

# Feedback

A man in a blue sweater and green apron is walking through a field of sheep. The sheep are in the foreground, and the man is in the middle ground, smiling. The background shows a line of trees under a clear sky.

## Good condition

8// **Managing ewes to wean more lambs**

21// **Shopping for genes**

Considerations for buying bulls this season

26// **Grazing strategies for the north**

30// **Hello China**

A growing market for Australian beef and lamb

32// **Warm up with winter beef**

## A note from the MD...

**O**ver 30% of the record export volumes of beef and lamb shipped recently went to new and emerging markets - other than the traditional three of Japan, the United States and Korea.

Since trade reforms started across the globe a number of decades ago, technical barriers to trade have increased. They often restrict or impede our progress into these emerging market places. Work by MLA, funded by producer levies, has quantified that we currently face more than 136 significant technical barriers to trade across the global market scene.

Many of these technical barriers require two things: they require science and research to counter impractical arguments and barriers to the trade; they then require government negotiations to get a resolution. The industry has been actively investing in the research to equip government negotiators with the scientific information to resolve these trade barriers. But with 136 of them

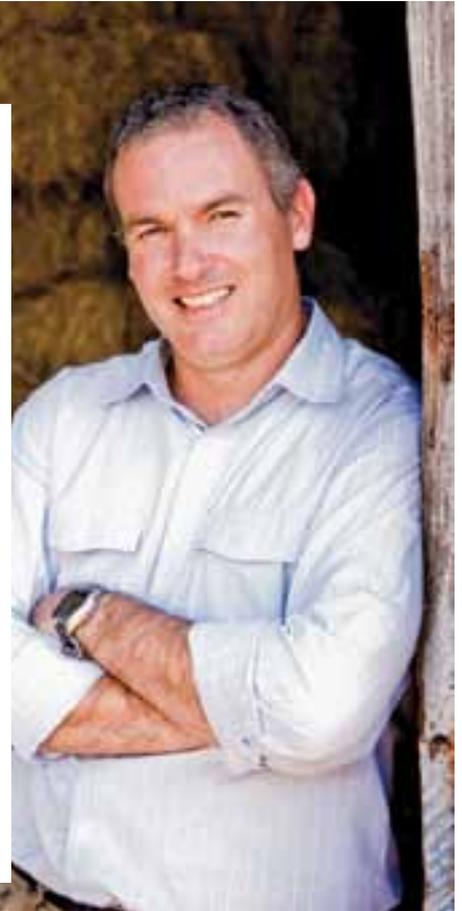
around the globe, the challenge for us now is to prioritise them as an industry, to enable the government to then prioritise their efforts in securing trade reform - the two most important regions currently being the Middle East and North Africa and South-East Asia/China.

We are investing levies to put people on the ground in these markets to build relationships, to work with government to resolve market access issues and support resolution of technical barriers to trade - to enable our industry to continue to prosper.

I welcome your feedback  
[managingdirector@mla.com.au](mailto:managingdirector@mla.com.au)



**Scott Hansen**  
MLA Managing Director



## Contents

### COVER STORY

**08** Managing for more lambs

### UP-FRONT

**03** Targeting trade barriers

### IN BRIEF

**04** Revised OJD management plan

**04** Refreshed *Entice* in store

**04** The challenge at Orange

**05** Food for thought

**05** Welfare standards input extended

### INSIGHT

**06** Stocking rate vs. lamb survival:  
debunking the myths

**07** Scholar seeks survival solutions

### INDUSTRY

**09** On the road with MSA

**10** Supply chain savings

**10** First step to full automation

**10** Sawing away labour challenges

**12** Research supports ship stocking rates

**12** Ask the expert

### ON-FARM

**13** Different breeds, different  
management?

**21**  
The genetic  
shopping list

**26**  
Grazing  
strategies for  
the north

**30**  
Here comes  
China

**16** Management through  
measurement

**17** From the first bleat

**18** Field day a front-runner

**21** Budget time

**23** The right genes for the job

**24** New northern reproductive EBV  
on its way

**25** Fertility focus

**27** Balancing act

**28** Working in rotation

**29** A long-term outlook

### GROWING DEMAND

**32** Warm and cosy with winter beef

**33** Recipe: Beef osso buco

### MARKETS

**34** Around the globe

**35** On the ground: MENA

**36** Market observations

**36** The upside of restrictions

### IN THE FIELD

**38** Past and upcoming events

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

The magazine is free to MLA members and available on subscription to non-MLA members at an annual rate of \$100 (including GST) within Australia and \$150 overseas.

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

*Feedback* Reply Paid 906, Locked Bag 991, North Sydney NSW 2059  
E: [info@mla.com.au](mailto:info@mla.com.au)  
T: 1800 023 100 // F: 02 9463 9393  
[www.mla.com.au](http://www.mla.com.au)

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

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

## Market access

# Targeting trade barriers

Hundreds of market access restrictions on Australian beef, lamb, mutton, goat meat and offal have been closely examined to establish the priorities of industry partnerships with the Australian Government.



**A** total of 261 technical barriers to trade (TBT) in 40 key markets were reviewed in research co-funded under MLA's market access program.

TBTs include the technical factors that restrict trade, including limits on expiry dates, lengthy accreditation processes and in-country distribution restrictions.

The review found that 136 TBTs had significant trade restricting effects, the total value of the impacts being estimated at \$1.25 billion (see Table 1). The remaining 125 TBTs, while still on the radar, were not a source of concern or currently do not have a significant effect on trade activity.

MLA's Manager of International Markets and Trade Services, Andrew McCallum, said TBTs can be as detrimental as tariffs and quotas. "Technical barriers to trade increase product preparation and delivery costs, and require compliance to conditions often exceeding

commonly accepted standards. At the end of the day, they raise the cost, increase the difficulty in supplying a particular market and often restrict export sales opportunities," Andrew said.

"Even in cases where Australia has negotiated reductions in tariff barriers, TBTs can dilute gains and erode the competitive position of Australian red meat.

"The prioritising process during the research was a complex and lengthy one involving economic modelling and road testing the results with commercial exporters."

The next step is to work through the results in conjunction with exporters and the Government, as resolution of these imposts will require a joint industry and government effort. The development of Action Plans for each of the key TBTs, which defines the proposed strategy and assigns resources (both in Australia and in our overseas markets), will provide an important framework for tackling these issues.

## Top five TBT issues

1. Product age and expiry date conditions
2. Market listing and accreditation restrictions
3. Product entry restrictions (bans)
4. Tariff quota administration and import permit issues
5. Increased packing costs from labelling requirements

# 43 TBTs

are associated with product age and expiry dates, with an impact value of

# \$421m

Table 1 The impact of high priority TBTs, by region

Region	Number of TBTs	Value
Middle East	60	\$480 million
North Africa	17	\$163 million
South-East Asia	17	\$180 million
North Asia	13	\$220 million
Other	29	\$207 million
<b>Total</b>	<b>136</b>	<b>\$1.25 billion</b>



**Andrew McCallum, MLA**  
T: 02 9463 9153  
E: amccallum@mla.com.au



## Revised OJD management plan

By **Ian McColl**  
President of Sheepmeat Council of Australia



**T**he Australian sheep industry has agreed on revised arrangements for the management of Ovine Johnes Disease (OJD). The *National OJD Management Plan 2013-18*, which came into effect on 1 July, enables producers to take a risk management approach to their farm biosecurity.

The plan was developed by the Sheepmeat Council of Australia and WoolProducers Australia following consultation with producers, industry and state governments.

Central to the plan is a new national Sheep Health Statement (SHS), designed for national adoption and includes recognition of OJD vaccination and testing results. It features a series of 'Yes/No' questions to allow buyers to make biosecurity decisions about OJD risk, as well as brucellosis, footrot and lice. It is recommended that vendors provide an SHS and buyers request an SHS, as it provides a level of information to minimise the risk of spreading disease.

Producer feedback during the public consultation on the National OJD Management Plan indicated that OJD zoning should end and this is incorporated in the plan. As some areas/states may choose to enforce entry requirements, producers trading sheep interstate should check with State Government authorities on whether restrictions apply.

The plan also encourages producers to collectively develop their own Regional Biosecurity Plans (RBPs), as this provides the added effectiveness of a collective approach.

RBPs are a set of actions agreed to by a group of producers in the same region to manage biosecurity risk for their farms (eg groups may agree to only buy vaccinated sheep). Guidelines are available to assist groups of producers in preparing a RBP.

A new OJD website, [www.ojd.com.au](http://www.ojd.com.au), has been developed as a reference on how to manage the disease and reduce risk of spread, and to provide access to key documents such as the SHS and guidelines on developing RBPs.



Information on OJD, and copies of the *National OJD Management Plan 2013-18* and the Sheep Health Statement (SHS), are available from [www.ojd.com.au](http://www.ojd.com.au)

## Refreshed *Entice* in store

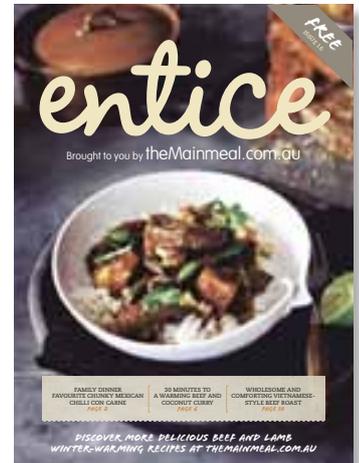
**M**LA's flagship consumer publication, *Entice* magazine, has been helping Australians build confidence in cooking beef meals for the past six years.

With 15 issues now published, *Entice* has been given a content refresh with the inclusion of lamb recipes and stronger integration with MLA's consumer website, [themainmeal.com.au](http://themainmeal.com.au)

Research in late 2012 identified that the people who prepare main meals were looking for a wider variety of meal ideas, with the inclusion of lamb recipes in *Entice* well received.

Additionally, 85% of butchers surveyed monthly said they would prefer to see some lamb recipes in the magazine.

The new issue of *Entice* is available nationally in butchers, IGA stores and Woolworths supermarkets. Distribution is also being trialled in Aldi stores in Victoria.



**Evelyn Lloveda, MLA**  
T: 02 9463 9187  
E: [elloveda@mmla.com.au](mailto:elloveda@mmla.com.au)



Read the new *Entice* online at [www.themainmeal.com.au](http://www.themainmeal.com.au)

## The challenge at Orange

**T**he challenges and opportunities for Australia's sheep industry will be the focus of an event to be held at Orange in central NSW.

The Agribusiness Today 2013 Challenging Lamb, Sheep and Wool Profitability Forum will be held at the Women's Centre on the Australian National Field Day site on Thursday, 8 August. The forum will run from 8.30am to 4pm.

Here's a snapshot of the topics to be discussed:

**Future of sheep markets in Australia:** MLA's Sheep Industry Analyst Robert Barker will talk about international market trends and export opportunities, while focusing on the impact of the Australian dollar.

**Australian sheep production in a global market - the challenges and how do we compare?** Charles Sturt University agribusiness lecturer Dr Karl Behrendt will provide a comparative analysis of the profitability of Australian sheep production with other livestock systems around the world.

**Lamb retailing in a competitive market:** MLA's Regional Manager Australia Lachlan Bowtell will give an insight into the ever changing retail landscape and how MLA markets lamb in this environment.

Speakers will also talk about the processors' perspective on industry opportunities, managing lice and animal health issues, pastures and wool production. Two producers will present case studies on their enterprises.



To register go to: [www.rdacentralwest.org.au/events](http://www.rdacentralwest.org.au/events) or  
T: 02 6369 1600

# Food for thought

Cattle and sheep industries take the stage at the Sydney Opera House.



