective use of the new technologies in practical breeding programs.

More than 1,500 DNA tests were allocated for use by these early-adopting studs, with a further 1,500 tests for smaller-scale testing by sheep breeders across the country.

"Breeding values for intramuscular fat and tenderness will now be considered when selecting ram lamb sires for use across the group," Murray said.

"Good scores for meat eating qualities may lead to the selection of an animal that wouldn't have been chosen for weight, fat and muscle alone. Similarly, if an animal is strong across these ASBVs but has poor results for intramuscular fat and tenderness, it won't be selected.

"This year, research breeding values for meat eating quality will be a mandatory selection criteria for the nominated ram lambs, of which about eight are selected as sires for use across the group."

It is expected that the accuracy levels of estimated breeding values will further improve as a result of the additional data collected during the Genomics Pilot Project and through the Information Nucleus Flock program.

These breeding values help breeders to accurately predict which rams will produce the desired traits in their progeny, as well as select younger animals for faster rates of genetic gain.

Genomic testing of about 20% of a stud's top young rams will provide cost-effective information to assist selection decisions for the next generation.

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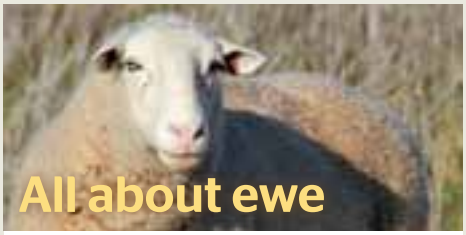

All about ewe

Bred Well Fed Well (BWFW) is a practical, one-day workshop highlighting the key production benefits of superior genetics and feed management for improved reproductive performance and flock productivity. It is an MLA and Australian Wool Innovation initiative, supported by the Sheep CRC.

Topics include: improving ewe nutrition, developing a breeding goal, developing a feed budget and breeding better ewes.

BWFW workshops are a good introduction to Lifetime Ewe Management and Making More From Sheep training courses.

Find out more at:
www.mla.com.au/bredwellfedwell

Business management

Talk your way through it

'Communication, communication, communication' is the mantra of NSW-based farm succession planner Isobel Knight.

It might seem a simple strategy, but it is one that can make or break family relationships and businesses, she said.

"Just as it is not good business practice to delay shearing or weaning or harvest, conversations about succession planning should not be delayed."

"Start talking early and make family communication a priority. If you don't, it could cost millions and your life's work.

"Poor succession planning can prevent the next generation of farmers from accessing the capital to stay on the land."

Isobel emphasised why succession planning makes good business sense when she spoke at the MLA-sponsored Hamilton Meat Profit Day in February.

Isobel, who married into a farming family, started her business, ProAGtive, in 2003 to provide a personal approach to succession planning – hinged on her training in psychology, counselling and mediation. In 2013, Isobel was named Rural Industries Research and Development Corporation NSW Rural Woman of the Year.

"In family farming, the personal aspects can't be separated from the business so succession planning should be collaborative, not adversarial," she said.

Isobel defines 'success' as the transition of management, leadership and ownership (preferably in that order) to the next generation.

Isobel said often only the 'horror stories' of farm succession were shared, but she has helped more than 400 families navigate the process and develop solutions that establish harmonious relationships, financially successful businesses and ongoing viability.

"When families start talking about succession planning, they soon find out that everyone wants something different," she said.

"Typically, mum wants family harmony, fairness to all her children, and the ability to retire or travel; dad wants to feel purposeful and to know the business he has built up is in good hands; and the daughter-in-law wants to plan for children and have security."

She said fair division of assets often did not mean equal.

"It might be unviable to split a farming business equally between three children. So, the parents might provide one child with capital to support a business venture and leave the farm to the second and cash or off-farm assets to the third," Isobel said.

"Even children who live and work off-farm have a strong emotional attachment to the family farm, and I have seen some creative solutions. One family decided to build a house on one property so off-farm children could stay at any time, without feeling like they were imposing."

Isobel said the most successful process is always ongoing.

"Some families, years after 'finalising' their succession plan, continue to have an annual meeting. Everyone participates, even parents who have retired, and it's a fantastic forum for family discussion," she said.

Tips for successful planning

Isobel's considerations in succession planning include:

1. Succession planning ensures parents access capital to retire (on- or off-farm) while equipping the next generation with capital to continue farming.
2. Each family business is unique; everyone has different needs/wants/expectations.
3. Prioritise communication – hold regular 'big picture' management meetings where everyone in the business, including off-farm children, can be involved.
4. Succession planning is important, regardless of business scale.
5. True wealth is incremental, so succession planning should be ongoing. The outcome may be known but the path to it can have many twists.
6. Take a long-term view to ensure the farm can support the family of the future, eg funding education or retirement plans.
7. 'Estate planning' usually divides assets, whereas 'succession planning' tries to keep the business together. An estate plan will form out of a good succession plan that takes business viability into account.
8. Start planning early so expectations are voiced and everyone knows the process. Determine needs and then wants.
9. Ultimately those running the business need capacity to pay the bills each year to survive. Understanding the viability and cash flow impacts of decisions can often enhance the overall transition plan.
10. Business owners often have many entities in their structure, so understanding each is critical in succession planning and, ultimately, the estate plan.

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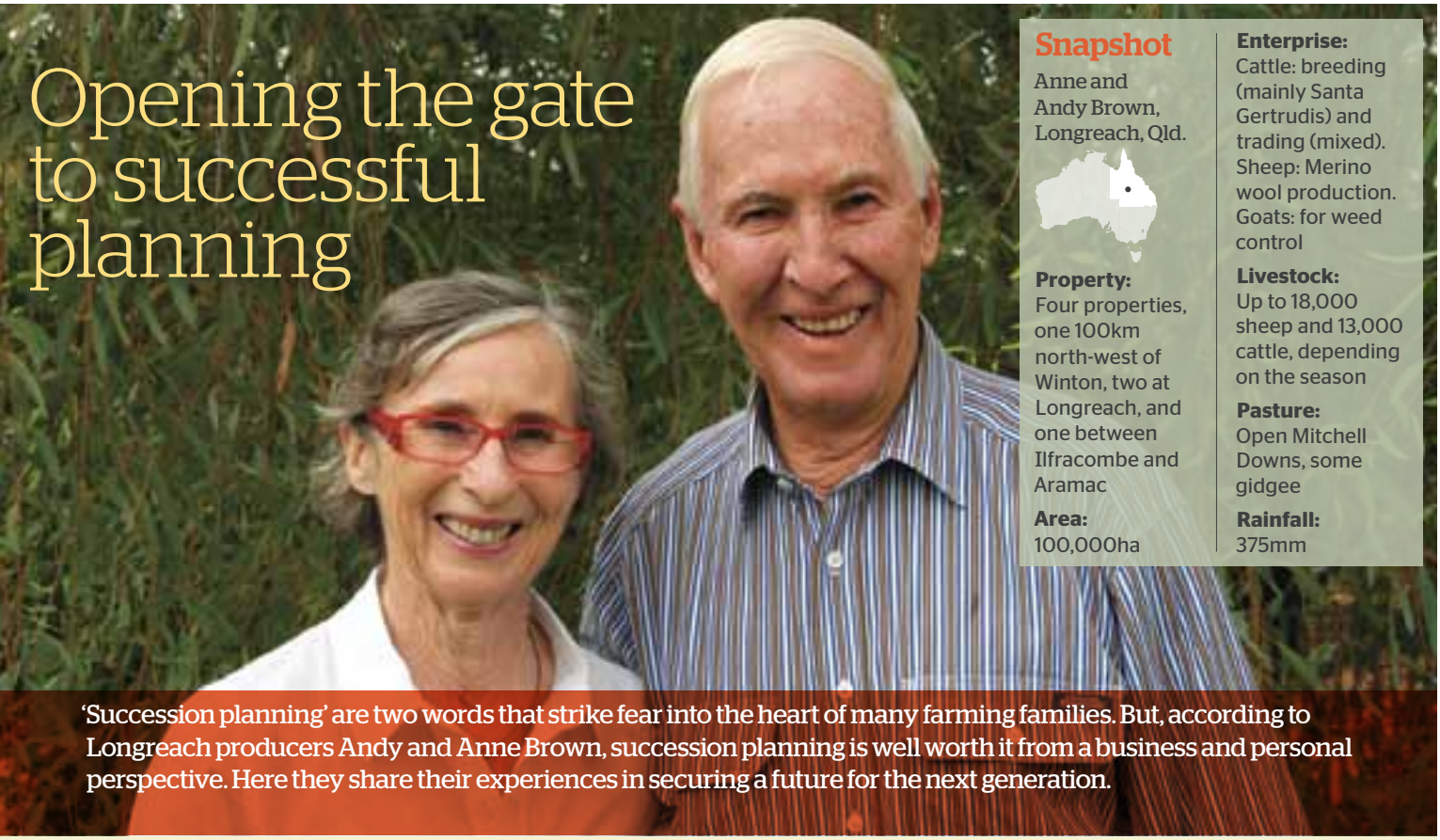
Listen to a webcast of Isobel's presentation at the Hamilton Meat Profit day at **www.mla.com.au/HamiltonMPD**

Opening the gate to successful planning



Snapshot

Anne and Andy Brown, Longreach, Qld.

Property: Four properties, one 100km north-west of Winton, two at Longreach, and one between Ilfracombe and Aramac

Area: 100,000ha

Enterprise: Cattle: breeding (mainly Santa Gertrudis) and trading (mixed). Sheep: Merino wool production. Goats: for weed control

Livestock: Up to 18,000 sheep and 13,000 cattle, depending on the season

Pasture: Open Mitchell Downs, some gidgee

Rainfall: 375mm

'Succession planning' are two words that strike fear into the heart of many farming families. But, according to Longreach producers Andy and Anne Brown, succession planning is well worth it from a business and personal perspective. Here they share their experiences in securing a future for the next generation.

Tell us about your family business: We started managing properties around Longreach in 1960. Over time, we purchased country and raised four sons, all of whom are now married. Today, we have four working aggregations, totalling just over 100,000ha. Three sons and their wives live on the main three properties and we have a caretaker on the fourth. Our daughters-in-law are involved in the business. We have 12 grandchildren, aged from three to 19, and they also play a vital part in the business. Our youngest son owns a business in Brisbane.

When did you start planning for the future? We started in 1993, by organising title and ownership details. Over time, it became obvious we needed outside assistance and initially we used accountants and lawyers. We were always planning in our own minds, but we sought professional advice from ProAGtive in 2011.

Why is succession planning important to families on the land? It is important because each family member needs to know whether they have a future on the land and, if so, what this future plan is.

Why did you consider using a succession planner? We felt that impartial and professional help was needed to accomplish what we had in mind.

Were there any surprises with succession planning? Mainly the realisation that the process is more complex than we expected. For the lay person, there are many unforeseen pitfalls on the journey to achieving what is really wanted, for example, insurance for our children and the finer points of succession of land and family in event of a death in the younger generations.

Were there challenges? Yes, such as different expectations that came with marriage, dealing with the issue of the family not on the land, and ensuring fairness to everyone. These were all overcome through open, honest mediated discussion and we have been able to retain the good working relationships we have enjoyed as a family.

How has succession planning benefited your family? All family members now have a clear picture of what is possible and where we are going as a business. We have the ability and forum to openly discuss this, as a family.

What are you most proud of? The considerate, respectful and honest manner that family members displayed in coming to where we are today.

If you could do it again, would you do anything different? We would have started the process sooner.

What is your advice to other farming families? Succession planning cannot be taken for granted. Start early and don't give up. It is ongoing, but the rewards and family unity, understanding and consideration for all the family members are so worthwhile.

Lessons learned:

- It is never too early to start succession planning.
- The importance of finding the professional help that fits your needs, and you can relate to.
- Genuine, open communication is important.

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Animal health

Drench resistance: a five-year story

Worm control represents the Australian sheep industry's biggest animal health cost, and drenches have been the main line of defence since the 1960s.

While modern drenches such as Valbazen, Nilverm, and Cydectin have provided high efficacy, ease of use and relatively low cost, they've also contributed to the increasing problem of resistance.

"The rule of thumb is that first reports of worms developing resistance to a new chemical occur about four or five years after its release," NSW Worm Control Coordinator with the NSW Department of Primary Industries, Stephen Love (pictured) said.

"There are some exceptions, but not many."

Timeline

1961	1966	1968	1972
The first of the 'modern' sheep drenches introduced to Australia was thiabendazole (TBZ) in 1961.	TBZ resistance reported in barber's pole worm in NSW.	The first levamisole (LEV or 'clear') drench was released in Australia, with resistance reported in NSW and Victoria about 10 years later.	Second generation BZ ('white') drenches released.

What increases resistance?

1. Guesswork

One of the causes of drench resistance, according to Stephen, is drenching too often or using the wrong dose rate.

"One reason producers drench too frequently is that they're guessing, rather than objectively estimating worm burdens, which would mean regular worm egg count (WEC) monitoring," Stephen said.

"Even if they're not guessing, they may not be employing non-chemical control options to reduce reliance on drenches, in particular preparing 'low worm risk' lambing and weaning paddocks."

2. The Environment

Stephen said the other issue was the environment producers were operating in, because some situations were more selective for resistance than others.

That was the case for West Australian producers, who began to notice ivermectin resistance of brown stomach worms just five years after the chemical's release in 1988.

"Ivermectin-resistant barber's pole worm was reported from the New England area in 1993 and, shortly after, WA reported ivermectin-resistant brown stomach worm," Stephen said.

"West Australian producers were only drenching twice a year, whereas the New England producers were drenching about six times a year; the difference was environment.

"The West has a Mediterranean climate and they were drenching at the beginning of their hot, dry summer. There were no worms in refugia, because they don't survive in the paddock at that time of year; instead they were all in the sheep.

"So, drenching then meant producers were strongly selecting for resistance."

West Australian producers are now advised to avoid drenching adult sheep in summer, unless they have high WECs.

1978	1979	1984	Today
LEV resistance reported in NSW and Victoria.	The first Victorian cases of BZ-resistant brown stomach worm (Ostertagia) reported.	Widespread resistance to LEV among barber's pole, black scour and brown stomach worms confirmed in NSW's New England.	About 90% of properties have BZ. The story is similar for most other drench families introduced in the past 50 years.

The future

Given industry's reliance on chemical control of worms, a major concern is that new drench groups only come on the market infrequently.

"There was a gap of more than 20 years between the launch of ivermectin in 1988 and the next new drench group, represented by Zolvix®, in 2010," Stephen said.

"It's imperative we do everything possible to preserve the life of this new drench family; there are already reports from New Zealand of goat worms resistant to Zolvix®."

What is the answer?

"The challenge with worms is they are more or less invisible," Stephen said.

"To make the invisible visible, people need to do objective measurement. This means undertaking regular WECs and drench resistance tests, using them alongside visual appraisal and then only treating if necessary – using drenches known to be effective.

"Our other best options for slowing drench resistance are to use targeted drenching strategies to leave some worms escaping exposure to a drench (see article on pages 22–23), using unrelated broad-spectrum drenches in combination and always at the correct dose rates and reducing our reliance on drenches through integrated worm management."

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www.wormboss.com.au

Drench resistance information
www.mla.com.au/chemical-resistance-and-residues

Look after mum

Sheep producers and researchers throughout eastern Australia are working together on a project to 'lift the limits' on production and drench resistance imposed by worm infection.

Lamb marking time in the Lifting the Limits project. The ewes' udders were painted so lambs could be identified (by the colour transfer to their face) according to the ewe treatment group they belonged to.

Preliminary results from an MLA-funded study have shown that *ewe* worm control has a greater effect on prime lamb weight gain than *lamb* worm control in high-rainfall regions, at least until weaning.

The results were collected during the first year of the Lifting the Limits project, which is being led by a team from the University of New England (UNE) in conjunction with researchers from the University of Melbourne, Charles Sturt University Wagga Wagga and the Central Livestock Health and Pest Authority.

Project leader Dr Lewis Kahn from UNE said the result was "very preliminary" but worth noting, as it was repeated across farms in the four study regions: New England, NSW Central Tablelands and South-West Slopes, and Central Victoria.

"It didn't matter if you were in New England with barber's pole worm or in Victoria with scour worms, the result was the same," Lewis said.

"It showed that, up to weaning at least, ewe worm control had a much greater effect on lamb bodyweight gains than lamb worm control.

"The lambs averaged more than 200 grams/day weight gain from marking to weaning and there was no significant difference between the worm-suppressed lambs and those which had no treatment up to weaning.

"However, these are preliminary results and we are now collecting data across a number of years to confirm them."

More meat, less resistance

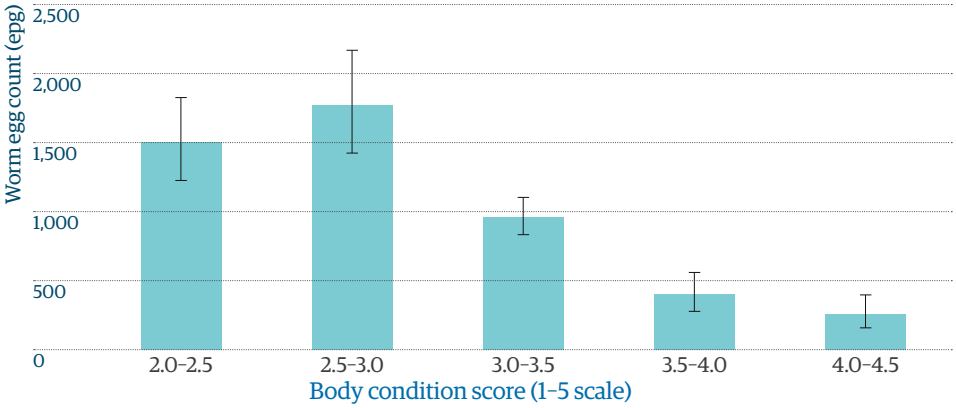
The project aims to 'lift the limits' imposed by worm infection on sheepmeat production systems by developing regional worm control programs to boost production while slowing the development of drench resistance.

It also seeks to define the real cost of worms remaining in crossbred and composite-based sheepmeat production systems. The cost of worms will be calculated from production loss due to worms, plus the costs of treatment and control.

Researchers are working with producers and gathering data from 17 commercial farms in the four study regions.

→

Figure1 Worm egg counts are lowest in ewes with higher body condition scores



Source: University of New England, Armidale

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"The farms are split into two groups based on their worm management: 'Lifting the Limits' farms and 'Regionally Typical' farms," Lewis said.

"On each farm, there are 120 ewes tagged to be reflective of the farm management and 120 ewes tagged and treated to essentially be maintained as worm suppressed.

"At marking, lambs from each ewe treatment group are identified and assigned to a worm control group similar to that of the ewes.

"With this design, the difference in performance between the normal ewes and lambs and the worm-suppressed animals can be attributed to worms."

Lewis said one objective was to slow the development of drench resistance.

"One of the most important things we can do to control drench resistance is to use effective chemicals in combination and in rotation," he said.

"In addition, in the Mediterranean and hot, summer-dry climates of south-eastern Australia, selectively leaving a small proportion of animals untreated is likely to delay the development of resistance.

"Otherwise, the only eggs excreted immediately after treatment will be those from resistant worms that have survived the chemical."

But, which sheep are best to leave untreated?

"We've found that high body condition score (BCS) is significantly related to low worm egg count of ewes, which opens up opportunities for leaving the higher BCS animals untreated, when selective treatment is required," Lewis said (see figure 1).

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Further reading

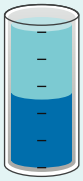
www.wormboss.com.au/tests-tools/management-tools/managing-drench-resistance.php

www.wormboss.com.au/news/articles/drench-resistance/use-refugia-to-prolong-drench-life.php

Making More From Sheep Module 11: *Healthy and Contented Sheep*
www.makingmorefromsheep.com.au/healthy-contented-sheep/index.htm

Project dashboard: Lifting the limits imposed by worms on sheep meat production

Financial contributions to the project:
$1,146,218



MLA levies: **50%**

Government: **50%**

Length of project:
4 years

The project is part of MLA's objective to:

Create opportunities through research to minimise the threat and impact of exotic, emerging and endemic diseases on Australian livestock enterprises.

Animal health

Strategic drenching on target

Rising concerns about drench resistance on his south-west Victorian farm led Leo Cummins to help establish an MLA-funded Producer Demonstration Site (PDS) to test the efficacy of targeted drenching.

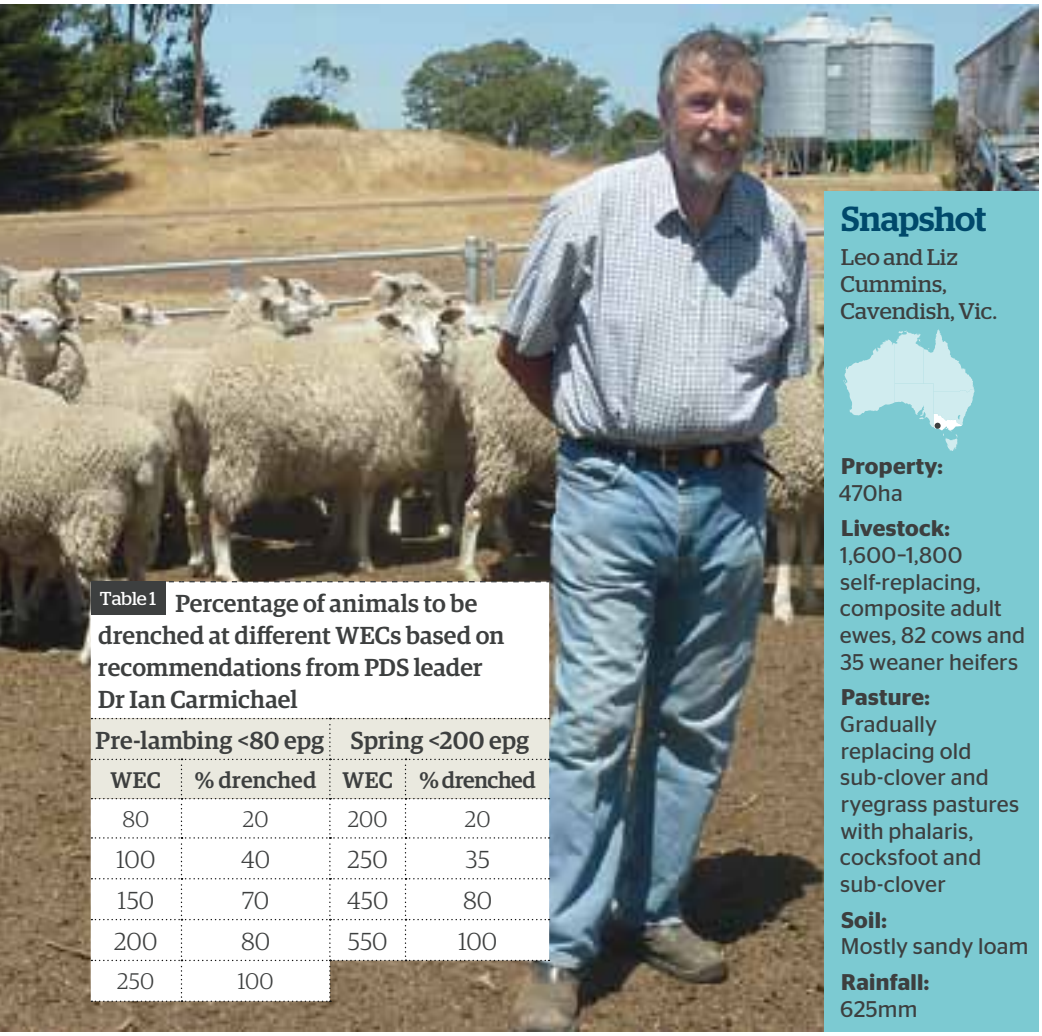
Cavendish producer Leo Cummins is focused not only on how he breeds his sheep, but also how he breeds internal parasites.