**T**EDx events provide a range of talks, demonstrations and performances to inspire and encourage learning. More than 2,200 'thinkers' attended TEDxSydney at the Opera House in May.

Food sustainability was high on the agenda at TEDxSydney and MLA, through the Target 100 program, sponsored the lunchtime session to discuss sustainable beef production. All the food served during the event was provided by groups associated with the attendees.

The Target 100 lunchtime session involved a panel made up of:

- Grant Hilliard, a meat purveyor who runs Sydney-based business Feather & Bone
- Rob Lennon, an organic cattle producer from Dunedoo, NSW
- Ronni Khan, founding director OzHarvest, a not-for-profit that delivers excess food to people in need

The session was facilitated by food and health blogger Sarah Wilson and explored soil, land and water management sustainability initiatives carried out by livestock producers. It discussed how consumers can

contribute to sustainability by recognising that every cut of beef is a good cut, considering the purchase of secondary cuts and respecting the source and effort involved in producing beef.

The discussion was framed by the carving of a 300kg carcass into cuts in front of the audience. The beef was used by Matt Moran's Aria restaurant to prepare dinner for the attendees that evening.

MLA Community Engagement Manager Elise Vale said the sessions received excellent feedback.

"Comments highlighted how many of those attending the session now better appreciate the sustainability initiatives undertaken by producers," she said.

Hear what attendees thought about sustainable beef production following the presentation at:

[www.target100.com.au](http://www.target100.com.au)

To find out more about TEDxSydney go to: [www.tedxsydney.com](http://www.tedxsydney.com)



**Elise Vale, MLA**  
T: 02 9463 9156  
E: [evale@mla.com.au](mailto:evale@mla.com.au)



[www.target100.com.au](http://www.target100.com.au)



**AnimalHealth**  
A U S T R A L I A

## Welfare standards input extended

**T**he consultation period for public comment on the draft Australian Animal Welfare Standards and Guidelines for Cattle and for Sheep has been extended to 5 August.

The decision was made by the federal, state and territory ministers of primary industries at a recent meeting following industry and stakeholder requests.

Animal Health Australia (AHA) is conducting the public consultation on behalf of its members.

AHA Chief Executive Officer Dr Mike Bond said he was surprised and pleased by the late rush of submissions responding to the draft standards.

"We've received more than 150 substantial submissions, more than 2,300 online surveys and many thousands of additional comments via email."

He said judging by the number and detail of submissions received, it was clear that they addressed significant issues for Australian livestock producers and the broader community.

"As the final standards will be written into law, it is important that everyone in the community has the opportunity for input," Mike said.

"I encourage any producers and interested members of the community who have not yet responded to take this further opportunity to read the draft standards and have their say."

AHA will start assessing the submissions already received while the consultation period remains open.

The development of the draft standards and guidelines has been a joint government and industry initiative coordinated by Animal Health Australia. Governments, peak livestock bodies representing thousands of producer members and welfare organisations have been involved in the drafting of the documents.

Visit [www.animalwelfarestandards.net.au](http://www.animalwelfarestandards.net.au) for further details on how to make a submission and to download the relevant documents.



Email cattle submissions to:  
[publicconscattle@animalwelfarestandards.net.au](mailto:publicconscattle@animalwelfarestandards.net.au)  
Email sheep submissions to:  
[publicconssheep@animalwelfarestandards.net.au](mailto:publicconssheep@animalwelfarestandards.net.au)

## Reproductive efficiency



# Stocking rate vs. lamb survival: debunking the myths

Lamb weaning rates have varied little in the past 30 years, stagnating at around 80% of ewes joined, but improved monitoring of ewes and feed resources, as well as significant industry investment, means there are more opportunities for producers to lift weaning numbers.

**20%**  
gain in conception rate by moving ewes up one condition score at joining

**C**onsultant Dr Jason Trompf, from JT Agri-Source, has helped develop and deliver practical training programs - such as Lifetime Ewe Management (LTEM) - that enable the skills to more proactively manage ewe nutrition and subsequent weaning rates.

"In Victoria, LTEM participants have lifted the number of lambs weaned per hectare by more than 20%," Jason said.

"This was achieved through a 15% increase in ewe stocking rate and a 10-15% increase in weaning rates, while reducing ewe mortality by 50%."

Jason said the sheep industry needed to overcome negative preconceptions about weaning rates, including the 'myth' that achieving higher reproduction rates was not economically viable.

"This is often promoted by consultants and benchmarking reports and is based on the fallacy that managing ewes for better conception and lamb survival means reducing stocking rate," he said.

"In LTEM, we have found it possible to simultaneously increase stocking rate, reproduction rates and ewe survival profitably. This is a result of better feed allocation to different classes of ewes based on condition score and pregnancy status, and more targeted and proactive use of feed resources at critical stages of the reproduction cycle, such as the recovery of light ewes post-weaning and twin-bearing ewes in late pregnancy and throughout lambing.

"Some producers also say that lamb weaning rates are driven by factors like seasonal conditions and predators - that's code for 'it's not in our control'.

"But ewe nutrition in late pregnancy and at lambing is manageable, and it has an enormous impact on ewe and lamb survival."

**Jason shared his top five tips for lifting lamb survival rates:**

- 1. Proactive management of ewe condition score:** There are three aspects to this: a) assess the ewe's condition score by feeling how much tissue and fat is covering her loin area, backbone and short ribs; b) assess the paddock feed for quantity and quality, plus know the quantity and quality of any supplement; and c) do an energy balance on the ewe and prepare a ewe condition score budget that aims to maintain ewe condition in late pregnancy, particularly in twin-bearing ewes.
- 2. Tight joining period of six weeks or less:** If the ewes lamb over a longer period it's difficult to tailor nutrition to the entire mob. There are also flow-on effects, particularly when producers delay weaning to grow out the smaller lambs, as it compromises the ewes' opportunity to recover for their next reproduction cycle. This typically leads to a lower peak condition score, which adversely affects next year's conception rates and - importantly - means there is more scope for the ewe to lose condition in the ensuing reproduction cycle.
- 3. Pregnancy scanning:** Scan to determine single or multiple pregnancies then separate ewes into their categories - dry, single and twin-bearing - and allocate nutrition accordingly. Ewe nutrition in the last 60 days of pregnancy relates directly to lamb birth weight, with low birth weight and overly high birth weights, accounting for about 60% of lamb losses.

## Putting Jason's tips into practice

Producers can improve their on-farm practices by accessing programs developed and supported by MLA and Australian Wool Innovation (AWI):

Bred well. Fed well. workshops  
[www.mla.com.au/bredwellfedwell](http://www.mla.com.au/bredwellfedwell)

Lifetime Ewe Management courses  
[www.lifetimewool.com.au/LTEM.aspx](http://www.lifetimewool.com.au/LTEM.aspx)

Making More From Sheep  
[www.makingmorefromsheep.com.au](http://www.makingmorefromsheep.com.au)

The Sheep CRC's Practical Wisdom Notes - Reproduction Series  
[www.sheepcrc.org.au/fact-sheets/practical-wisdom-notes--reproduction-series.php?rt=1306390038](http://www.sheepcrc.org.au/fact-sheets/practical-wisdom-notes--reproduction-series.php?rt=1306390038)

#### 4. Paddock allocation and mob size for lambing:

These strategies can be used to address two significant causes of lamb loss, particularly in twins, being exposure and mismothering. Allocate twin-bearing ewes to the most sheltered paddocks, because the lower the lamb's birth weight, the greater the risk of death due to exposure. Lamb twin-bearing ewes in smaller mob sizes to ensure privacy at lambing. The number of lambs born in a paddock each day governs the opportunity a ewe has to bond with her lamb at the birth site, which enhances the ewe's maternal behaviour.

- 5. Time of lambing:** Time of lambing is a critical decision, integrating numerous factors such as matching feed supply to ewe demands, weather conditions, target markets and labour resources, particularly in mixed farming businesses. Rarely does a given time of lambing tick all boxes perfectly and typically there will be trade-offs. Advantages of lambing out-of-season, when there may be little green feed available (with the aim of lambing before sowing crops or to hit mild weather conditions or to target early sucker lamb premiums), are often outweighed by the increased cost of production due to supplementary feeding and reductions in income from ewe and lamb losses due to nutritional deficits.

**i** Dr Jason Trompf // T: 0408 386 986  
E: [j.trompf@latrobe.edu.au](mailto:j.trompf@latrobe.edu.au)



*Nuffield scholar Matthew Ipsen will be travelling overseas to investigate ways to improve lamb survivability.*

## Scholar seeks survival solutions

**N**uffield scholar Matthew Ipsen will be looking at the 'big picture' when he investigates sheep reproduction and lamb survival later this year.

The Victorian Merino breeder, who was awarded a 2013 Nuffield scholarship, owns and operates a property at Wareek in central Victoria with his parents.

The Ipsens run 3,000 sheep and crop 400ha on the 820ha property. They own the Cahirblonig Merino stud and run a contract harvesting business, in addition to Matthew's sheep artificial insemination and pregnancy scanning business, Ewe Wish.

Matthew will use his Nuffield scholarship to examine sheep management systems in New Zealand, Argentina, Uruguay, South Africa, France and the United Kingdom.

"Australian lamb weaning percentages have barely increased in the past 30 years, which creates opportunities for producers to improve profitability, put greater selection pressure on reproductive and production rates, as well as counter welfare issues by improving the survivability of lambs," he said.

Matthew hopes his studies will provide ideas to lift lamb survival, particularly twins, in the first 48 hours of life.

He says it costs producers more when ewes lose a twin than a single lamb because the ewe has consumed more feed and the surviving lamb will be weaker than a single lamb.

Matthew is looking for solutions that can be applied across Australia's sheep industry for operations of all sizes.

"By studying intensive housing of sheep and different feeding systems, both indoors and paddock systems, I may be able to improve the health of pregnant ewes, allowing them to birth without difficulties," he said.

"I'm also looking to gain an understanding of how Australian producers can improve current conception rates and build on management systems to allow for increases in litter size."

**i** Matthew Ipsen // T: 0417 516 640  
E: [ewewish@bigpond.com](mailto:ewewish@bigpond.com)

# Managing for more lambs

## Snapshot

Ian, Jan, Nick and Georgie Harvey, Strathdownie, Vic.



**Property:**  
1,600ha

**Enterprise:**  
Prime lambs and beef cattle

**Livestock:**  
7,800 first-cross and composite ewes and 600 Angus cows

**Pasture:**  
Ryegrass, phalaris and sub-clover

**Soil:**  
Varies from loamy duplex soils to black clay and peat swamp soil

**Rainfall:**  
690mm

## Reproductive efficiency

**P**regnancy scanning and feed budgeting have helped the Harvey family lift stock numbers by 2,800 ewes and 150 cows on their property in south-west Victoria, while maintaining high lamb survival rates.

In 2005, Ian, Jan, Nick and Georgie Harvey were running 5,000 ewes and 450 Angus cows on 'Strathdownie Estate' and, according to Nick, couldn't have squeezed another animal on the place.

"The farm as it was run in 2005 was fully stocked - there was no spare grass in the middle of winter," Nick said.

But, five years later, the Harveys ran 7,800 ewes and 500 cows on the same area.

"What I'm proudest of is that we lifted the stocking rate on a farm that was already considered fully stocked and still maintained lamb survivability," he said.

The lamb weaning rate on Strathdownie Estate averages 80-85% for twins and 93% for singles, figures that have remained steady since Nick started pregnancy scanning and feeding accordingly in 2005.

"The main management change has been that I supplementary feed a fair bit more than I used to," Nick said.

"However, I still don't feed a lot - I just make sure I concentrate on the stock that will return the most."

Nick began pregnancy scanning ewes in 2005, as well as experimenting with feed budgeting software. It was also the first year he fed cereal grain to ewes during the last six weeks of pregnancy.