Leo has embraced the findings of an MLA-funded PDS to reduce drench resistance by trialling targeted drenching in Victoria's south-west to build up the numbers of non-drench-resistant worms on his property.

"The PDS concept was basically that you don't have to drench all your ewes all the time, provided you're carefully monitoring their worm burden using average flock worm egg counts (WECs)," Leo said.

"Based on flock WEC results, plus body condition scores and any evidence of scouring, you can make decisions on what proportion of the flock to drench, using a matrix of trigger points (see table 1)."

The matrix was developed by Veterinary Parasitologist Dr Ian Carmichael from the South Australian Research and Development Institute, who led the PDS.



Snapshot

Leo and Liz Cummins, Cavendish, Vic.

Property: 470ha

Livestock: 1,600-1,800 self-replacing, composite adult ewes, 82 cows and 35 weaner heifers

Pasture: Gradually replacing old sub-clover and ryegrass pastures with phalaris, cocksfoot and sub-clover

Soil: Mostly sandy loam

Rainfall: 625mm

Table 1 Percentage of animals to be drenched at different WECs based on recommendations from PDS leader Dr Ian Carmichael

Pre-lambing <80 epg		Spring <200 epg	
WEC	% drenched	WEC	% drenched
80	20	200	20
100	40	250	35
150	70	450	80
200	80	550	100
250	100		

PDS key recommendations

- The farm must already have an effective worm control program. Targeted drenching is not a worm control program in its own right.
- Worm control strategies vary between regions.
- Targeted drenching is only recommended for adult ewes.
- Drenches used must be known to be at least 95% effective.
- All scouring sheep and those in obvious poor condition are drenched before the required proportion of targeted animals is estimated.
- Sheep in condition score 4 or greater are not drenched. In the absence of a flock worm egg count (WEC), body condition alone should not be used as a basis for targeted drenching.
- Each mob needs to be considered separately.
- Flock WEC should be done just before the planned drenching date.

Leo chairs the South West Prime Lamb Group, which ran the PDS on seven properties over two seasons, from 2010-2011 to 2012-2013.

Leaving a proportion of the ewe flock undrenched allows non-drench-resistant worms to remain in the environment, slowing the development of a drench-resistant worm population.

In the first year of the project, Leo entered a study mob of 115 ewes. In the second year he expanded the targeted drenching regime to his entire ewe flock - with no obvious production losses.

In practice

"Targeted drenching hasn't changed my day-to-day management very much," Leo said.

"Our drenching timetable is based on the old Wormplan-type program, which includes a double summer drench and at least one winter and one spring drench.

"One difference is we now collect more WEC data just before drenching is normally due.

"We send a tray of faecal samples from each mob and do a bulk count at the lab, four times a year. That costs about $25 to $30 per mob.

"When the WEC comes back we take a look at the trigger points, talk to our veterinary consultant and decide what proportion of the flock to drench, with the general aim of keeping the post-drenching egg count below 80 epg (eggs per gram).

"The goal is to get the WEC down to a level that suggests worms are still present, but having a minimal effect in terms of depressing the animals' growth rate."

Decision making

Leo runs about 10 ewe sub-flocks and, on some occasions, some of the flocks aren't drenched at all.

Over the two-year period from December 2010 the whole flock would have been drenched nine times under traditional management practices - totalling about 900 doses for 100 ewes - but under targeted treatment, with its careful approach to WECs, only 188 doses were given.

"Under targeted treatment some flocks won't be drenched at all; for others we may need to drench 10-80%, choosing those in the poorest condition," Leo said.

"Anything that is thin or severely scouring also gets a drench and, if at any time during the year things don't look right, I'll get a WEC done and drench if necessary."

Targeted drenching has provided Leo with savings in terms of time spent in the yards and money spent on chemicals, but he does spend more on WECs than in the past. He believes productivity on his farm has not suffered.

Overall, he's very happy with how the system works for prime lamb producers, but believes more work will have to be done to quantify production losses before the wider sheep-producing community embraces the concept.

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Interested in the PDS program?
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Pasture management

Secrets to legume summer sowing success

Livestock and grain producers in Western Australia's south-west are increasingly looking to hard-seeded, annual pasture legumes to provide flexibility in crop-pasture rotations.

Department of Agriculture and Food Western Australia researchers Dr Angelo Loi and Brad Nutt with Rhizobiologist Dr Ron Yates in a paddock of Margarita French serradella summer sown in early 2013.

Summer sowing of specific legume varieties is providing benefits, including relatively cheap establishment, increased carrying capacity after multiple crops and full use of growing season rainfall.

There are some 'golden rules' to ensure successful pasture legume establishment, according to Department of Agriculture and Food Western Australia (DAFWA) researcher Brad Nutt. They are:

→ Choose the right species and cultivar

→ Sow at the right time

→ Select your paddock carefully

→ Have a nursery paddock to produce your own seed/pod

→ Use a long-life granular rhizobial inoculant.

"Not all species or cultivars are suitable for summer sowing," Brad said.

"Our research has narrowed it down to two (of the commercially available varieties): Margarita French serradella (at a rate of 25–30kg/ha pod) and AgWest® Bartolo bladder clover (20kg/ha seed).

"They have two important characteristics: 80–90% of the seed sown will break down and become germinable in the first summer/autumn, and when it does break down it germinates quickly."

DAFWA research on a trial site located in Western Australia has shown marked variation in pasture establishment based on time of sowing (see figure 1).

"When it comes out of the harvester, 90–95% of the seed/pod is dormant," Brad said.

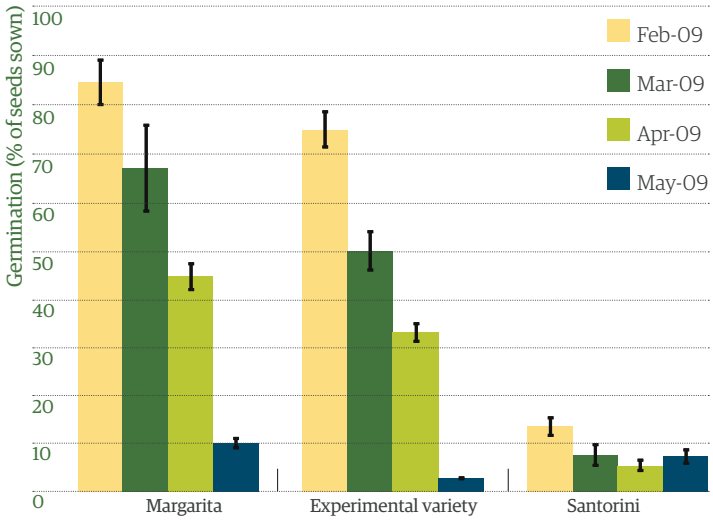
"You have to give it adequate time and exposure to get it to soften down to those 80–90% breakdown levels.

"We've found sowing in mid-February to be most successful, but you could probably go into mid-March if you bumped up your sowing rates and weren't too worried about inefficiencies." (See figure 1).

Paddock selection is also important, with the best option being a paddock that has had a long crop rotation – even better if the last rotation was a hay crop.

"If the previous year was a pasture year you'll have too much competition and lose establishment density," Brad said.

Figure 1 **Timing of summer sowing – based on trials with three varieties of serradella**



Source: Department of Agriculture and Food, Western Australia

"It has to be a reasonably clean paddock and you need to be careful about use of residual group B herbicide sulphonyl-urea and clopyralid (Lontrel™), in both the year before and summer sprays."

Serradella likes neutral to acid, coarse-textured soils; it can grow on loams, but not clays. Bartolo bladder clover prefers a higher pH – ideally above 5 – and is suited to loams and clays.

The final rule – and the secret to summer sowing's cost effectiveness – is have a nursery paddock to produce your own pod or seed.

"This is the reason the technique was developed in the first place and it particularly suits serradella," Brad said.

"Extracting serradella seed from its pod so it can be sown conventionally costs about $1/kg, which makes it expensive. This way you can produce a lot of your own pod, and you don't have to get it processed."

Other tips for successful summer sowing include:

→ Unscarified seed or pod should be drilled using a normal seeding rig, or top-dressed and harrowed, and planted no more than 1cm deep with an industry-recommended granular inoculant and fertiliser types and rates.

→ Grazing can begin as soon as the plants reach the four to five leaf stage.

→ Stock should be removed in spring in the first year to allow seed set.

→ Both varieties need to be planted to crop in the second year, and left to pasture again in the third year to optimise seed set and establish a seed bank.

→ Harvest with conventional grain harvesters.

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Read *Feedback's* earlier feature on the management of annual legumes on pages 22-24 of the August 2013 edition.
www.mla.com.au/feedback

For more information on managing these new annual legumes visit:

www.mla.com.au/frenchserradella

www.mla.com.au/bladderclover

Esperance producer Simon Stead and his family have sown 2,000ha of hard-seeded legumes in the past two years.

Snapshot

Simon, Jon and Bob Stead and their families, Esperance, WA.

Property:
8,000ha

Enterprise:
Wheat, barley and canola cropping. Self-replacing Merino flock. Terminal maternal ewe flock. Shorthorn and Angus commercial cattle herd

Livestock:
4,000 Merinos, 1,700 maternal composites, 350 Angus cows, 220 Shorthorn cows

Pasture:
Traditionally sub-clover-based improved pastures with some medics and wimmera ryegrass. About 10% of pastures now hard-seeded legumes

Soil:
Sand over gravel over clay, running into transitional Mallee country

Rainfall:
500mm

Putting summer-sown legumes to the test

Simon Stead is optimistic about the potential for hard-seeded legumes to replace struggling sub-clover in his pasture-crop rotation. He's particularly impressed by the convenience of summer sowing – an option for some of the legume varieties.

Simon farms in partnership with his father Bob, brother Jon and their families, and has sown about 2,000ha of hard-seeded legumes in the past two years.

"We've got a major problem on the south coast with red clover syndrome," Simon said.

"Our sub-clovers are coming under stress and dying out before the end of the season – anywhere from June.

"We're being left in a hole from a nitrogen-fixing and a feed point of view." →

Simon's top tips for establishing hard-seeded legumes

Nursery paddock – set up a patch you can keep clean, flat and rolled.

Paddock preparation – don't sow into old pasture. Sow at the end of a cropping rotation and be mindful of chemical residues.

Sowing time – summer sowing is brilliant because you don't feel pressure to sow something else. However, don't sow later than February if sowing unscarified seed or pod – it won't soften in time. If sowing scarified seed don't sow too late – it grows slowly in cold weather.

Fertiliser – we used plain superphosphate.

Inoculant – use dry, granular inoculant if summer sowing.

Seed depth – we seeded with a deep blade systems bar with canola boots on, which keeps it in the top 10mm. We've also used a double disc opener, which stops the paddocks blowing away in summer.

Seed rate – use recommended rates.

Weed control – Margarita serradella has a dormancy period of 14 days after rain, so we sprayed everything with Round-up at about 10 days. It killed some of the Margarita, but it effectively controlled the capeweed and grasses. Once the legumes are growing you can use a grass selective herbicide, but for broadleaf weeds we built a weed wiper and use Round-up. For biserrula, just use sheep and more sheep!

Time of grazing – similar to other crops: make sure the stock can't pull it out of the ground. Lock stock out towards the end of the season for seed set.

Seek advice – Angelo Loi, Brad Nutt, Ron Yates and Neil Ballard have been great sources of information and are very accessible.

What is red clover syndrome?

Found in approximately 50% of Western Australia's South Coast clover pastures it starves the plants of phosphate and turns them red. The cause and the cure are currently unknown.

→

In 2011, Simon took part in a pasture tour with the ASHEEP grower group, led by Angelo Loi, Brad Nutt and Ron Yates from Department of Agriculture and Food Western Australia, and consultant Neil Ballard.

"We travelled around the south-west and saw these legume varieties performing well in pretty harsh conditions," Simon said.

"It was an inspiring trip, so I came home and seeded about 1,000ha of new pasture."

In late autumn/early winter 2012, the Steads sowed 700ha of biserrula, with the balance made up of bladder clover, Santorini yellow serradella, Margarita French serradella and Prima gland clover.

"We had pretty good seed set, though some varieties did better than others," Simon said.

"The bladder clover, for example, grew massive amounts of feed and we harvested seed."

In 2013, the pastures went back under canola, and this year those paddocks will return to pasture.

"This will be the true test," Simon said. "If they don't persist, they're no good to me."

Simon said it was difficult to gauge how much nitrogen (N) the previous legume pasture had contributed to the 2013 canola crop, however he did small trials of different N rates.

"They all had starter N at sowing time and visually you can't see any difference between the areas that had 0kg N/ha, 40kg N/ha and 80kg N/ha applied at the start of flowering," he said.

The area with 0kg N/ha displayed a yield advantage over canola grown on paddocks which hadn't previously been sown to legumes. However, Simon found as the N rate went up so did the yield.

"It was an abnormal year with 300mm more rainfall than the average annual rainfall, so we will continue these trials to assess the impact of the legumes with the view to, at times, being able to reduce the amount of N we need to apply," he said.

Building up

The Steads summer-sowed 300ha of Margarita French serradella in February 2013.

With 180mm of rain falling in March – contributing to a 700mm total by the end of October – the results were "phenomenal".

"All our pastures came up – and it was our best sub-clover year in 10 years," Simon said.

"However, red clover syndrome kicked in and chopped a lot of it off, whereas the serradella was still green, flowering and setting seed at the end of October.

"Where we swathed (windrowed) the canola you could see a carpet of biserrula and Santorini under it, and a little bit of bladder clover too.

"The legumes are supposed to be so hard-seeded that nothing should germinate in the first year after they set seed, but I think when you get 700mm of rain you get a fair bit of seed softening."

The Steads traditionally re-sow about 30% of the cropping area back into pasture in winter, but Simon says this may rise to 40% if the legumes perform well.

"We'll then work a rotation of two crops to one pasture and, if the pasture starts to look a bit dodgy, go to two years of pasture to let it build up," he said.

"Now we're waiting to see which varieties will be the most persistent."

Table 1 **Simon Stead – Esperance trial 2013: Dry matter assessment – tonnes/ha**

	28 June	25 July	4 September
Serradella	4.5	3.6	3.5
Control	2.1	2.6	1.6

Control paddock based on 30-50% Dinninup sub-clover content (fairly standard for the area)

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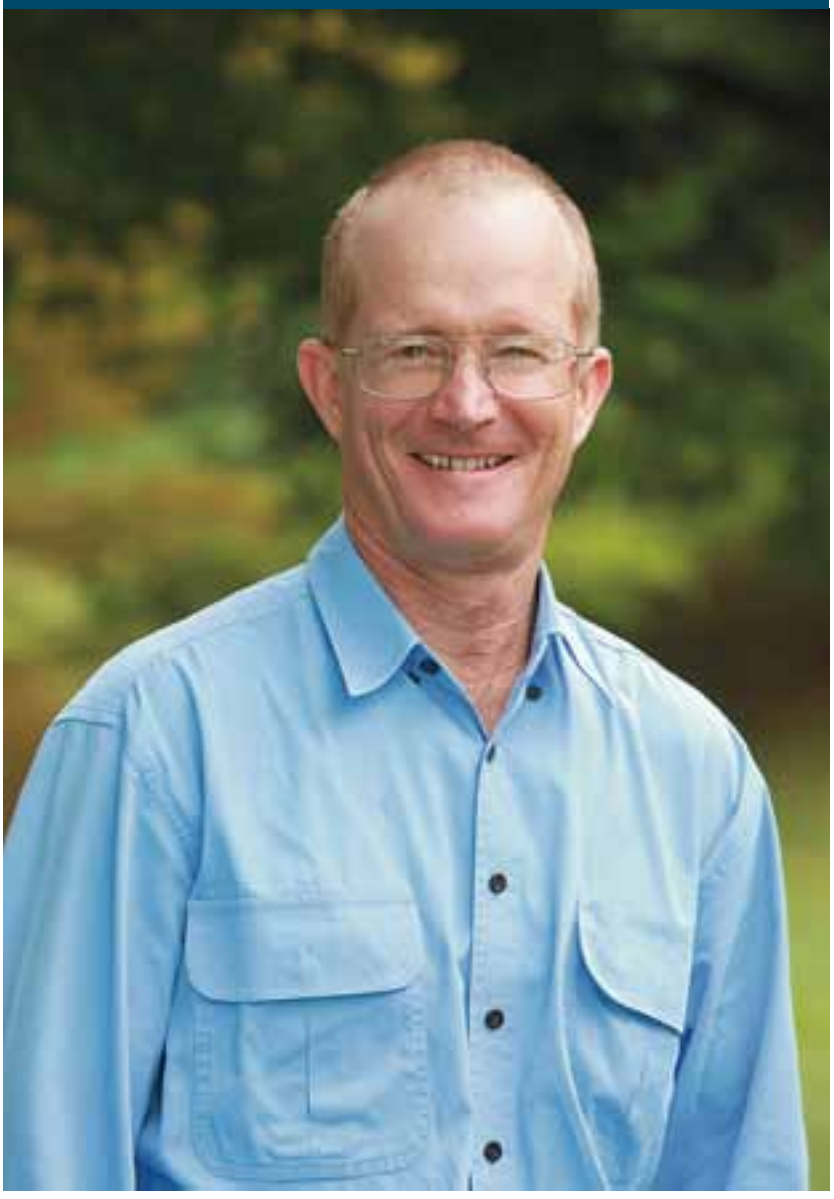
To watch a video featuring Simon Stead and Brad Nutt talking about establishing hard-seeded legumes go to **www.mla.com.au/hardseededlegumes**

In profile | Reproductive efficiency

Geoffry Fordyce // *Championing Cash Cow*

Dr Geoffry Fordyce wears many hats. Not only is he a Queensland cattle producer but he's also a Research Fellow at the University of Queensland and a member of the team behind Cash Cow, one of the largest research projects ever supported by MLA.

Epic in design and execution, Cash Cow was a massive data collection exercise over four years involving 78,000 head of cattle on 72 properties across Northern Australia. It focused, for the first time, on commercial production, investigating reproduction wastage and developing regional benchmarks for reproductive performance. Geoffry talks to *Feedback* about some of Cash Cow's findings



Why did you get involved with Cash Cow?

I've been involved with cattle reproduction in Northern Australia for decades and we've always known there's been a major problem with reproduction wastage. After producing a review publication on the topic with Dr Brian Burns, we realised we were no closer to finding out why, how or when these reproductive losses were occurring. When talking with the now Cash Cow project leader Professor Michael McGowan, we came up with the concept.

Cash Cow produced a huge volume of data. What did the data reveal and what did you and the research team do with it? We now better understand the biology of beef cow reproduction in Northern Australia and factors associated with its variation. We have developed a system to assess businesses in the context of what is achievable in their own environments so producers can accurately answer the question 'how is my herd going?'. The analysis of what affects reproductive traits means we can offer more confident advice and solutions to problems.

What messages did you deliver to producers at the WA Meat Profit Day earlier this month? The first was the importance of pasture to a cattle business - you can't make something out of nothing. The second was that, by using the method we developed, where productivity is measured as net saleable live weight yield, producers can accurately assess the health of their breeding herd business, something which previously has been very difficult to do, particularly in the context of what's realistically achievable.

During the course of the project were there any surprises? There was huge variation in the live weight production ratio between enterprises, up to four times, which highlighted potential for improvement. This might be achieved by practices such as better pasture production and utilisation and better lactation management.

A really good surprise occurred at the start of the project. We had a hypothesis that live weight production/year for a yearling steer could be used to predict live weight production/year for a cow. It turned out to be a very good predictor, in fact it was 1:1. It meant the annual live weight gain of yearling steers is, on average, the same as weaner production of cows. This has obvious ramifications for management.

There's a lot of information coming out of this project. Where should producers focus their efforts? We learnt from this project that producers do record a lot of information but often it's not used or isn't useful. If producers collected and used data in a standardised way, eg calculating net live weight production, they can get answers to important questions in their farm businesses.

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Feedback will feature major findings from the Cash Cow project in upcoming editions.

Reproductive efficiency

Another AI option

In the March edition of *Feedback* we took a look at the benefits and challenges of fixed time artificial insemination (FTAI). This month we examine the how tos of observed heat artificial insemination (AI).

Professor Lee Fitzpatrick, of James Cook University, who has researched FTAI programs in northern Australia since the 1970s, believes observed heat AI, using heat detectors, is better than FTAI, even for larger herds.

"The disadvantage of FTAI on large numbers is that most inseminators can only cope with about 50 animals in a straight run before their arm starts to get tired and pregnancy results are affected," he said.

"And, as soon as you start to break up large mobs into smaller lots, you start to lose the advantages of FTAI.

"In my experience, inseminating smaller groups on heat detection, based on positive heat detection aids only, immediately lifts your success rate by 10%. By using synchronising drugs, inseminating for two cycles and putting in mop-up bulls, you can expect pregnancy rates of greater than 95%."

Lee said heifers were the only option for FTAI because lactating cows are logistically difficult and Brahmans, in particular, pose problems with post-partum anoestrus.

"Weight is also important, particularly for Brahman heifers or heifers with high *Bos indicus* content," he said.

"They should be a minimum of 300kg and closer to 350kg depending on genotype. Sometimes, if they're not quite cycling, a synchro' program will kick start them."

MLA R&D Coordinator for Northern Beef Geoff Niethe said that for many producers, particularly those in harsh environments, breeding their own bulls using artificial insemination made a lot of sense.

He said producers would choose observed heat AI over FTAI if:

1. You have large numbers to be inseminated so that there is a cost effective workload for staff and inseminators over two to three days.
2. If you are using expensive semen and need to maximise conception rates from insemination.
3. You have the ability to do your own insemination or unlimited access to a qualified technician.
4. You don't have strict time constraints.

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Check out tips for successful fixed time AI in the March 2014 edition of *Feedback* at **www.mla.com.au/feedback**

Also go to: **www.brahman.com.au/technical_information/reproduction/artificialBreeding.html**

www.mla.com.au/mbfp/tool5.6-AI

Snapshot

Rob and Annie Donoghue, Bauhinia, Qld.