By early 2006, he had lifted stock numbers to 6,000 ewes and 600 cows, and soon after was invited to join a local Lifetime Ewe Management (LTEM) course with Rural Industries Skills Training.

"There were five local producers in the group, running a total of 39,000 ewes," Nick said.

"We went through all the topics in the two-year LTEM course, including linking ewe condition at joining to lambing potential, condition scoring and manipulating ewe condition, plus analysing the economics of different feeding strategies.

"The main lessons I learned were about monitoring: monitor your sheep's condition score and regularly monitor the nutritive value of the grass that they're eating, and then feed them appropriately."

Nick said he put the lessons into practice immediately, as a lack of spring rain in 2006 put pressure on his new stocking regime.

"We had a failed spring in 2006 and I don't think we would have got through it nearly as easily without the course," he said.

Gaining a better understanding of pasture composition and potential also gave Nick the confidence to alter his cattle program.

He changed calving time from March/April to July/August: "That opened up a lot of DSEs in winter, which I then filled with ewes."

## Lambing tips

- **Condition:** Maintain twin lamb-bearing ewes above condition score 3.
- **Mob size:** Lamb down in as small a mob as practical. Around 150 twin-bearing ewes in a mob is ideal, but otherwise no more than 250.
- **Feed:** Make sure there is as much feed around the ewes as possible to enable them to feed at the birth site.
- **Minimise interference:** I go around the lambing ewes every second day and use binoculars so I can stay as far away as feasible so I'm not disturbing the mothers and new lambs.



**Nick Harvey** // T: 0429 847 260  
E: squarves@hotmail.com

## Market compliance

**With 30,214 producers and 77 brands now signed up to Meat Standards Australia (MSA) the program continues to evolve with new research findings and changing customer requirements. One recent development is a change to MSA transport protocols.**

## On the road with MSA

**M**ore cattle producers will be able to cash in on MSA premiums following recent changes to the grading system's transport protocols.

Following an MLA-funded study into the effects of transport on eating quality, the MSA Pathways Committee has recommended the former day-after-dispatch slaughter protocol be extended to 48 hours (with a maximum of 36 hours in transport) for a trial period of 12 months.

MLA Program Manager Eating Quality R&D Dr Alex Ball said the expanded footprint for MSA-eligible stock would have a significant impact on northern cattle producers as well as giving southern producers more choice of processors.

"Increased opportunity now exists for more producers to target the MSA premiums," he said.

Alex said the outcomes showed management at home had far more impact on an animal's ability to grade MSA and achieve a premium than the distance travelled, time in transit or opportunities to rest, feed and water.

"A clear outcome of the transport trial was the importance of pre-trip stock management in being able to realise those markets through MSA compliance."

The study involved three central Queensland properties that transported 343 steers (18 to 36 months, 489kg to 780kg), off pasture.

The steers were divided into four lots and sent on four different road trips, but staggered to arrive at the abattoir at the same time.

The road trips were:

1. 12 hours duration
2. 12 hours with a 12-hour food/water break, then another 12 hours
3. 24 hours
4. 36 hours

Researchers found that extending the transport time from 12 to 36 hours had no detrimental effect on eating quality and, similarly, there was no perceivable benefit to eating quality or dressing out percentage from the 12-hour rest break.

Alex said all animals were tested for rib fat, ultimate pH and meat colour with about 60% of the carcasses meeting MSA specifications. Of those that failed, about 30% were excluded for high meat colour (greater than 3) and the remaining 10% for pH and rib fat non-compliance.

"This outcome was of concern due to its commercial ramifications, however, the good news is the experiment showed best practice stock handling techniques and pre-trip preparation can have a huge impact on carcase performance," he said.

Figure 1 Locations of MSA licensed plants across Australia as at May 2013



**Dr Alex Ball, MLA**

T: 02 6773 2493

E: aball@mmla.com.au

Information on MSA T: 1800 111 672

E: msaenquiries@mmla.com.au



Or visit: [www.mla.com.au/msa](http://www.mla.com.au/msa)

To register as a producer go to:

<http://registerproducer.msagrading.com.au/>

[msagrading.com.au/](http://registerproducer.msagrading.com.au/)

For MSA E-decs visit

<http://lpa.ausmeat.com.au/>

## Labour efficiency

# Supply chain savings

**MLA is working closely with meat processors, the Australian Meat Processor Corporation and the automation industry to address one of the biggest risks to the red meat supply chain: labour availability.**

**T**he collaborators are working on a range of automation projects in the processing industry at various stages of commercialisation, with significant gains already achieved in labour-use efficiency, occupational health and safety, and meat yield and quality.

These are MLA Donor Company projects, which don't involve any producer levies.

"MLA is working on the ambitious target of developing technology options to deliver a 5% increase in labour efficiency to the supply chain by 2015," MLA Processing Technology R&D Manager Chris Ruberg said.

"MLA's focus is on delivering large-scale processing efficiency initiatives with the greatest impact, such as fully automated lamb boning systems."

## First step to full automation

**E**ngineering firm Scott Technology Ltd, in conjunction with MLA and lamb processing companies, has developed automated lamb primal cutting equipment guided with the use of x-ray technology. It is the first step towards a fully automated lamb boning room.

Victorian lamb boning company, Australian Lamb Company (ALC), shares

Scott Technology's vision of a fully automated lamb boning room.

In 2011, Scott installed the first successful x-ray ovine primal cutting system at ALC's plant in Sunshine, Victoria.

The x-ray primal cutter automatically cuts lamb carcasses into hindquarters, middle sections and forequarters, at a rate of 10 carcasses/minute, with the flexibility to

reduce the carcass rate and add an extra cut. It first x-rays the carcass to determine the best cutting position for maximum meat yield, then feeds the information to downstream processing units.

The x-ray primal cutter represents module one in a four-module automated boning room, with the other modules including middle, forequarter and hindquarter machines. Scott Technology Ltd is now installing a middle machine for ALC, while

## Sawing away labour challenges

**M**eat processing is a sector with constant pressures - labour, throughput and workplace safety are just three issues. Here, we take a look at breakthroughs that help address these challenges.

### Robotic ovine cutter

The robotic ovine cutter (ROC) processes up to 600 carcasses/hour, replacing conventional bandsaws for primal cutting of lamb and mutton.

The system achieves increased yield and flexible cutting options (two, three and four primal cuts/cycle) by employing two carcass-gripping robots, a cutting robot and a camera system to analyse the carcass and determine where to cut it.

The dustless circular knife eliminates sawdust, which increases yield and shelf life and improves the appearance of the product.

There is no exposure to water, improving the overall quality of the lamb and prolonging shelf life. Other benefits include reduced carcass handling, increased safety and reduced employee stress.

The cut accuracy of the ROC is up to 80%, which is 10 to 15% higher than bandsaws.

The ROC's flexible design allows it to be installed in existing processing floors with minimal infrastructure changes.

The latest version of the ROC was installed at Cootamundra's GM Scott Abattoir in 2012 by Machinery Automation and Robotics (MAR).

*MAR's robotic ovine cutter.*



# 26%

of meat processing injuries are to hands and fingers.

MLA's role is to bring technology providers and processors together, then use the Commonwealth Government's matched R&D funding to develop technology that would otherwise be too commercially risky for industry to pursue alone.



**Chris Ruberg, MLA**  
T: 02 9463 9142  
E: cruberg@mla.com.au

# 148,000

full time jobs in Australian beef and lamb processing

# 178

processing facilities in Australia

# 27%

of those are registered for export

## Did you know...

MLA Donor Company research is funded through private investment and matching government dollars. No producer levies are invested in MDC research projects. The investment profile is 50% private investment and 50% Government matching funds (via MLA Donor Company).

processor JBS Australia will have x-ray primal and middle systems installed by the end of the year.

ALC General Manager Darren Verrall said the x-ray primal had boosted labour use efficiency, occupational health and safety, productivity and carcass yields.

"We've boosted safety by removing three bandsaw operators and we've had productivity gains in the vicinity of 200 to 250 carcasses a shift," Darren said.

"These productivity gains have given us the ability to purchase and process more stock, which benefits our suppliers.

"But the big benefit has been the accuracy and consistency in the cutting lines, resulting in higher yields and increased carcass value."

A cost/benefit analysis on the equipment at ALC found a net benefit of up to \$2.03 per head with a payback period of 1.62 years.

# 10

carcasses/minute processed into hindquarters, middles and forequarters by the x-ray primal cutter.

## Beef loin saw

The operator-assisted beef loin deboning saw addresses meat yield and operator safety issues.

The semi-automatic system moves the operator away from the bandsaw by ensuring both of the operator's hands are on trigger-activated handles that 'drive' the loin through the bandsaw on a moving table.

The patented prototype was developed by Scott Technology, in conjunction with JBS Australia, MLA and Australian Meat Processing Corporation (AMPC), and has been modified from existing JBS equipment. It has been trialled at the processor's Beef City facility near Toowoomba, Queensland. JBS is now trialling an updated version at its Brooklyn facility in Victoria.

A cost/benefit analysis estimated a net benefit of \$3.99 per head over chain boning, and \$2.09 per head over current table-boning methods. While the saw's yield benefits are similar to those of JBS's own modified design, it offers significant flexibility and safety improvements and has tripled the blade's life.

## BladeStop

BladeStop is a brake mechanism on bandsaws that can stop a blade within 15 milliseconds of sensing contact with an operator's hand.

BladeStop utilises a modified 400 bandsaw, the Thomson MK400, and offers a choice of two sensor strap positions - arm or wrist.

MAR Innovations Manager Stuart Shaw said the system reduced risk of serious injury, increased processing uptime and had the potential to improve product quality and yield.



Scott Technology's beef loin saw is based on JBS Australia's own modified saw.

BladeStop has been developed by Machinery Automation and Robotics (MAR) in collaboration with MLA over a period of five years. The system is operating at two sites in NSW and one in Queensland, and MAR is anticipating a further rollout in coming months.



**Stuart Shaw** // T: 02 9748 7001  
E: sshaw@machineryautomation.com.au

**Sean Starling, Scott Technology** // T: 0419 891 950  
E: s.starling@scottstechnology.com.au



To see BladeStop in action, view this video on [www.youtube.com](https://www.youtube.com) and search for 'MARautorobotics BladeStop'.

## Research supports ship stocking rates



**A**n MLA-funded research project has provided objective evidence to support current stocking rates for sheep and cattle travelling by ship, while also suggesting there is value in investigating whether a small space increase would continue to improve animal welfare into the future.

The research, conducted by CSIRO, sought to determine the animal welfare outcomes during sea transport at different stocking densities.

Weight change and lying behaviour were assessed in two classes of sheep and one class of cattle at three stocking rates, including the current Australian Standards for the Export of Livestock (ASEL).

Researchers concluded that the current ASEL stocking densities were appropriate on animal welfare grounds, as the results from the three voyages were fairly similar: space allowance had no effect on weight gain and little effect on lying time.

However, it was observed that when offered more space, animals spent more time lying, particularly during the critical early stages of the voyage, when the animals are adapting to the change in their environment.



**Sharon Dundon, MLA Livestock Export R&D Manager**

E: [sdundon@mla.com.au](mailto:sdundon@mla.com.au)



[www.mla.com.au/refiningstockingdensities](http://www.mla.com.au/refiningstockingdensities)

## Ask the expert

**What can be done about this cattle disease called theileriosis?**

Cattle producer, NSW



There is no registered effective treatment for cattle with this disease, which mainly causes weakness and anaemia and, sometimes, abortions and death. MLA has funded a study with a chemical called buparvaquone so cattle veterinarians who wish to import the drug for their own patients can give informed advice on withholding periods.

In the absence of an effective treatment, prevention is the best approach.

Until proven otherwise, it is still assumed that the *Theilerie orientalis* organism (a blood parasite) is transmitted by a multi-host tick (ie not cattle tick). This has certainly been proven in Japan, where the disease is endemic. Cases are usually associated with cattle movement between inland properties and the coast - either unexposed cattle from up-country are

exposed to the parasite near the coast, or coastal cattle bring the disease with them when transported inland.

In either case, good quarantine procedures and treatment for ticks should go a long way towards curbing the disease. Multi-host ticks seldom spend more than about seven days on the host, so the tick is usually long gone by the time the animal shows signs of illness. This makes diagnosis and treatment more difficult.

**Dr Johann Schröder, MLA's Project Manager, Animal Health and Biosecurity**



To ask your question, email the editor at [info@mla.com.au](mailto:info@mla.com.au) (include 'Feedback - ask the expert' in the subject line) or write to Feedback, Reply Paid 906, Locked Bag 991, North Sydney NSW 2059.

## Research at work

The latest on-farm strategies emerging from MLA's investment in research

### In this issue

#### 16// **A vigorous assessment**

MLA funded research explores a way to objectively measure lamb vigour.

#### 18// **Bannockburn PDS**

Read what one Queensland cattle producer learnt about different finishing systems at a recent field day at Bell.

#### 21// **Genetic investment**

Where will you get the best bang for your buck when investing in cattle genetics?

#### 28// **Weather watching**

Meet the latest additions to the Climate Champions program.

# Different breeds, different management?

*Condition scoring ewes can help producers assess if ewes – whether Merinos or non-Merinos – are receiving adequate nutrition and are on track to optimising their reproductive performance. But does that nutritional management need to be the same – regardless of breed? →*



## Ewe management

→

**T**he answer is “maybe not,” according to Dr Janelle Hocking Edwards, a research scientist in grazing production systems at the South Australia Research and Development Institute (SARDI). Janelle has completed a MLA-funded review of the research on this topic.

A sheep producer herself, Janelle runs 1,500 non-Merino ewes (Border Leicester x Merino) as well as a flock of 3,500 Merino ewes in South Australia’s south east.

When comparing the two types of sheep, Janelle sees a difference between the Merinos and non-Merinos in their response to nutrition, yet all current nutrition guidelines are Merino-based.

“I use Lifetime Ewe Management guidelines for my Merino ewes and am really impressed with how reliable the guidelines are,” Janelle said.

“However, we generally need to start feeding our Merino ewes a month earlier in the season than our first-cross ewes, to achieve the same target condition scores at mating and lambing.

*“When we do start feeding them, the crossbred ewes seem to need less feed to maintain that condition score.”*

Could this be hindering prime lamb production, and is there an opportunity to improve business performance?

“The current models assume a sheep is a sheep and it doesn’t matter what breed they are - you feed them based on their liveweight,” Janelle said.

“This is despite evidence in the scientific literature that non-Merino ewes out-perform Merino ewes for key lamb production traits when managed under identical conditions.

“It is possible that matching inputs to the actual needs of non-Merino ewes has the potential to increase stocking rates, decrease supplementary feeding costs, increase reproductive efficiency and increase turnoff rates - thereby reducing cost of production. For example, supplementary feed requirements of non-pregnant adult non-Merino ewes can potentially be reduced by 14%, or stocking



*Janelle with first-cross ewes of mixed age and carrying singles.*

rates increased by 14%, compared to management guidelines recommended for Merino ewe management.

*“However the LTEM guidelines remain the recommended guidelines until there is further research as to how they can be adjusted for non-Merino ewes,” Janelle said.*

#### The next step

According to Janelle, just as there are different recommendations for dairy and beef cattle, a sheep bred for wool production is different from one bred for meat production or fertility.

“The crossbreds may simply be better at foraging in the paddock or maybe they are more efficient at using their feed. I’m not sure which, and that’s really where this project came from - to determine the actual difference in efficiency of nutrient utilisation between Merino and non-Merino ewes and the potential industry impact,” she said.

Lifetime Ewe Management program leader Darren Gordon said further research was being done to work out some of the finer details of the terminal and maternal industries.

The project will provide the foundations to develop next generation, genotype-specific guidelines for the management of non-Merino ewes.

**7 million** sheep now condition scored in the Lifetime Ewe Management program (LTEM)

Average  
**10-15%**

improvement in the number of lambs weaned and sold of LTEM participants



### What is a non-Merino ewe?

Any maternal ewe which is not a pure Merino. The review classed all maternal breeds and crosses such as a Border Leicester-Merino ewe as non-Merino.

## A process of evolution

**As the Lifetime Ewe Management program evolves, the focus is on refining its recommendations to take in subtle management differences between breeds.**

But program leader Darren Gordon said that whether you have a Merino or a non-Merino flock, condition scoring is a critical first step for both.

“Understanding the effect condition score has and then managing it to hit targets will optimise profit,” Darren said.

“It doesn’t make any difference whether it is a 50kg Merino or a 75kg first cross ewe – condition score is condition score. It tells us the physical wellbeing of the ewe, so it takes out having to worry about frame size, fleece weight and – if you are not scanning – if it is carrying twins, singles or even triples.

“Understanding this allows you to make precise feeding decisions so you can allocate the right feed source to the right animal.”

“Lifetime Ewe Management suits both the wool and sheep meat industries in understanding the effects of nutrition across a range of profit drivers, wool characteristics and survival in the Merino industry, as well as survival and growth rates in the terminal industry, especially in twin-born lambs.”

Darren speaks with authority: 1,700 Merino and non-Merino breeders have put nearly seven million ewes through the program, delivered by Rural Industry Skills Training.

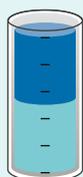
“It’s all about the management of twins and singles to optimise survival rate,” Darren said.

“Getting lambs born and through to sale is the biggest profit driver of terminal businesses. Participants of the program have reported an average 10-15% improvement in the number of lambs weaned and sold. Those are quite significant numbers when you put that over the national flock.

“When you look at the two million non-Merino ewes that have gone through the program, that’s an extra 200,000 to 300,000 lambs, without taking in the Merino side.”

## Project dashboard: Research review on non-Merino ewe management

**Financial contributions to the project:**  
\$56,000



MLA: **50%**

Government matching funds: **50%**

**Length of project:**  
1 year completed



**Project is part of MLA’s objective to:**

Create opportunities to improve reproduction efficiency



**Dr Janelle Hocking Edwards** // T: 0438 548 564 // E: janelle.edwards@sa.gov.au

**Darren Gordon** // T: 0408 114 656 // E: dgordon@rist.com.au

To learn more about Lifetime Ewe go to [www.lifetimewool.com.au](http://www.lifetimewool.com.au)

To learn more about High Performance Weaners go to [www.sheepcsrc.org.au/education/producer-training/high-performance-weaner-courses.php](http://www.sheepcsrc.org.au/education/producer-training/high-performance-weaner-courses.php)

➔ **See how LTEM has helped one non-Merino producer make gains on page 16**

## Management through measurement



By more precisely managing the condition of their ewes, Western District producers Darren and Kylie Schurmann have lifted profitability.

Darren Schurmann looks over his June and July 2012 drop lambs.

**A** simple philosophy of measuring inputs and outputs has increased lamb turnoff by 15%, and delivered dollars to the bottom line for these Victorian producers.

Darren said the principles learnt through the Lifetime Ewe Management (LTEM) program now underpin their breeding operation.

"We have been able to increase our stocking numbers from just under 8/ha to 9/ha. By having the sheep in better condition, there has been an improvement in flock fertility from 115% lambs of ewes scanned to 125%. Kilograms (measured in carcase weight) per hectare have lifted from about 230kg/ha to 265kg/ha.

"It's putting us in control by knowing how to feed that animal to get the most out of her.

"LTEM may have initially been designed for Merino sheep, but it suits the crossbreed job perfectly. It's overall better management."

### Value adding

The gains have been further increased with training from the High Performance Weaners program, a course designed to build on LTEM and lift production with the early joining of ewe lambs.

"We had incredible success with our ewe lambs last year. The June-July (2011) drop lambs were joined in mid-March, and we had 93.5% in lamb, carrying 165%," Darren said.

Ewe nutrition is the key, according to Darren, and can only be managed by knowing the quality and quantity of the feed and by condition scoring ewes. He feed tests standing pasture, as well as pasture and lucerne hay cut on the property and any feed bought in.

"It got frustrating spending all that money buying 100 tonne of barley, or whatever, without knowing

if I was giving a sheep enough," Darren said.

"I might have felt good when I was feeding them, but I didn't know if I was giving enough or too much."

The program sets out ideal condition scores for different stages of the breeding cycle. Using the feed test results, Darren is able to manage the feed to achieve the optimum condition score for joining.

### Maternal modifications

With the LTEM trainer's guidance, Darren modified the recommended condition scores for his maternal breeds.

"I like to get our twin-bearing ewes at around 3.5 if we can," Darren said. "It also allows us to take a bit of weight off the singles to try and avoid any dystocia problems.

"It's not very time-consuming to adjust the feed pattern. Once you know the digestibility of your pastures and the ME (metabolisable energy) and protein of the feed in your silos and hay sheds, it's not that hard.

"By scanning for singles, twins and empties, we can separate them and feed them appropriately. We do not want to turn our more productive sheep - our twinners - into singles next year, so we look after them."

### Snapshot

Darren and Kylie Schurmann, Strathkellar, Vic.



**Property:**  
650ha

**Enterprise:**  
Prime lambs and cropping

**Livestock:**  
3,000 ewes

**Pasture:**  
Mixture of perennial ryegrass and clover as well as phalaris, fescue and clover

**Soil:**  
Mainly a loam with well-drained, red soil banks

**Rainfall:**  
680mm

## Genetics



**S**tudies have shown that lamb vigour - shown by behaviours such as the time it takes a newborn lamb to stand and suckle, or bleat - is a heritable trait, but these traits are difficult to measure in a commercial setting.

Instead, lamb vigour scores are usually assessed during tagging and measurement of the lamb within the first 12-18 hours of life. These are based on a combination of subjective assessments of the degree of struggling and vocalisation, and the rate of the lamb's return back to the ewe.

CSIRO research scientists Dr Drewe Ferguson, Dr Ali Small and Phil Valencia are working with UNE's Dr Geoff Hinch and his PhD student Christine Morton on the lamb vigour research project. It seeks to identify which of the behaviours that make up the current lamb vigour scores are the most important, and whether they can be more objectively measured.

"This is really stage one - the proof of concept stage - of what we hope will be a larger project," Drewe said.



**Darren Schurmann** // T: 0428 528 906  
E: d.schurmann@bigpond.com



Hear Darren explain condition scoring as used in the Lifetime Ewe program at [www.youtube.com](http://www.youtube.com) and search for 'Lifetime ewe management (episode 10)'

# From the first bleat



MLA-funded research is looking to technological advances to help producers lift lamb survival through genetic selection. The CSIRO-led collaboration with the University of New England (UNE) is using SmartTag technology (see box) to measure ewe and lamb behaviour during and immediately after birth. The results will help improve field-based measures for assessing lamb vigour.

"We're looking specifically at the duration of labour and the time it takes the newborn lamb to bleat.

"The ewes are fitted with SmartTags that contain sensors that record each ewe's movements and both the ewe's and lamb's vocalisations.

"Our goal is to develop simple prediction algorithms - that can read the information from the SmartTag and predict the time of birth based on changes in movements and vocalisations.

"If successful, we would be keen to develop the technology platform further so that, ultimately, it could be applied in larger-scale genetic improvement schemes," Drewe said.

## The delivery details

The research at CSIRO's FD McMaster Research Laboratory at Armidale in NSW is based on five artificially inseminated ewe cohorts selected from the research station flock.