Property: 47,720ha

Enterprise: Beef production for the Japan Ox market

Livestock: 12,000 head

Pasture: Native (black spear grass, kangaroo grass, blue grasses) supported by widespread stylos, buffel grass and legumes such as leucaena, butterfly pea, wynn cassia and desmanthus

Soil: Sandy surfaced texture contrast soils in forest country through to cracking clay soils associated with brigalow and softwood scrub country

Rainfall: 630mm

Producers Annie and Rob Donoghue initially turned to AI as a means of introducing genetics from *Bos taurus* bulls without having to manage an animal struggling to cope in their northern environment, particularly with heat, ticks and buffalo fly during the mating period.

Lessons learned

- Start small until you become more confident with the AI program.
- Be well prepared.
- Understand all the important factors from heat detection methods through to cleanliness.

In for observation

But the Donoghues have now found many more benefits from their fixed time and observed heat detection AI programs used to join heifers when seasonal conditions allow.

"We aim to capitalise on hybrid vigour and use European genetics for muscling and the British influence for meat quality attributes but we have found we need to keep at least 50% Brahman content in the herd to ensure ease of management and survivability," Annie said.

Aiming for export markets with steers and the Meat Standards Australia domestic trade with heifers, the Donoghue's herd is predominantly 50% Brahman with the remainder made up of various European and British breeds such as Hereford, Angus, Charolais, Limousin, Simmental, Shorthorn and Blonde d'Aquitaine.

The mating game

"We join heifers from mid November, two weeks ahead of the rest of the herd and ideally for nine weeks," Annie said.

"This increases opportunity for re-conception during their second mating and helps to improve selection for more fertile heifers about a month ahead of the rest of the herd. That gives the heifers more time to rejoin in their second year."

If all the factors that influence AI programs look good, the couple will join up to 700 head using an observed heat synchronisation program, their first choice of program, particularly with more valuable semen.

"To entertain an AI program we need adequate rain prior to November, good feed ahead of the cattle and a significant body of feed in the smaller paddocks around the yards," Annie said.

"The heifers need to be well grown, a minimum of 330kg live weight, a body score condition of 3 and on a rising plane of nutrition."

Feed and nutrition, according to the couple, have the biggest bearing on a program's success rate with both FTAI and observed heat methods resulting in pregnancy rates of 40% and 49% respectively in "less than perfect" years. However, when the stars align their rate has been up to 57% for FTAI and 59% for observed heat detection.

The heat is on

When running an observed heat detection program, Annie and Rob check the heifers at dawn and dusk, with the most emphasis on the morning run.

"The heat detection process has a huge bearing on the success of your program and if you're not confident, you may be better off with an FTAI program," Annie said.

They have gone away from using teasers, believing they only help identify obvious females, not the shy ones that are difficult to spot.

They believe careful observation of heifer behaviour coming into heat is extremely important to the success of the program. While heifers standing to be mounted is a clear indication of 'standing heat', they also take note of other indicators such as restlessness, chin resting, frequent urination, rub marks, swollen vulvas and a stringy mucous discharge from the vulva.

"We do apply heatmount indicators such as the Hot Cow Oestrus Detection Tag, Estrotect Heat Detector or Kamar Heatmount Detectors but these are only ever interpreted in conjunction with behavioural observations," Annie said.

"The biggest decider for us is the value of the semen in terms of expense or amount available. Our observed heat detection programs to date have maximised the number of progeny per straw used while, with FTAI, we have tended to increase the number of AI progeny produced in proportion to the heifers originally inducted to the AI program."

More observations

For observed heat, the Donoghues use a 10-day program, selecting their best heifers.

"When you're planning observed heat programs using heat synchronisation you've got to remember that you will have to identify a lot of heifers cycling at certain times and they ideally need to be inseminated within a specific time window," Annie said.

"Seven hundred is the maximum we have attempted in an observed heat program utilising skilled support staff."

Annie recommends starting with small numbers until producers are comfortable with the process.

"I think the important things are: don't plan too big too early, be well prepared ahead of time, make sure you have skilled operators and make sure there is attention to detail," she said.

"AI is methodical so attention to temperature, timing, cleanliness, the process of insemination and looking after semen in the tank can have a large bearing on a program's success."

Annie Donoghue // T: 07 4996 4114
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Engaging with butchers

Talking shop

There are around 3,800 independent butcher shops in Australia and MLA communicates regularly with most of them, including the 1,650 butcher owners who are members of MLA's Australian Butchers' Guild.

MLA Trade Marketing Manager Stephen Pocock said for the past 12 years, MLA had been building a fraternity for butchers, where ideas can be shared and access is provided to relevant resources, education and training.

"The independent retail sector is an important part of industry and MLA supports long-term programs and resources to ensure it remains a viable sector for consumers to source traditional and value-added product," he said.

"We know Australian independent retail butchers are passionate about their industry, which is why, to support future growth, it is essential that they are known by consumers as a sustainable, professional, well-educated channel for sourcing beef and lamb.

"With an evolving retail landscape, we have seen supermarkets pursue opportunities by improving their fresh meat shopping experiences. Butchers are looking to differentiate their meat offer with niche brands, an increased valued added range and product positioning statements."

More than 50% of Australian independent retail butcher owners are already members of the Australian Butchers' Guild (known as the Red Meat Networking Club until late 2013).

Members can participate in a range of activities like supply chain tours, trips to innovative and aspirational butcher stores, Beefing Up and Racking Up your Profits value-adding masterclasses and trade nights. They also have access to educational resources on processing, marbling and ageing processes, in-store marketing and promotional programs based on MLA's seasonal lamb roast and summer beef barbecue brand campaign promotions, butchery video clips and cuts reference charts.

"Since implementing the Beefing Up and Racking up your Profits value adding program in 2007 more than 3,900 butchers have attended workshops around the country," Stephen said.

"Many butchers have introduced the product lines directly from the manuals and others now use their own flair to adapt the ingredients to suit their customer base."

3,800 independent butcher shops in Australia of which MLA communicates with around 85%

1,650 independent butcher owners registered as members of the Australian Butchers' Guild

26 seasonal beef and lamb product range launches conducted nationally

15 combined retail and foodservice 'Paddock to Plate' tours conducted nationally

Stephen Pocock, MLA
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www.australianbutchersguild.com.au

Facebook: **www.facebook.com/AustralianButchersGuild**

Contact: **butchers@mla.com.au**

Racking up more profit

Victorian butcher Brendon Watts, who has had more than 40 years experience as an independent retailer, found participating in the MLA supported Beefing Up and Racking up your Profits value adding programs and masterclasses helped his bottom line.

Brendon said, "The programs provided me with the knowledge of how to value the whole carcase, turn once-trim cuts into premium products and continue to meet the changing consumers' requirements and needs."

Brendon has been engaged by MLA to run some of the courses over the years and has now trained more than 400 butchers in Victoria.

He said participant feedback was positive, as they provided ways to improve bottom lines and keep customers happy.

"It's about bringing the bottom end up instead of pushing the top end up," he said.

"As a small business owner I am constantly looking for a point of difference and competitive price point. I need to value the whole carcase today as a premium product, otherwise I'm losing money."

The simple lamb burger is an example of this in Brendon's business having attracted a strong customer following. "By value-adding lamb trim from $13/kg into a Tuscan lamb burger priced at $22.90/kg, we now sell more lamb burgers as a premium product and we're able to utilise the whole carcase, so we're not just relying on the leg, cutlets or loin cuts.

"If you ever said I could have charged that for trim I wouldn't have believed it, but now we buy it in, as it's one of our most valuable cuts. We make more monthly profit from our burger than our eye fillet.

"Another example is we sell bolar blade as Greek lasagne. Now consumers can buy a lasagne from us, not with mince, but with shredded beef – and it's delicious.

"Producers are doing a better job than ever before in supplying me with a consistent product that I can then turn into masterpieces."

Brendon Watts, Brendon's Quality Meats, Doncaster Vic
T: 03 9848 6388

Going for gold – The Flavour Makers Naturals

Australia is set to send its best butchers to the UK to compete in the 2014 Tri-Nations Butchery Competition in July. The competition is an MLA initiative and forms part of the Australian Butchers' Guild program. This year the team has attracted Flavour Makers as the principle sponsor with naming rights to the team.

The six-member team will compete against New Zealand and the UK in front of thousands at the UK's prestigious Yorkshire Show.

Now in its fourth year, the multinational butchery event is a competition of skill and workmanship and an opportunity to raise retail standards by building excellence and professionalism in the butcher trade.

Independent judges will award points based on butchery skill, workmanship, product innovation, overall finish, presentation and display - elements the butchery industry believe are vital to the longevity and growth of independent butchers the world over.

The Australian team consists of captain Michael James, Carina North Meats, Carina, Queensland; Gary Hine, The Naked Butcher, Mundaring, Western Australia; Adam Stratton, Tender Value Meats, Hornsby, NSW; Trevor Hill, Bruce's Meat, Torrens Park, Adelaide, South Australia; Matthew Papandrea, Joe Papandrea Quality Meats, Bossley Park, Sydney NSW; and Tom Bouchier, Peter Bouchier – Butchers of Distinction, Melbourne, Victoria.

The competition involves two hours of breaking down and garnishing a side of beef and a whole lamb carcase and each team can provide their own signature seasonings, spices, marinades and garnishes.

Tri-Nations entrants with MLA's Trade Marketing Manager Stephen Pocock, preparing for the competition.

→ **See page 32 for Tri-Nations competitor, Tom Bouchier's story**

In profile Engaging with butchers

Tom Bouchier // *butcher champion*

As a third generation butcher, and one of 14 butchers in his family, Melbourne's Tom Bouchier is excited about his future in the meat retail industry.

Tom, 21, grew-up in Melbourne, and upon finishing school, started an apprenticeship with his father, Peter. After finishing trade school top of his class, Tom is now based in the Peter G Bouchier Butchers of Distinction store at Toorak.

Tom also works in the family's Melbourne CBD retail outlet and their smallgoods' factory and has gained experience in boning and trimming at Gundagai Meat Packers.

His talents were quickly being recognised, winning the Australian Culinary Challenge as a first-year apprentice in 2010 and coming runner-up in the MLA Mystery Box competition as part of the 2011 Australian Meat Industry Council Sausage King competition.

He also won a gold medal representing Victoria in the 2013 Australian Young Butchers' Picnic, where he was tested on everything from boning, slicing and preparing products to cooking a restaurant-quality cut.

Tom is a member of the 2014 Australian Tri-Nations Butchery team.

Why are you passionate about the meat retail industry?
I have grown up around it and have known butchering my whole life. It's a great industry that can get you anywhere.

What challenges do you think butchers face?
Competition from supermarkets, where people shop for convenience and often lower prices. To combat this, butchers have to use their expertise and customer service to give consumers what they want. There is 'theatre' walking into a butcher shop - seeing the butchers making jokes, sharing stories and helping customers with selection. You can't find that between the supermarket shelves.

What skills have you developed through your competition experiences?
Competitions test a whole range of skills – not just cutting up a carcase. In the MLA Mystery Box challenge at the 2011 Sausage King Awards, we had just one hour to make as many products as possible from the marinades, garnishes and ingredients we had been supplied. The Australian Young Butchers' Picnic had a range of components – from shopping for garnish ingredients on a limited budget, to boning and slicing meat, to presenting for butcher judges to critique, to cooking and plating up a cut in restaurant fashion for some of Perth's best chefs to judge.

Why do you think the Tri-Nations Butchery Competition is valuable to Australia's meat retail industry?
To learn and get ideas from the other countries in this competition. I'm really looking forward to working with the Australian butchers – it's great timing for me to have this experience as a young butcher.