"We selected both maiden ewes and multiparous ewes (who have given birth at least twice) that were either single or twin-bearing to give biological variation in their behaviours at the time of birth, as well as variation in lamb behaviour," Drewe said.

"We used sires from the Sheep CRC Information Nucleus Flock that had divergent EBVs (Estimated Breeding Values) for specific vigour traits that relate to neonatal behaviour. For example, some sires' progeny were very quick to bleat and stand; other sires had lower EBVs for those traits."

The ewes lambed in a shed during September and October 2012, and each birth was monitored by video and by a team of technical support personnel who were present around the clock. Measures relating to the chosen EBVs,

such as rectal temperature, bleat response to restraint and time to return to the ewe, were taken from each lamb at specific time points during the first day of life.

Researchers are currently aligning the video data of specific behaviours with what was recorded on the SmartTags to generate the preliminary prediction algorithms.

Regardless of any advances in measuring and selecting for lamb vigour, Drewe and Ali agreed producers should use genetic selection in conjunction with best practice ewe management.

"Genetic improvement is one avenue for improving lamb survival, but you still need to look after ewe body condition, nutrition, shelter provision, predator control, and so on," Drewe said.

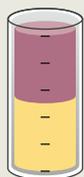
## SmartTags

- SmartTags were developed by CSIRO Information and Communication Technologies to remotely monitor animal behaviour.
- Prototypes developed specifically for CSIRO Livestock Industries contain sensors that measure an animal's posture, orientation, vocalisations and temperature.
- The tags are a research tool and are not commercially available at this stage. In future they may be available to monitor high-value stud ewes, similar to the foaling alert system used by horse breeders.

*Above: Ewes and lambs from the lamb vigour research project at CSIRO's FD McMaster Research Laboratory, Armidale, NSW.*

## Project dashboard: Genetics for survivability

MLA's financial contributions to the project:  
\$105,070



MLA: 50%  
Government matching funds: 50%

Length of project:  
15 months



Project is part of MLA's objective to:

Create opportunities to improve reproduction efficiency



**Dr Drewe Ferguson**

T: 02 6776 1354

E: drewe.ferguson@csiro.au

**Dr Ali Small** // T: 02 6776 1435

E: alison.small@csiro.au



Want to hear more about sheep genetics? Head along to Sheepvention at Hamilton Vic, on 5 and 6 August when MLA will present an innovation workshop at which Sheep Genetics Australia's Luke Stephen and Hamish Chandler will update you on the latest research. Go to [www.sheepvention.com](http://www.sheepvention.com)

Order a copy of the *Lambing planner* from MLA 1800 675 717

## Finishing systems

# Field day a front-runner

**Feedback** sent writer and cattle producer Paula Heelan to learn more about the different steer finishing systems studied at an MLA-funded Producer Demonstration Site (PDS) at 'Bannockburn', near Bell, on the Darling Downs. Paula and her husband Peter run 'Ulcanbah Station' at Clermont in Queensland.

**T**he PDS examined the economic performance of different steer finishing systems, including improved pastures, leucaena, oats and grain feeding.

More than 100 producers attended the field day, hosted by MLA and the Queensland Department of Agriculture, Fisheries and Forestry (QDAFF) as part of the FutureBeef Program for Northern Australia.

Here's Paula's report on what happened on the day.

## 10:00am

Producers and field day hosts, Ranald and Sally Ferrier, use Bannockburn to background steers on leucaena and improved pastures before finishing them on oats or in their on-farm feedlot. Ranald said having leucaena planted in an elevated position had been a great advantage in terms of keeping it frost-free. He strongly recommended producers consider being part of a PDS. "The support provided by QDAFF staff is outstanding - they have run this project meticulously, insisting on the accountability of every beast and consistent weighing. Gathering hard data on how finishing systems compare has been a real advantage," he said.

### Ranald Ferrier Welcome



Ranald and Sally Ferrier

## 10:10am

### Roger Stone Weather watching

Climatologist Roger Stone reported Australia has the most variable rainfall in the world, but forecasting the chances of rain is relatively straightforward - and we can all do it. "By watching the sea surface temperature and following patterns in the Pacific Ocean, we can

predict anomalies. El Nino is characterised by unusually warm temperatures in the Pacific and La Nina by unusually cool temperatures," he explained. Roger said the current solid easterlies in the Pacific suggested a good season with winter rain ahead, but a sudden westerly burst would be a warning of no rain. To weather watch visit [www.usq.au/acsc/groups/climate](http://www.usq.au/acsc/groups/climate)



Roger Stone, Professor in Climatology and Water Resources



## 11:00am

### Courtney Ramsey, Bell Veterinary Services - Three-day sickness

Veterinarian Courtney Ramsey shed light on three-day sickness (bovine ephemeral fever), its causes, clinical signs, treatment and prevention strategies. As prevention relies largely on vaccination - which is costly - research is underway to find a less-expensive, more-effective, one-shot vaccine.

"Following extreme, wet conditions, a higher number of older, heavier animals can become infected and long periods of lying down lead to muscle damage. Where there are mosquitoes and midges you are likely to see cases of three-day. It can also cause infertility in bulls," she said.



Courtney Ramsey, Bell Veterinary Services





**11.30am Jonathan Schmidt, Burenda Angus Forage Options**

Jonathan Schmidt, who manages 'Burenda Holdings' - a breeding, growing and fattening beef enterprise owned by Alec and Mary Peden and Vera Theiss - gave an overview of the operation's effective feeding program.

At Dalby Downs, Kaimkillenbun, more than 3,440ha is split between: hay and silage production; winter forage, including oats or feed barley; leucaena; and grass pasture. Leucaena was first planted in December 2004 in the worst cultivation paddock - and went without rain until May 2005. Jonathan had given up on the patch

until, in September, he noticed plants had survived and were trying to grow. "It was the leucaena's success in a very dry year that highlighted its potential for us. We've since established good stands of leucaena, as well as grass, on our better farming country, and are extremely pleased with its performance," he said.

[www.burendaangus.com.au](http://www.burendaangus.com.au)



Alec and Mary Peden and Jonathan Schmidt, Burenda Angus



Stephen Munge, Bannockburn Manager

**12.30pm Steve Munge Bannockburn manager**

With his extensive knowledge and experience, Steve has been pivotal to the success of the Bannockburn PDS since it began in late 2010.

Referring to his trusty notebook for facts and figures, Steve outlined Bannockburn's management practices in the past two years. "Aware of leucaena's potential, we felt it was worth evaluating at Bannockburn. In the past, we've tried several different finishing systems," he said. "We found, in backgrounding, that leucaena really pushes cattle up to weight and that Bambatsi, Green Panic and Rhodes are the most robust of grasses."

**12:50pm Tim Emery Bannockburn PDS Wrap up**

QDAFF Extension Officer and PDS Project Leader Tim Emery presented a project wrap-up, reiterating the project design, talking through a series of photos from the two-year trial period and presenting findings of average daily gains, stocking rates and kg/ha for the different systems. Key results from the PDS will be published in *Feedback* in an upcoming issue.



Tim Emery and Roger Sneath, QDAFF Extension Officers

**1.10pm Roger Sneath NIRS results**

QDAFF Extension Officer Roger Sneath explained how the ongoing quality of different diets in the PDS was monitored by regular near infrared reflectance spectroscopy (NIRS) testing of dung samples. Dung sampling showed leucaena generally had higher dry matter digestibility and crude protein levels compared with the grass paddocks. Results also showed phosphorus is not a limiting nutrient on Bannockburn and, as expected, the typical trend is that most nutrients are higher in green plant material and lower in mature dry plant material. Visit: [www.futurebeef.com.au](http://www.futurebeef.com.au)

*Continued on page 20*

**Peter and Paula Heelan, Ulcanbah Station, Clermont**

*"It was good to hear an update on HGPs - today confirms we're on the right track with our program. I like the sound of Stocktake Plus and will download the app and try some land and stock monitoring with it."*



**Chantelle and Brendan Whiteman, Glenvilla, Kumbia**

*"Our biggest problem is deciding which way to go for our feeding program - grain feed, grass or grow oats? We'll go home now and digest the information we've heard today and look at our options - certainly the leucaena option."*

**Allan Wenham, Esterley, Bell**

*"It was a very informative day with a good variety of talks. I'm going to think more about HGPs and Roger's forecasting. There's a bit to establishing leucaena. I'm going to consider it."*

## 1.20pm

Fred Chudleigh  
Number crunching

Fred Chudleigh, QDAFF  
Economist

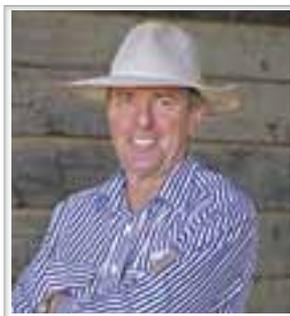
QDAFF Economist Fred Chudleigh's job was to evaluate the relative economic performance to determine which production system was the most cost-effective during the PDS trial. The systems were compared by looking at the partial return on livestock capital invested. He said the results represented Bannockburn's circumstances over the last couple of years. A full report of the economic analysis will be featured in an upcoming *Feedback*.

## 2.30pm

Peter Ramsey, Elanco - Maximising  
growth rates in grassfed cattle

Peter outlined the benefits of using hormone growth promotants (HGPs) to maximise growth rates. He said implanted cattle are accepted for slaughter by major export markets for boxed Australian beef and most domestic markets, and are eligible for MSA grading. Peter also gave an overview of the use of rumen modifiers.

[www.elanco.com](http://www.elanco.com)



Peter Ramsey, Elanco

## 2.45pm

Consultant Col Paton  
Will your grass last?

Col said knowing how much cattle eat and measuring how much forage you have available were the easy first steps in forage budgeting. "A forage budget allows you to assess whether the feed amount at the end of the growing season will last stock until the break in the next season. This allows you to make stocking rate decisions early, off load stock in time to avoid panic selling and work out how long to graze each paddock in a rotational grazing system."

More information: [info@ecorichgrazing.com.au](mailto:info@ecorichgrazing.com.au),  
[www.futurebeef.com.au](http://www.futurebeef.com.au)



Col Paton, EcoRich Grazing

## 3.00pm

Roger Sneath, QDAFF  
What App?

QDAFF Extension Officer Roger Sneath, presented Stocktake Plus - an app for graziers. With this app you can monitor land condition, stock numbers and rainfall. As a forage budgeting tool it helps match stock numbers to pasture availability. Stocktake Plus also produces reports, including long-term, benchmark carrying capacities for paddocks and properties. Look for Stocktake Plus in your app store or visit [www.stocktakeplus.com.au](http://www.stocktakeplus.com.au)



Roger Sneath, QDAFF  
Extension Officer



Key results from the PDS will be published in an upcoming issue of *Feedback*.

**Tim Emery, DAFF Roma** // T: 07 4622 9903  
E: [timothy.emery@daff.qld.gov.au](mailto:timothy.emery@daff.qld.gov.au)

## Now what?

Many of the topics covered during the field day captured Paula's interest. Here's her homework checklist:

- Go to [www.usq.edu.au/acsc/groups/climate](http://www.usq.edu.au/acsc/groups/climate) to learn more about DIY weather forecasting
- Read more on three-day sickness - [www.mla.com.au/threedaysickness](http://www.mla.com.au/threedaysickness)
- Look at the feasibility and cost of introducing leucaena and improved pastures
- Consider HGPs to boost growth rates - read *Hormone growth promotants and beef production - A best practice guide* at [www.mla.com.au/HGPs-and-beef-production](http://www.mla.com.au/HGPs-and-beef-production)
- Begin forage budgeting - [www.futurebeef.com.au](http://www.futurebeef.com.au)
- Download Stocktake Plus to monitor land and stock condition

## Management

# Budget time

**The new MLA-funded upgrade of the Breedcow and Dynama herd-budgeting programs for northern producers makes weighing up your most profitable management and marketing options easier than ever.**

**N**orthern beef producers contemplating their herd management or turn-off options can put their theories to the test with the upgraded version of the free herd-budgeting package Breedcow and Dynama.