How are you "training" for the competition?
Working at my family's shop in Toorak has played a big part in my competition success throughout my apprenticeship. I have learnt how to perform under pressure, how to cut well efficiently, how to perfect hygiene and appearance and also how to tray up meat for display. I'm making sure every tray I put in the window is of competition standard.

Who is your typical customer and what do they buy?
Mainly families and young professionals, who are prepared to spend a little more for assured quality and their buying habits change over the course of the week. At the start of the week we put out easy-to-cook, quick and simple cuts and meal ideas, and towards the end of the week – especially on Saturday – we feature roasts and barbecuing meal ideas. Customers won't buy something if they are not 100% satisfied, so I think working in this environment has helped me to become the butcher I am.

What are your top sellers?
Meat Standards Australia graded eye fillets, because they are lean and tender no matter how they are cooked, and minted lamb cutlets which are an easy midweek meal made with great flavoured marinade.

www.petergbouchier.com.au

www.australianbutchersguild.com.au/Home/Feature-1-Tri-nations

Recipe

As the days start to shorten and cooler weather arrives, here's a recipe from MLA's autumn lamb campaign to demonstrate an 'easy' lamb roast.

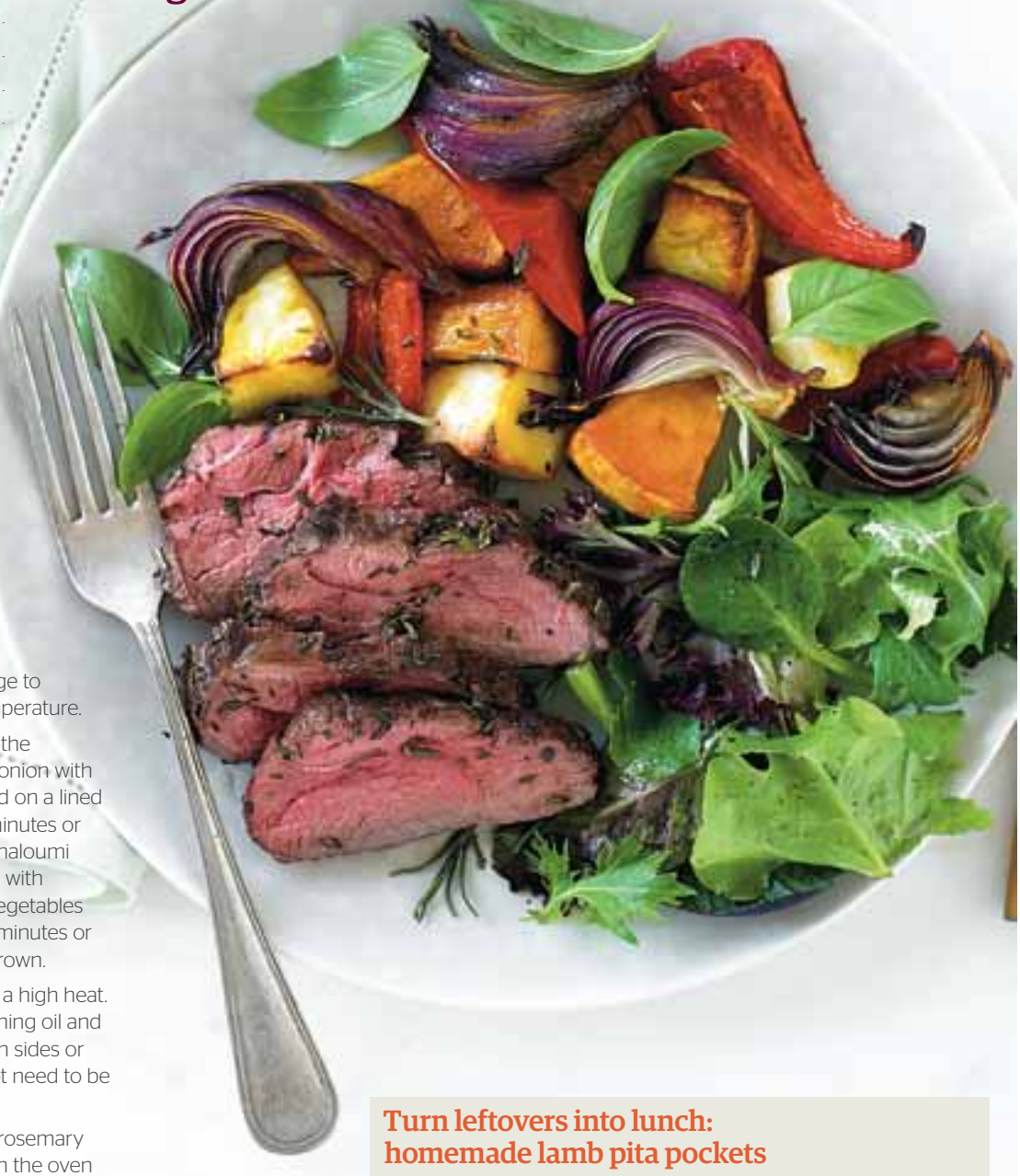
Rosemary lamb rump

with balsamic roasted vegetables and haloumi

Serves: 4

Preparation time: 15 minutes

Cooking time: 40 minutes



Ingredients

1kg of lamb rumps (about 4–5), trimmed of fat

2 red capsicums, cut into wedges

1kg pumpkin, cut into wedges

2 red onions, cut into wedges

2½ tbsp olive oil

250g haloumi cheese, cut into 2cm pieces

1 tbsp balsamic vinegar

2 tbsp rosemary leaves, chopped

½ cup basil leaves

Green salad, to serve

Method

1. Take the lamb out of the fridge to allow it to come to room temperature.
2. Preheat oven to 180°C. Toss the capsicum, pumpkin and red onion with two tbsp of the oil and spread on a lined baking tray, cooking for 25 minutes or until golden brown. Add the haloumi pieces to the tray and drizzle with balsamic vinegar. Bake the vegetables and haloumi for a further 15 minutes or until the haloumi is golden brown.
3. Place a large frying pan over a high heat. Rub the lamb with the remaining oil and cook for two minutes on both sides or until browned (lamb does not need to be cooked).
4. Rub the browned lamb with rosemary and place in a roasting dish in the oven for 15–20 minutes or until cooked to your liking. Remove from oven, cover loosely with foil and allow to rest for 10 minutes.
5. Slice the lamb and serve with roasted vegetables, haloumi and basil leaves. Serve with a green salad.

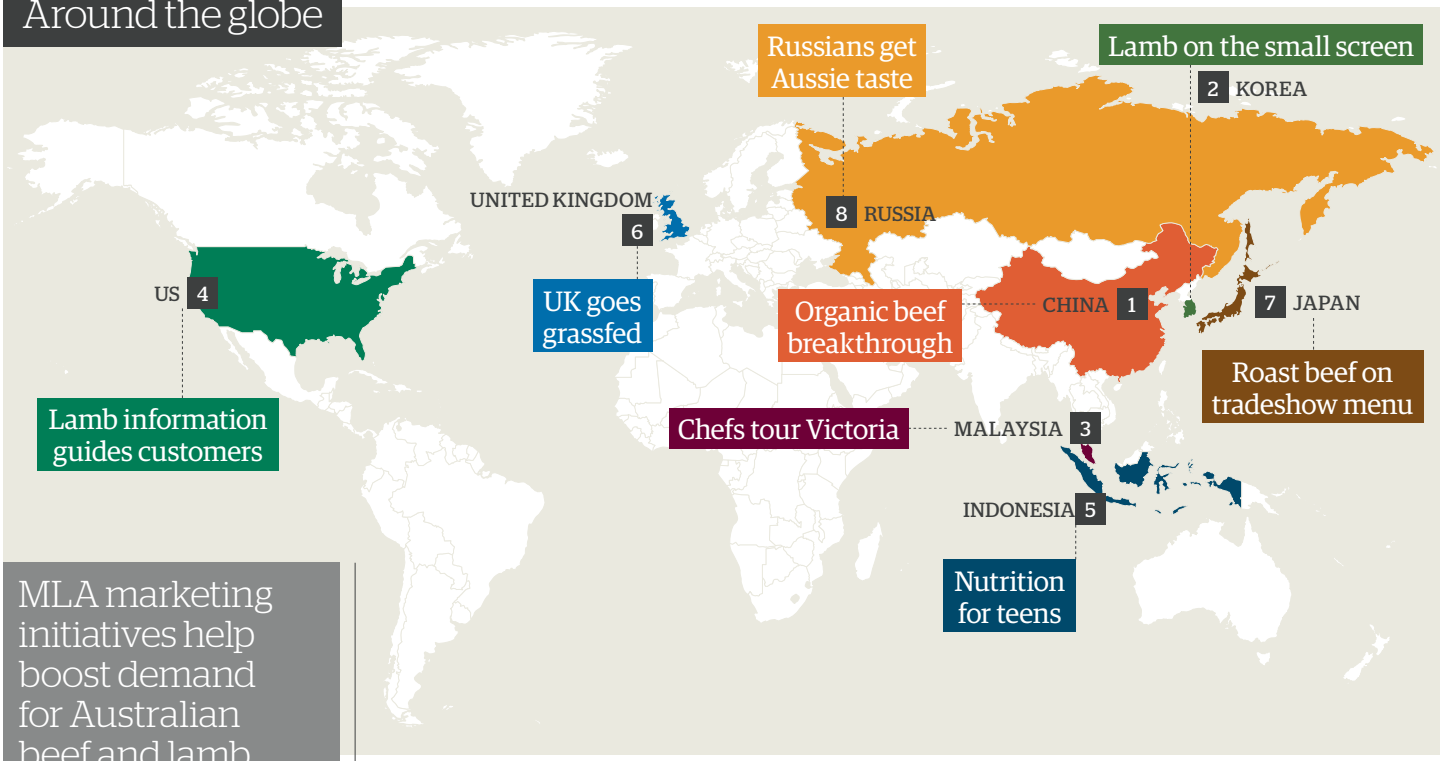
Turn leftovers into lunch: homemade lamb pita pockets

Serves: 2
Preparation time: 5 minutes

Split two wholemeal pita pockets and spread with hummus, sliced lamb, sliced tomato and shredded iceberg lettuce

Find more autumn recipes at **www.beefandlamb.com.au**

Around the globe



MLA marketing initiatives help boost demand for Australian beef and lamb both at home and in our global marketplace.

1 CHINA

Seal of organic approval

Australian organic beef has become the first and only organic red meat to be imported into China with full certification. Australian meat processor Arcadian Organic & Natural Meat Co was the first to be granted China's organic food certificate, with the assistance of its importer, Beijing Organic and Beyond Corporation. The organic beef products are available to buy online and through home delivery. With support from MLA, a beef product launch was held in January at the Australian Embassy in Beijing.

2 KOREA

Lamb's online shopping debut

An MLA joint promotion resulted in more than $46,000 worth of Australian bone-in lamb shoulders being sold through the Korean home shopping television in 35 minutes. The promotion was launched with NS Home Shopping in February, the first lamb offering in Korea's home shopping segment. MLA provided images and a video of lambs in a 'natural environment' and an interview with MLA Korea Regional Manager Michael Finucan, who spoke on the qualities of Australian lamb for Korean consumers. Australian lamb bone-in shoulder was advertised during the promotion, with matching Korean sauces, for A$73/set and 628 sets (or 1.5 tonnes) were sold.

A$46,208

worth of Australian bone-in lamb shoulders sold through Korean home shopping television in 35 minutes

3 MALAYSIA

A 'taste' of Victoria

Seven executive chefs from Malaysia travelled to Australia for a week in March to learn more about Victoria's regions and produce. The chefs, influential in the buying decisions within their businesses, are highly respected in their countries.