About 400 producers have used the program in the past 25 years to test the best management, marketing and investment options for their enterprises.

Agricultural Economist Fred Chudleigh, of Queensland's Department of Agriculture, Fisheries and Forestry, said MLA had continued its long-term support for the program, funding its recent upgrade to version six which has the same capabilities as previous versions but is much more user friendly.

"It is now compatible with all MS Windows 32-bit and 64-bit operating systems including 'premium' versions of Windows XP and Windows 7," he said.

"The improved stand-alone version, which now looks like other Windows applications, provides Excel-like functionality without the need for Excel."

The Breedcow and Dynama suite of programs compares the likely profitability of different management systems or turn-off scenarios

(Breedcowplus program) and makes forward projections of stock numbers, sales, cash flow, net income, debt and net worth (Dynamaplus program).

It is not a day-to-day herd management program that records individual animals.

Fred said there were useful tools in the programs to help decide what to sell when a plan fails or what to buy when an opportunity arises.

"The ban on live exports to Indonesia was an example of a situation where this program came to the fore," he said. "It certainly helped producers weigh up their options and choose their most profitable alternatives."

Fred said the old and new versions of Breedcow and Dynama could co-exist quite happily on older computers but the new version would be required for 64-bit computers.

Training sessions in the new version will be rolled out later this year.



**Fred Chudleigh**

T: 0439 898 816

E: Fred.Chudleigh@daff.qld.gov.au



To download the programs go to [www.daff.qld.gov.au/16\\_6886.htm](http://www.daff.qld.gov.au/16_6886.htm)

## Genetics

# Beefing up your bull selections

With spring bull sales fast approaching, now is the time for producers to assess their production goals, evaluate their herd and identify which genetics will move their business forward.

**C**hristian Duff from the Tropical and Southern Beef Technology Services said bulls bought this year would have a long-term influence on a cattle producer's bottom line.

"If you approach bull buying as an opportunity to take the herd forward through genetic improvement, you will put the business in a stronger position to combat the cost-price squeeze and gain productivity and profitability," Christian said.

"Whether you breed Brahman in the Northern Territory for the export steer market, or Herefords in Victoria for domestic trade, industry resources such as BREEDPLAN Estimated Breeding Values (EBVs) and selection indexes provide you with powerful information."

Christian compared the genetic variation across money-making traits between 2011-drop bulls in the top and bottom 10% of their breed (based on EBV and index percentile bands).

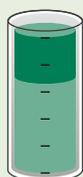
"Bulls from the top 10% of Herefords for weight traits will have progeny that could weigh significantly more at 200, 400 and 600 days (7.5kg, 12kg and 18kg heavier on average), compared to the progeny of bulls at the bottom 10% of the breed," he said.

"The top selection indexing bulls could also return more in different production systems, potentially earning an additional \$18.50 per cow joined for supermarket production systems, \$20 for grassfed steer, \$22.50 for grainfed steer and \$22 for EU systems.

"Progeny from Brahman bulls in the top 10% of breed for the weight traits could, on average, be 8kg, 11kg and 20.5kg heavier at 200, 400 and 600 days respectively.

## Project dashboard: Breedcow and Dynama

**Financial contributions to the project:**  
**\$295,000**



MLA: **35%**  
Queensland Government and Reef Plan: **65%**

**Length of project (completed):**  
**20 months**



**Project is part of MLA's objective to:**

Create opportunities through research and extension to improve reproduction efficiency in northern beef by five percentage points.



## Genetics

**\$18.50 to \$22/cow**

additional earnings from using genetics from top 10% of Herefords

**\$12.50 to \$15/cow**

additional earnings from using genetics from top 10% of Brahmans

→

The top 10% for fertility traits could potentially produce daughters that have higher conception rates and calve earlier, and the top indexing bulls will return on average \$15 more per cow joined for Japan ox production systems and \$12.50 more for live export systems."

**Selecting the right bull for the job**

Christian suggested evaluating all the genetic information available from cattle breed societies and individual seedstock producers (pedigrees, EBVs and selection indexes are available online or on-the-go with the INSolutions app), incorporating your cattle assessment skills, and aligning with a progressive bull breeder.

"If you buy a tractor, you expect the machinery dealer to be knowledgeable about the vehicle's features. Similarly, your seedstock producer should be able to explain the information they provide on their bulls, so you can identify bulls with high genetic merit to suit your production system," he said.

Market information and on-farm production measures can also refine your genetic shopping list.

"Use processor feedback to identify the traits to invest in, such as weight for age or fat cover, so your cattle can better meet market specifications," Christian said.

"Regularly and objectively measure your on-farm production points such as weaning percentages and percentage of unassisted calves. If an area is identified that can be improved to lift profitability, there is a good chance that genetics through selecting the right bulls can help.

**Regional focus**

Commercial producers can select from a wide menu of traits when buying bulls: weight, calving ease, docility, fertility... the list goes on.

The combination of traits that will deliver optimum results varies across production systems, with producers in different regions emphasising specific traits.

"Female reproduction is an important profit driver across all regions, however, it is particularly critical in the northern production system," Christian said. "Northern producers should select bulls that will genetically produce more fertile daughters through shorter days to calving EBVs."

Southern producers tend to put more weighting on calving ease, both direct and in daughters, because heifers across this region are usually expected to calve down as two-year-olds (up to a year younger than in the north).

Temperament is high on genetic shopping lists for all producers as, when combined with the right management, it benefits worker safety, animal welfare, feedlot performance and meat quality.

"Beef breeds favoured in southern Australia, such as Limousins and Angus, are publishing EBVs for docility, which is a heritable genetic trait," Christian said.

"In the north, herds tend to use the objective measurement of docility, being flight time."

Different markets also affect regional selections. Some southern production systems might put a higher weighting on the marbling trait (Intramuscular Fat EBV) in bull selection, whereas it may be a trait of lower importance for tropical breeds.

Looking ahead, Christian said taking advantage of genetic variation for feed efficiency in the grazing herd was still the 'holy grail' for most production systems, as feed intake in the cow herd was a significant enterprise cost.

BREEDPLAN produces trial Net Feed Intake EBVs for several breeds that describe genetic variation in feed efficiency in young cattle and in steers in the feedlot situation. Ongoing research for BREEDPLAN is aiming to produce EBVs that specifically target genetic variation in cow feed efficiency.

**Going shopping?****A checklist for bull buyers:**

1. Select the right breed for your enterprise and identify bull breeders whose management systems and objectives align with yours.
2. Choose the selection index within your breed of choice that is most relevant to your production system - but still consider EBV traits you want to improve in your herd.
3. Use this information to identify and rank bulls. Your budget and bidding competition will influence your purchases, so producing a relatively broad list of bulls is essential.
4. While doing your homework, take into account additional information such as pedigree (for genetic diversity), genetic condition/defect status and horn/poll status.
5. In conjunction with this information, when at the sale, make visual assessments of your target bulls for general structure and temperament.
6. Hone in on other objective tools such as bull breeding soundness evaluation (BBSE) results. This may be available before the sale.
7. Bought some bulls? Make sure your investments remain functional. Consider conducting a BBSE annually to ensure your sires can perform for the upcoming joining season and pass on their high-merit genetics.
8. Reassess your bull team each year and identify sires that need to be replaced. Keeping a bull for longer reduces the cost per calf, but you might miss out on genetic progress from younger bulls of higher genetic merit.



**Christian Duff** // T: 02 6773 2472  
E: christian.duff@abri.une.edu.au



<http://sbts.une.edu.au>  
(Southern Beef Technology Services)

<http://tbts.une.edu.au>  
(Tropical Beef Technology Services)

<http://breedplan.une.edu.au>

Download MLA's Tips and Tools:

*Buying better bulls* at  
[www.mla.com.au/bulls](http://www.mla.com.au/bulls)

# The right genes for the job

Victorian cattle and sheep producers Tom and Olivia Lawson have a simple philosophy for their commercial and seedstock enterprise: buy genetics, not feed.

**B**y investing in cattle that are fertile, resilient, efficient and marketable, Tom and Olivia have increased profitability by 20% in 10 years.

This strategy doesn't only make sense economically - selecting the right genetics for their production goals delivers environmental benefits, animal welfare and positive social impacts.

"Good genetics are an important risk management tool," Tom explained. "Over the past few years, we have gone through the two worst fires on record, floods, drought and declining margins, but by building a sustainable system, we can keep our business moving forward."

The Lawsons operate Paringa Livestock, producing cattle and sheep genetics. Commercial principles guide all aspects of their business.

"Our enterprise is founded on low-cost, high-production and best-practice principles," Tom said. "We view profit as kilograms/hectare, achieved through a combination of management and genetics, underpinned by environmental and animal welfare systems."

When shopping for new genetics or evaluating which cattle deserve a place in the herd, Tom prioritises traits which increase revenue and reduce costs.

"For us, the 'revenue traits' are fertility and calving ease for animal welfare and to get more calves on the ground; weaning and yearling EBVs to identify weight for age; and marbling, carcass and eye muscle area which impact yield and value."

"The 'cost traits' are cow mature size and feed efficiency - we aim to maintain or reduce mature cow weight and improve feed efficiency."

Tom uses BREEDPLAN EBVs and \$Indexes as key selection tools, and said he is no longer fixated on 'breed', preferring to inject hybrid vigour into his commercial herd.

"By selecting genetics based on merit, not breed, we have improved vigour, fertility, feed efficiency and adaptation in our herd."

Paringa Livestock maximises the impact of its genetic investments by targeting three drivers of profit: early calving, management and feed efficiency.

"We buy bulls which will produce high performance females with longevity. The number of animals born in the first three weeks of calving has a 40% influence on our profitability - this is a measure of fertility, calving ease, and live weight gains.

"Management influences 20% of our profitability. Management priorities are pasture, animal health, and early weaning."

Tom said weaning as early as four months released genetic potential, enhanced rumen development, boosted stocking numbers and generated 30% better feed conversion.

"Finally, feed efficiency is critical as it contributes to 40% of our profitability. Feed to gain is highly heritable, but very difficult to measure."

The Lawsons practise fixed-term AI to control joining. Females are expected to calve at two years old or be culled. Their 'zero feed' policy (except for supplementation at weaning) emphasises cattle that are resilient and reduces feed/fuel costs.

"Pushing our herd to perform under these conditions really exposes the value of good genetics."

Tom said he also kept his genetic 'shopping list' centred on market demands.

"Docility scores and 400 day weight EBVs are important because they impact MSA compliance. Our clients also want quiet cattle, so we look closely at temperament."



**Tom and Olivia Lawson**

T: 0434 146 795

E: info@paringalivestock.com.au



[www.paringalivestock.com.au](http://www.paringalivestock.com.au)

## Snapshot

Tom and Olivia Lawson, Yea, Vic



**Property:**  
2,023ha (owned and leased)

### Enterprise:

Seedstock and commercial - Charolais, Red Angus, Stabilizer cattle; Pimera and Highlander sheep

### Livestock:

600 breeders, 1,000 replacement, trade cattle and agistment, and 500 breeding ewes

### Pasture:

Sub-clover, annual rye, mixture of natives

### Soil:

Sedimentary red gravel to clay

### Rainfall:

550-750mm



## Genetics

# New northern reproductive EBV on its way

'Reproduction rate' is a key profit driver in northern Australia, but some producers are weaning less than 50% while the average is still only at 72%. A new genetic tool will help make selecting for fertility much easier.

**A**n MLA-funded Beef CRC project has measured the performance of 3,500 Brahman and Tropical Composite bulls and identified which male fertility traits correlate to female reproductive performance.

The University of Queensland's Dr Brian Burns said the research gave producers a cost-effective solution to make genetic and economic gains across their entire herd.

Producers already have access to Estimated Breeding Values (EBVs) for scrotal size and days to calving for making genetic progress in reproductive performance. These new results will likely lead to an integrated EBV for reproductive performance that combines the existing EBV traits with data on traits such as age at puberty, post-partum anoestrus interval (PPAI) - the period from calving to starting to cycle again - and percentage of normal sperm.

"Identifying these early-in-life predictors of a bull's fertility will help reduce the number of bulls required for breeding by up to 50% and increase the number of calves born," Brian said.

"Selection for sperm motility alone could achieve a 6% increase in lifetime weaning rate over 10 years. PPAI is also heritable, so producers can improve herd fertility - especially in Brahman cattle -



Dr Brian Burns is researching the reproductive performance of northern bulls.

by selecting bulls whose daughters will have shorter PPAI."

Traditionally, selection for cow fertility in northern herds could only be applied to females after they had been through several mating periods, so genetic gains were slow. Tropically adapted beef breeds had little genetic information for male reproductive traits which influence female reproductive performance.

This project evaluated bulls from birth to 24 months of age for 109 traits to assess heritability and correlation to female reproduction traits.

Researchers found that:

- key components of fertility (age of puberty, post-partum re-conception interval, scrotal circumference and semen quality) are heritable in these two breeds
- bull reproductive traits (especially sperm morphology) are genetically linked to female reproduction, so selecting for

male fertility will genetically improve their daughters' fertility

- selection for fertility doesn't come at the cost of other economically important traits, so multi-trait selection is possible
- significant variation exists for key bull traits such as semen quality and scrotal circumference
- genetic and in-herd economic benefits can accrue if seedstock producers record scrotal circumference and conduct bull breeding soundness evaluations on young bulls

Brian said this information was critical for northern cattle producers who faced different challenges than their southern counterparts, such as extensive management systems, harsher environments, parasite burdens and breed differences.

"Commercial producers should use genetically superior bulls which are sound and tested

## A tool kit for northern cattle producers:

- use EBVs to identify superior bulls
- only use Bull Breeding Soundness Examination tested, sound and fertile bulls
- select male and female replacements from calves born early in the calving season, from cows that have not missed a calf
- for faster progress, use superior genetics - select fertility EBVs: scrotal size in males, days-to-calving in females
- combine EBVs with selection indexes, structural soundness and temperament assessments to maximise genetic gain and herd functionality
- consider using MateSel, a tool which helps to optimise matings to reflect breeding goals and make long-term sustainable genetic gains

fertile to increase calving rates and reduce the number of bulls required."

"Selecting these bulls for the key traits will improve male and female reproductive performance and increase the profit potential of the entire herd."

### Where to now?

The Next Gen Beef Breeding Strategies Project, funded by the Queensland Government, is now working with key seedstock herds to develop commercially viable recording mechanisms for the traits measured in this Beef CRC project.



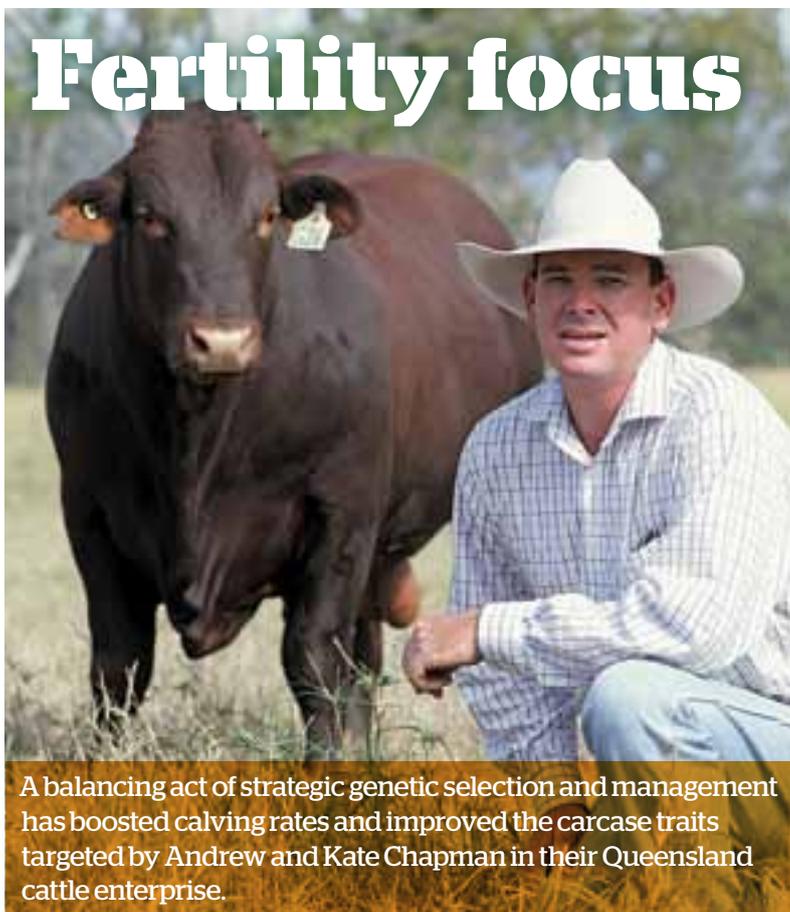
**Dr Brian Burns**  
E: b.burns@une.edu.au



BREEDPLAN:  
<http://breedplan.une.edu.au>

MateSel:  
E: matesel@breedplan.une.edu.au

# Fertility focus



A balancing act of strategic genetic selection and management has boosted calving rates and improved the carcass traits targeted by Andrew and Kate Chapman in their Queensland cattle enterprise.

Above: Andrew Chapman. Photograph by Kent Ward.

**The Chapmans have geared their seedstock and commercial herds to produce Brahman and Santa Gertrudis bulls (for sale and to use in their own cattle herd), high-performing replacement females, and cattle to turn-off for the EU market.**

"The most important trait for northern beef producers is fertility as it is the biggest profit driver. For producers to get full benefits of improved property development, infrastructure and supplementation, there needs to be improvement in the fertility genetic traits used," Andrew said.

"Our aim is to produce structurally and reproductively sound seedstock which have the potential to improve growth, carcass, fertility and docility traits while still meeting market specifications.

"In our commercial herd, we focus on breeding and selecting females which will deliver a calf each year with the same genetic qualities as

we expect from our seedstock herd, and which can perform in our environment."

These goals are underpinned by four management strategies to help cattle maximise their genetic potential:

- **Selecting the right genetics** - visual assessment; EBVs for growth, carcass, fertility and docility; and semen morphology testing are key elements.
- **Boosting fertility** - only pregnancy tested in calf (PTIC) cows are retained annually, semen assessment of sires, emphasising fertility EBVs and dams' calving history, and shortening mating from five to four months.
- **Providing nutrition** - improved pastures, supplementary feeding and rotational grazing.
- **Maintaining herd health** - through treatment for pests and diseases.

Andrew has refocused his genetic strategy over time, to increase emphasis on fertility while at the same time maximising growth and carcass traits. His ideal genetic package is one that will produce highly fertile cattle with above-average growth, that are adaptable to the northern environment.

"Since we started selecting sires for our commercial herd with high individual fertility traits and dams' fertility traits, we have been able to increase our annual pregnancy test rates by 10% in the last 15 years without compromising growth," Andrew said.

"This genetic pressure, combined with management choices such as improving pasture, means the majority of calves are now born earlier. Repeat clients who buy our steers to fatten for EU markets also report they are now able to turn these off earlier with higher yields."

Andrew takes a long-term approach for his 'genetic shopping list'.

"Selecting for a single trait can be hugely detrimental to an operation, so we always look for a balanced set of EBVs that will achieve our breeding goals. It is critical to use better genetics to produce an animal better than the last generation, to remain profitable when running costs are increasing all the time."



**Andrew Chapman**  
T: 07 4975 6132  
E: akchapman@activ8.net.au

## Snapshot

Andrew and Kate Chapman, Calliope, Qld.



**Property:**  
6,800ha

**Enterprise:**  
Santa Gertrudis and Brahman seedstock, breed bulls for commercial herd to produce for EU market and replacement females

**Livestock:**  
2,200 head including 250 stud breeders and 700 commercial breeders. Produce 70-80 bulls annually

**Pasture:**  
Native pasture consists of black spear grass and native bluegrass. Improved pasture is 'Callide' Rhodes grass and creeping bluegrass with legumes siratro, seca stylo and butterfly pea

**Soil:**  
Clay, sandy loam creek flats, granite ridges

**Rainfall:**  
815mm

## Lessons learned

- **Education is critical:** Producers have access to vast amounts of information that can assist them in their selections, through new technology and research data, field days and workshops.
- **Know what you want:** Identify what improvements are needed to meet breeding objectives, and then source animals that have the reliable data for any traits which need to be improved.
- **No information is a risk:** Limited information on a breeding animal can lead to higher risks by not meeting your production goals.

## Dry season management

## Snapshot

Simon and Christine Campbell, Blackall, Qld.



**Property:**  
25,000ha

**Enterprise:**  
Terminal crossbreeding based on Brahman females and Charolais bulls producing first cross progeny, plus trading cattle

**Livestock:**  
1,200 breeders, controlled join, progeny retained to feedlot entry weights, trading cattle

**Pasture:**  
70% improved buffel pasture, 10% Mitchell grass native pasture, 10% retained tree cover, 10% creek or river frontage

**Soil:**  
In the main pasture areas, grey and brown medium to heavy clays, and some minor texture contrast soils with light stone cover, with lighter red soils and some aeolian deposits along the Barcoo and creeks.

**Rainfall:**  
Median 470 mm, average 528 mm (404mm in summer) – based on 111 years of Blackall rainfall records

# Eye for the dry



Central-western Queensland beef producer, Simon Campbell. Image: Brendan Schrag

## Enterprise flexibility and a philosophy of being 'managers not victims' are business tools for Blackall cattle producers Simon and Christine Campbell.

**B**y looking at seasonal records, the Campbells realised their property received only half its average summer rainfall in 2012-13.

"Climate variability is high here, so we expect dry years and droughts. We try to plan for these events in our station and business plans in good years and bad, allowing for a bit of human fallibility," Simon explained.

"While we have a stock production plan, we don't have a fixed stocking rate – except as a reality check. We aim each year to match stock numbers to available feed."

This equips the business to handle major unexpected shifts, such as changing from a mix of sheep and cattle to all cattle in 2004 in response to the impact of wild dogs and low stock numbers following the 2004 drought.

Today, Simon's baseline target is to wean 1,000 to 1,100 calves a year, from 1,100 to 1,200 breeders, and to manage feed so progeny can be sold at feedlot entry weights most years. He factors in "opportunistic flexibility" for marketing, especially for heifer progeny.

"This dry year, despite early sales of No.2 dry stock (dry or unjoined cows or male stock born or branded in 2012 at the end of 2011-12 drop) in March, we still lost value on a dollar/kg basis as the market also dropped early," Simon said.

"Selling earlier cost us in lower weights compared to previous years, however, if we had waited until our

usual sale time in late May, we would have received 50-60¢/kg less than we received in March.

"This action gave us the benefit of room to move. Depending on the winter season, we hope to keep this year's progeny for a few months after weaning, rather than being forced to sell straight off their mothers, which should keep us off the market until prices improve."