The chefs were guests of the International Food and Beverage Trade Week and the Victorian government. MLA supported the tour and chefs visited the Melbourne wholesale markets, retail outlets, processor JBS and a cattle property on the Bellarine Peninsula.

4 US

Raising lamb's profile

A recent Technomic study commissioned by MLA in November 2013 showed a 4% increase in trade awareness of Australian lamb and a 6% growth in retail and foodservice meat buyers purchasing or trialling the product. This is backed by a 5% increase in Australian lamb exports to the US so far in 2014 (on the same period in 2013). To further capitalise on this, MLA has released a new lamb product guide for current and prospective customers.

6%

increase in US meat buyers purchasing or trialling Aussie lamb

5 INDONESIA

Teen chefs cook up storm

MLA coordinated the Australian Beef Junior Chef Challenge to communicate to teens the nutritional benefits of beef. The competition attracted 450 junior high school students, representing more than 11 international and national schools. Thirty-three teen chefs progressed to the grand final where they prepared Australian beef-based meals including burgers, chilli beef pancakes and stir-fries.

450

students hear about the nutritional benefits of beef

6 UNITED KINGDOM

Grassfed beef on UK radar

A trial is underway in a large UK mid-tier family dining restaurant chain of six Australian grassfed beef cuts – rump, cube roll, tenderloin, striploin, T-bone, and oyster blade (served as flat iron) – being added to the menu of 12 restaurants. The restaurants were selected in strategic locations of the Midlands, central London and southern England, to provide customer feedback. The trial will run for three months, and, if successful, Australian beef will go onto menus of 140 restaurants in the chain.

6 Australian grassfed cuts trialled at

12 restaurants

7 JAPAN

Sampling success

Around 3,000 visitors tasted Australian roast beef and steak with a salty miso sauce when they visited the Aussie Beef Booth at the 48th annual Supermarket Trade Show. The three day event attracted 1,402 exhibitors and 82,000 visitors.

MLA's spring campaign and beef projections seminar was also held, attended by 100 participants, which generated coverage in three major trade newspapers (with a combined circulation of 120,000).

3,000

supermarket trade show visitors taste Aussie beef

8 RUSSIA

Red meat and wine match

MLA organised an Australian red meat industry stand at the Prodexpo five-day food show in Moscow. Around 2,300 companies from 63 countries exhibited and attendees could taste Australian beef, lamb and wine.

On the ground

Russia

Michael Crowley
MLA Regional Manager
European Union and Russia
E: mcrowley@mla.com.au

Australia experienced a challenging market access issue with Russia earlier this year when Trenbolone and Zeranol were banned. These products are ingredients found in synthetic hormone growth promotants (HGPs). As a result of an increased testing regime, Australia returned positive detections and was placed in a difficult situation. Russia also placed a temporary ban on beef offal imports from Australia in January due to this issue.

What was a very open market for Australian beef and offal changed to become an HGP-free market.

The chilled and frozen beef market remains open and MLA continues to work with our trade partners in Russia to ensure Australia maintains its great reputation as a supplier of safe, healthy and high quality beef and sheepmeat.

Our beef export volumes to Russia are higher than this time last year (up 34% year-on-year) but, following this recent issue, we saw significantly reduced volumes shipped to the region during February (down 72% compared to February 2013). This downward trend is set to continue while supply chains adjust to the new market requirements. With a reduction in the available cattle supply eligible for Russia, there will be an adjustment period before a recovery in volumes is seen.

On a brighter note, chilled beef exports to Russia reached record levels in 2013, increasing from 1,000 tonnes in 2012 to more than 2,700 tonnes in 2013. The value of these exports averaged $14.50/kg, making Russia Australia's highest value/kg chilled beef export market.

Australia is currently in a unique situation in Russia as it's the sole supplier of high quality chilled beef to the high-end steakhouse restaurant sector. This is due to the US, our major competitor in this segment, being barred from exporting beef to Russia in February 2013 due to the country's banning the use of Ractopamine (a feed additive used in feedlots to add muscle mass).

With the US unlikely to re-enter the market until at least the second half of 2014, Australia is set to remain the sole supplier to the sector for much of this year.

Market observations

Keeping an eye on the competition

Being one of the major players in global beef and lamb markets, Australia's competitive position can be crucial to the export success and subsequent value captured through the supply chain.

Tim McRae
MLA Economist

Consequently, the available supplies and associated prices from competitor countries can be a major factor influencing the demand for Australian product.

Heading into 2014, the supply situation for two of Australia's main competitors, the United States (beef) and New Zealand (lamb) is likely to have an influence on prices received for Australian product this year.

For the US beef industry, a 60-year low cattle herd and calf crop have underpinned historically high prices for US product. Accelerated by recent drought conditions, the long-term decline in the US herd (while partially offset by production gains) has reduced the supply available to US consumers.

This is currently, and is likely to continue being, a positive for the Australian cattle industry as the US is Australia's main competitor in Japan and Korea and is the second largest market for Australian beef exports.

At 87.7 million head, the US herd is at its lowest level since 1951 and this, combined with current rebuilding efforts, is expected to underpin historically high prices over the medium term.

Contrast this to Australia, which is in a drought-led liquidation phase after peaking at 29 million head. Interestingly, in 1951, Australia's cattle herd was just above 14 million head - half of what it is today.

For lamb, Australia and New Zealand collectively capture the lion's share of the global trade - competing for consumers from China, the Middle East and the US.

New Zealand exports in their current production year (2013-14) are expected to be down 9% year-on-year, the result of drought and a historically low lamb crop and sheep flock.

With these reduced supplies, Australia is well positioned to attract additional export demand in lamb markets.

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Sheep projections

A story of low supply and high demand

The 2014 outlook for the Australian sheep industry is positive, underpinned by strong global demand, a lower Australian dollar and reduced competition from New Zealand, according to MLA's *Sheep industry projections 2014*.

Drought and a scorching summer across important lamb producing regions of Australia will impact on supplies in the first half of the year, and the impact of seasonal conditions on lambing rates in the next 12 months will be crucial to the increased supply of lamb over the medium term.

The Australian flock is forecast to reach 72 million head at 30 June 2014, down 3%, or 2.2 million head on 2013 (see figure 1). This illustrates the extent of widespread dry conditions across the eastern states, with historically high slaughter in 2013.

Over the medium term, the flock is forecast to recover to reach 74.3 million by 2018.

Supplies to ease

After record supply and exports in 2013, overall production volumes are expected to decline this year, with lamb slaughter forecast to decrease 4.3%, to 20.95 million head (see figure 2).

Reduced supplies are expected to have a positive impact on prices, provided seasonal conditions improve and enable Australian producers to finish lambs to meet market requirements.

Reduced adult sheep stocks, coupled with an assumed return to 'average' seasonal conditions, is forecast to see mutton slaughter slow, to around 6.10 million head in 2014, down 36.6% year-on-year (see figure 3).

Lamb demand to remain strong

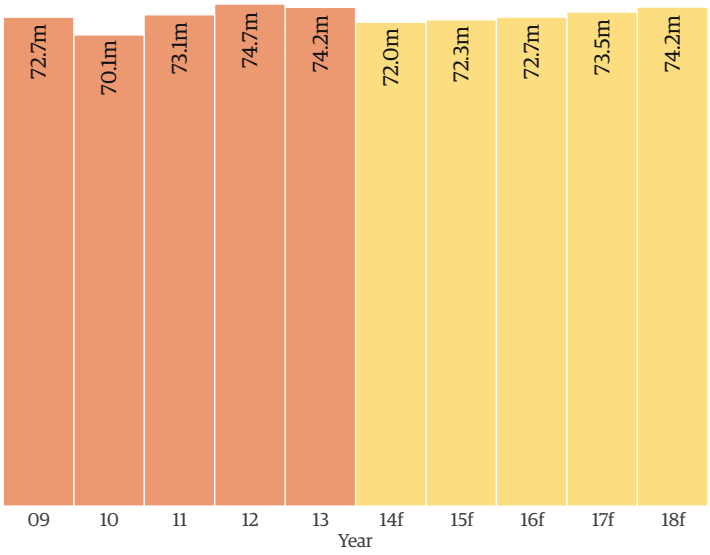
While the supply of Australian lamb in the mid-term will hinge on seasonal conditions, the demand for lamb in international markets looks clearer.

With the Australian dollar assumed to trade lower, decreased competition from New Zealand, due to supply issues, and expanding demand from most major markets, Australian sheepmeat is expected to be highly sought after in 2014.

After a record 2013 volume of 213,714 tonnes swt, Australian lamb exports for 2014 are forecast to decline 1.5%, to around 211,000 tonnes swt (see figure 4).

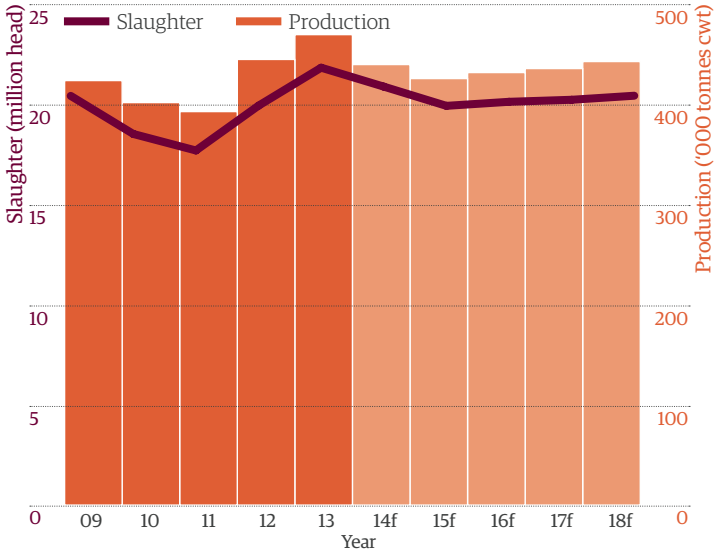
Strong international demand and forecast tighter global supplies are expected to see the larger, established markets of the Middle East, China and the US take a larger percentage of Australian exports, as greater competition for product will likely see volumes to smaller, developing markets decline.

Figure 1 Australian sheep flock (million head)



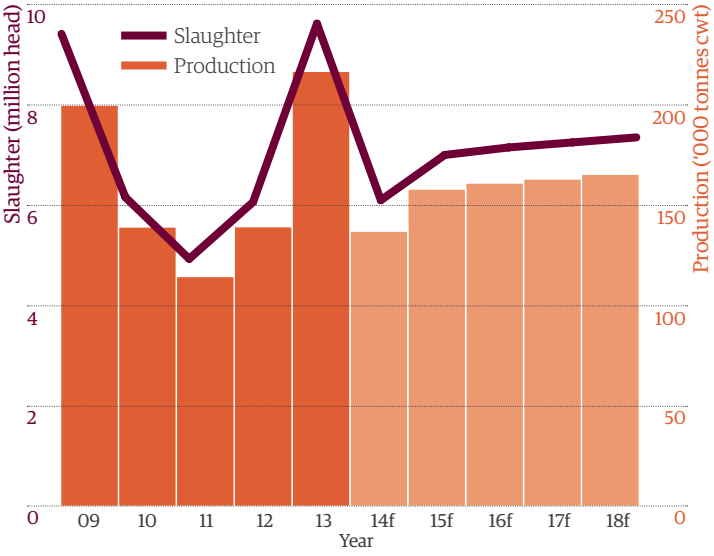
Source: Australian Bureau of Statistics (ABS), MLA forecasts f = forecast

Figure 2 Australian lamb slaughter and production



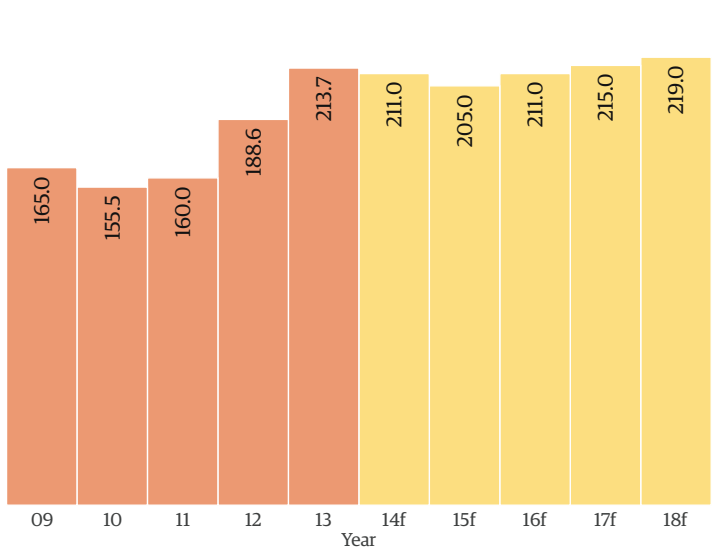
Source: ABS, MLA forecasts f = forecast

Figure 3 Australian sheep slaughter and mutton production



Source: ABS, MLA forecasts f = forecast

Figure 4 Australian lamb exports ('000 tonnes swt)



Source: Department of Agriculture, Fisheries and Forestry, MLA forecasts f = forecast

The domestic market – still Australia's largest single lamb market – is also likely to feel the impact of reduced supplies with consumption expected to fall by 8% in 2014.

The surge of shipments to the Middle East in 2013, underpinned by large volumes to Bahrain, the United Arab Emirates and Jordan, is forecast to continue in 2014, as growing populations and incomes fuel demand. Lamb exports in 2014 are forecast to reach 61,000 tonnes swt, up 2% year-on-year.

Similarly, the growing middle class and incomes in China, coupled with strong concerns for food safety, saw Australian lamb exports to the country reach a record 39,535 tonnes swt, representing 18% of total Australian lamb exports. Exports to China are expected to increase a further 10% to 43,300 tonnes swt in 2014.

Australian lamb exports to the US are forecast to grow a further 7% in 2014, to 42,000 tonnes swt, which would be the highest calendar year total since 2007.

Mutton exports constrained by supplies

A significant increase in drought induced mutton turnoff bolstered mutton exports, reaching 172,000 tonnes swt in 2013. In line with a significant decline in production, mutton exports for 2014 are forecast to total 110,000 tonnes swt, 36% lower than 2013.

Similar to lamb, the larger, more developed mutton markets are forecast to increase their market share of mutton exports. China, Australia's largest mutton market, is forecast to continue the strong demand trend from 2013, at 47,000 tonnes swt in 2014, down 19% year-on-year. Likewise, shipments to the Middle East are forecast at 34,100 tonnes swt, back 17% on 2013.

Tim McRae, MLA
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Read MLA's *Australian sheep industry projections 2014* at **www.mla.com.au/industryprojections**

Victoria//Hamilton Meat Profit Day

This month we look at key messages presented by five industry experts at the Hamilton Meat Profit Day. If you're interested to hear more you can watch their videos online (see details below).

Associate professor Bill Malcolm, lecturer in management economics at the University of Melbourne and a farm economist with Department of Environment and Primary Industries (DEPI):
Bill gave an overview of what he sees as important profitability issues for producers in the next decade, challenging the audience to think ahead and set up their businesses to be prepared for anything. He said building wealth was based on individual situations and driven by risk analysis and returns, building capital, servicing debt and managing a balanced portfolio within the farm.

David Rutley, Lamb Supply Chain Coordinator, Thomas Foods International:
Thomas Foods International processes around 25% of Australia's sheep and lambs. David explained Thomas Foods' role as a global food company was buying nationally and selling globally, taking a whole chain approach and connecting the dots between buyers and sellers. He said the consumer was king – all genetics, production, processing, distribution and processing product traits were dictated by consumer feedback.

↑ *Meat Profit Day attendees take in the sheep trade displays.*

Want to hear more? Audio webcasts of all the speakers at the Hamilton Meat Profit Day are available online **www.mla.com.au/HamiltonMPD**

← Ian Locke, Managing Director of Wirruna Poll Hereford stud, Spring Valley, Holbrook, NSW:
Ian spoke on the importance of genetic progress for economically important traits. He said genotypes and environment were major factors affecting genetic progress. He said the easiest way to improve efficiencies in farming, and more specifically in beef, was through improving genetics. Ian relies on tools like BreedPlan to improve economic traits by recording calving rates, weighing, fertility and carcase traits.

← Todd Charteris, State Manager, Rabobank Victoria:
Todd discussed the future of farming in Australia from a financial point of view, and the rise of the rural entrepreneur's role in agriculture. He proposed that their future place in Australian agriculture would depend on five main challenges: succession, supply chain effectiveness, sustainability, producing more with less and using social media and science.

← Nick Linden, Lamb Production Scientist at the DEPI in Victoria:
Nick spoke about lamb production systems being more than just science. He said increasing sheepmeat consumption depended on production levels, consistency, supply chain relationships and the uptake of technology to aid weight gains.

Upcoming events

Find more events and information at **www.mla.com.au/events**

Influential people workshop

This one-day forum will empower you to advocate effectively on behalf of your business, your community and your industry.

When and where:
24 April, Biggenden Qld

Bookings and for more information:
T: 0400 129 279 // E: catherine@influentialwomen.com.au
www.influentialwomen.com.au

Farm300 and Project 2020 advisor workshop

Do you work in the livestock sector and want to increase your knowledge of climate variability, greenhouse gas emissions, business profitability and sustainability? Then this workshop is for you.

When and where:
20 May, Launceston Tas
22 May, Hamilton Vic
26 May, Adelaide SA
28 May, Perth WA
3 June, Tamworth NSW
5 June, Wagga Wagga NSW
10 June, TBC Qld

Bookings and for more information:
www.mla.com.au/farm300
Priscilla Cumming, Rural Industries Skill Training
E: pcuming@rist.com.au // T: 03 5573 0956

LambEx Adelaide

A two-day conference for lamb and sheep producers, featuring outstanding speakers, an extensive trade exhibition, entertainment and an opportunity to communicate with all sectors of the lamb value chain.

When and where:
9–11 July, Adelaide SA

Bookings and for more information:
www.lambex.com.au

CHALLENGER UPDATE

The six diverse livestock enterprises participating in the MLA Challenge have closely examined their business strengths and weaknesses and are putting in place strategies to improve their productivity and profitability. Here we talk to two MLA Challengers, Lachlan Hughes and Bill Wilson, about their learnings so far. To learn more about the Challengers go to: **www.mla.com.au/challenge**

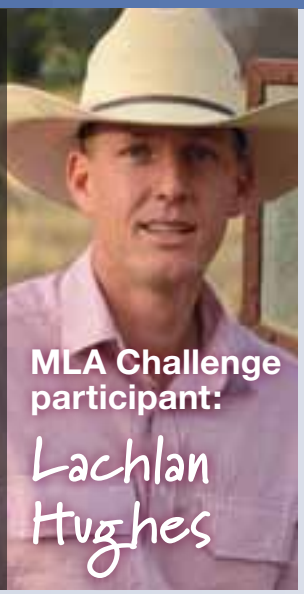
Questions

'Banchory Grazing' quick facts

Dulacca, Clermont and Capella Qld

Property size: 21,588ha
Herd / flock size: 7,000 head
Breeds: Angus cross
Average annual rainfall: 620mm

Soil type: Clay to light ridge
Pasture type: Native and improved pastures



'Riverglen' quick facts

Edi, Vic

Property size: 185ha
Herd / flock size: 250 breeders
Breeds: Angus/Charolais and Speckle Park
Average annual rainfall: 1,150mm

Soil type: Sandy loam
Pasture type: Annual and short rotation rye grasses, sub, shaftal and white clovers, lucerne and phalaris

By being involved in the MLA Challenge, what areas of your business have you identified as needing work?

There are a few areas, including paying more attention to our genetics and monitoring pastures and seasonal weight gains. But the biggest one, given the way our business is integrated, is our actual business processes. We've realised we need to run more like a corporate business than a country, family business, with scheduled, formal meetings. We also need to make each section of the business a profit centre and understand what are the profit drivers within each section.

We realised we needed to simplify our livestock management, because I'm away from the farm quite a bit hay contracting and Georgie is flat out looking after our three little kids. The solution was to shorten our joining period and bring our calving time forward, so the peak calving time is over when the hay season gets really busy. This will also give us a more even line of cattle and make better use of our spring feed. Our second major issue was we had a huge asset in water allocation which was being completely under-utilised.

What strategies have you put in place already to improve this?

Genetics – we've pregnancy-tested all our cows and culled anything empty. We're also selling everything that calves outside our window and retaining the best heifers. We've also put more effort into our bull genetics, with help from our mentor Robert Gill. Monitoring – we've been using a financial management program called Phoenix, and now we're using Phoenix Livestock to record animal data as well. Each part of the business Is keeping more accurate records and we've also set up pasture monitoring sites. Business processes – with guidance from Agripath, we've completed a business review and determined financial KPIs within each section of the business. My brother has started working in our marketing arm, Rangeland Quality Meats. He has a business background and has been able to bring more efficiency to Rangeland Quality Meats, along with meeting structure, marketing skills and business direction.

This year we put our bulls out earlier and for a much shorter period. Over the next three years we'll bring joining forward a week each year.

Another strategy to simplify livestock management is to create more and smaller paddocks, with an improved watering system based on troughs. Smaller paddocks will make grazing management easier and we'll use MLA's Feed Demand Calculator and Rainfall to Pasture Growth Outlook Tool to better calculate how long the feed will last.

We've also sowed a summer forage crop of millet on our irrigated country which we'll use to finish weaner cattle. The long-term plan is to put a lot of that ground into lucerne, which we'll either use ourselves or sell off as fodder. We're using MLA's Cost of Production calculators to work out the best use of our water.

What's one key learning that has stood out for you so far?

I think it's opened our eyes to the potential for our business. Everything we learn through the Challenge, and everywhere we go, shows us how much more there is to be achieved in this industry.

That we don't need to run a super-complex operation. The only two profit drivers for the farm are kilograms of beef produced and what it costs to produce them. We just need to have a handle on those.

What are the seasonal issues you face in April and what actions do you take to respond to them?

The biggest issues by April will be feed on offer and condition score. That will determine whether we sell all our weaners and buy what we need throughout the year, or we keep them.

We've usually had our autumn break by April and we re-sow pasture as part of our ongoing pasture renovation program. We do soil tests and spread fertiliser based on the results. We also prepare our weaners for sale.

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Wednesday, July 9	
8.00am–4.00pm	Adelaide and Mt Lofty NRM Board single day field tours, departing and returning from the National Wine Centre car park
4.00pm	Conference registration desk opens
6.30pm–8.00pm	The PIRSA LambEx welcome function – celebrating South Australia's most respected food producers and wine makers
Thursday, July 10	
7.00–8.30am	Breakfast seminars: Hosted by Sheep Genetics and Grassland Society of Southern Australia
7.45am	LambEx trade show opens
8.45am–5.00pm	LambEx Conference Day 1
6.30pm–7.30pm	The Future Farmers Network pre-dinner drinks
7.30pm–11.00pm	The AWI Grandslamb dinner
Friday, July 11	
7.30am–8.00am	The Gallagher Recovery breakfast
8.45am–3.45pm	LambEx Conference Day 2

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