Simon embraced a range of industry tools to guide dry season management, including climate research (he rates the Madden-Julian Oscillation that monitors tropical weather fluctuations as the most useful) and MLA's Nutrition EDGE workshops for advice on managing feed in dry and drought times, and options for feeding.

"The DPI finding that 85% of annual dry matter is present by the end of March in any year (on average) is also critical in our enterprise," he said.

"This is the feed bank we draw on until the next summer, at the appropriate utilisation rate, which is generally 30%."

An annual feed budget is prepared between March and May after the major summer rain, and matches stock numbers and production to the feed available until the next summer.

For 18 years, Simon has bought annual satellite images to guide this feed budget. Although this is becoming difficult with the decommissioning of Landsat 7, the images provide a record of feed and vegetation change, and have been valuable in guiding vegetation management policy issues.

Simon also incorporates cow reproduction research and training with adviser John Bertram, to address challenges such as pestivirus infections and reproductive efficiency.

Simon uses controlled joining and annual pregnancy testing to ensure dry cows turn into cash.

### Lessons learned

- Monitor feed and feed utilisation carefully and act on it early.
- Improve reproductive efficiency constantly.
- Do cash flow budgets and review these religiously - done well, they will guide decisions in dry times and surplus-feed or trading times.
- Try not to worry about the things outside your control, like the value of the \$A or government policy.
- Decide and plan in advance of stressful situations such as droughts - imagine 'what if' scenarios so you can make better decisions, earlier.
- Aim to be the managers - not the victims - of tough situations.



#### Simon Campbell

T: 07 4657 4196  
E: cobhorse@gmail.com



#### John Bertram, Technical Officer with Tropical Beef Technology Services

M: 0429 932 170  
E: john@tbts.une.edu.au

To find out more about MLA's Nutrition EDGE course go to [www.mla.com.au/edge](http://www.mla.com.au/edge)

To learn more about Madded-Julian Oscillation visit [www.bom.gov.au/climate/mjo](http://www.bom.gov.au/climate/mjo)

Read the *Is it fit to load?* guide at [www.mla.com.au/is-it-fit-to-load](http://www.mla.com.au/is-it-fit-to-load)

# Balancing act

**As northern producers enter winter on the back of minimal summer rain, choosing between feeding and off-loading livestock can be tough, but assessing all options helps balance the short and long-term impacts of dry season management decisions.**

**Désirée Jackson**  
Scientist, Department of Agriculture, Forestry and Fisheries at Longreach



**P**roducers still have options so now is a crucial time to assess how to approach the next few months.

If you have pasture available, create a forage budget to assess how many stock you can retain, and for how long. Take into account that feeding supplements can stimulate dry matter intake of pasture, increasing the rate pasture depletes.

Conducting a diet quality analysis allows a more precise decision on what and how much to feed. Symbio Alliance is the commercial provider of the F.NIRS (faecal Near Infrared Reflectance Spectroscopy), and can analyse dung samples to determine dietary crude protein and digestibility, to determine if cattle require protein only or an energy supplement.

After assessing pasture condition, ask:

- If I have to feed lick until a break in the season, will I retain stock and supplement?
- How long can I afford to feed stock? Energy supplements cost between 30 and 90¢/head/day. There is potential for supply shortages and price increases later in the season, so consider forward contracting energy supplements.
- If there is no available pasture, can I reduce stocking rates by agisting cattle or leasing country? Available paddocks can become scarce.

→ Alternatively, do I need to sell livestock? Assess cattle that are not critical to your business.

Feeding stock can be expensive and stressful so, before you start, calculate how long you can afford to feed them and what price you will need to get for these cattle to cover the cost of feeding.

Reducing stocking rates will ensure pasture recovery is quicker when the season does improve, as well as encourage the growth of more desirable species.

Before selling stock, consider:

- Whether selling all steers will affect cash flow later this year and next year.
- Cows in their final trimester of pregnancy have higher nutrient requirements than dry, empty or early-pregnant breeders but are a more valuable unit to sell.
- Livestock that are weak and in backward store condition should not be transported.
- Weaning earlier (down to 60kg) will take pressure off breeders.
- Whether you can keep weaner heifers on a positive plane of nutrition (gaining at least 100g/day from weaning to mating) so fertility is not compromised.
- Whether you can manage the production gap in two years if you sell all heifer calves now.



**Désirée Jackson** // T: 07 4650 1223  
E: Desiree.Jackson@daff.qld.gov.au

### Seek support from:

- Your local pasture agronomist for feed budget advice
- Symbio Alliance: [www.symbioalliance.com.au](http://www.symbioalliance.com.au)
- Stocktake Plus app (for Apple and Android) to conduct a feed budget in the paddock: [www.stocktakeplus.com.au](http://www.stocktakeplus.com.au)
- Queensland Livestock Transport Guide: [www.daff.qld.gov.au/4790\\_12023.htm](http://www.daff.qld.gov.au/4790_12023.htm)

Climate variability

## The Climate Champion program...

# Working in rotation



New Climate Champion David Rankine with his wife, Donna.

**D**avid and Donna Rankine's property in Queensland, 'Bunuro', has seen major changes since they bought it in 2001.

The Rankines divided the property into 14 smaller paddocks ranging from 600 to 1,000ha. They also established new watering points so the maximum distance for stock to access water was two kilometres.

David monitors and evaluates pasture growth so he can forecast stocking rates. He uses an intensive rotational grazing system, which combined with wet-season phosphorus supplementation, has resulted in a carrying capacity almost double historic levels for the district. David also rests paddocks infested with heart-leaf (a bush poisonous to grazing animals) in the wet season.

David uses Bureau of Meteorology and Elders forecasts - seven-day forecasts for general management and seasonal forecasts before the wet season.

Although rainfall and temperature appears cyclical in his area, David says climatic conditions elsewhere in Australia remind

him that he should be prepared for similar changes in Queensland.

### Conversation starter

David, who joined the Climate Champion program this year, recently travelled to Western Australia for a Climate Champion update where he learnt about cropping in low rainfall areas.

"No matter where you are, it's about learning to deal with variability," he said.

"It's important to get the latest climate research, information and innovations to grass-root producers so it can be put into active management strategies.

"The new MetEye service from the Bureau (of Meteorology) will be really beneficial for us in Queensland. I've learnt a lot about how they develop it and how they're becoming more accurate in their forecasting."



**David Rankine**  
E: ddrankine@gmail.com



Learn more from the champions at:  
[www.climatekelpie.com.au/ask-a-farmer/climate-champion-program](http://www.climatekelpie.com.au/ask-a-farmer/climate-champion-program)

### Snapshot

David and Donna Rankine, Torrens Creek, Qld.



#### Property:

31,000ha

#### Enterprise:

Cattle breeding

#### Livestock:

1,500 Angus-cross

#### Pasture:

Native: soft spinifex, black speargrass, kangaroo grass, bluegrass, serangoon, Seca stylo

#### Soil:

Light sandy loam

#### Rainfall:

500mm

## What is the Climate Champion program?

The program is funded by the Grains Research & Development Corporation (which also manages the program), the national Managing Climate Variability program, MLA, Cotton Research and Development Corporation and Australian Wool Innovation.

By taking part in the program, the producers - who represent most major agricultural commodities - have opportunities to:

- talk with researchers about the tools and information to help them manage climate risk
- trial early research products and practices, and potentially influence the research
- influence how research findings are communicated to farmers
- help producers in their region learn how to deal with climate variability

recognises that producers often look to their peers for relevant information. Meet two of the latest MLA-sponsored recruits - David Rankine from the north and Gillian Taylor from the south - to the program to build climate knowledge.



### Snapshot

Gillian and David Taylor, Bowna and Wodonga, NSW.



**Property:**  
1,100ha

**Enterprise:**  
Cattle breeding

**Livestock:**  
500 Angus

**Pasture:**  
Perennial pastures

**Soil:**  
Granite outcrops,  
loam valleys

**Rainfall:**  
750mm

five years. Gillian admitted it was nerve-racking in 2007 when the trees went in during a dry season.

The trees have contributed to better water retention, biodiversity, shade for animals, cooling of the soil, and more. The Taylors have fenced off areas along gullies and almost tripled the number of paddocks on the property. All the tree lots are being registered as carbon-accumulation sites.

Gillian relies on short- and medium-term weather forecasts to make on-farm decisions, especially in the months leading up to changes of seasons or ahead of selling stock.

"We want to know about climatic conditions on a daily, weekly, monthly, seasonal and yearly basis," she said. "Climate is a critical part of our decision-making. It dictates our key management decisions. More easily accessible information can only enhance our business."

### Creating conversations

Gillian recently joined the Climate Champion program. She signed up because she was passionate about getting more producers talking about climate change and variability, and then managing it by using forecasts and their own experience.

*"Climate change is affecting producers so quickly - I don't think we're adapting fast enough. I'm looking forward to getting this information out to my own networks as well," she said.*

The program encompasses most of Australia's primary industries - not just livestock or cropping - and Gillian saw this as a bonus.

"We're all primary producers and have a lot of things in common. When we're talking climate and agriculture and land management, it's all about resource management - whatever you do," she said.

### Meet Gillian Taylor, one of the new MLA-supported Climate Champions.

**G**illian and David Taylor - who run beef cattle near the border of NSW and Victoria - are quick to "take the foot off the pedal" when in dry times.

"We use climate forecasting and close monitoring of our grazing plans to ensure we have five to six months' feed in front of the mob," Gillian said.

Gillian described her planned rotational grazing management strategy as conservative.

"We've always been that way. Our agricultural experience has been in the Riverina, north of Jerilderie, a marginal area where you have to sell early and change direction quickly to maintain feed reserves for a quick recovery when it does rain."

For Gillian, groundcover is king. She will stock up to 500 cattle depending on the season and weather signals. At the moment, the properties run about 320 cows and calves.

"We manage our property based on holistic management and a planned grazing

strategy, with all our cattle running in one mob. Our animals are moved every one or two days to a fresh paddock," Gillian said.

The rest periods for the paddocks are 90-150 days. The cows and calves are moved faster in the growing season than in dry times.

It's a far cry from the properties' beginnings. When the Taylors purchased their base property 'Bibbaringa' in 2007, the land was stressed from continual dry seasons.

"The day after we bought it, we sat down with an aerial photograph of the property and looked at it as a clean slate, with no fences," Gillian said.

From there, Gillian and David envisaged the property in 50 and then 100 years.

"We drew these big swishes of trees and laneways through it," Gillian says. Since then, with a Caring for Country grant through the Murray Catchment Management Authority, the Taylors have planted 60,000 trees in



**Gillian Taylor**  
E: gillian@bibbaringa.com

# Here comes CHINA

**Australian producers have been told for some time that China and other Asian neighbours could offer the next big hope for Australian exports. Signs that the predictions could be true were seen when Australian beef and lamb was showcased to 46,000 visitors at a recent Chinese exhibition.**

**M**LA's South-East Asia/China Regional Manager, Andrew Simpson, described the scene at Asia's food and beverage exhibition, SIAL, in May: "It was like a busy casino floor, with Aussie exporters dealing out business cards like croupiers."

Inquiries from Chinese importers translated into significant orders of beef and sheepmeat, with new markets identified for goatmeat.

Fourteen Australian exporters joined with MLA and guest chefs to take advantage of the booming Chinese market, driven by a growing middle class, depleted local production and trade restrictions.

"This is the first time the tradeshow has had prominent Australian meat exporters, providing a platform to grow existing relationships, initiate new business and position our products before bona fide customers," Andrew said.

"Recent food safety concerns in China have strengthened the opportunity for Australian exporters to leverage on the clean, green and safe image our meat enjoys. Food sourcing has never been so important for consumers, especially in the face of a 'grey trade' of meat from unregulated countries, and depleted local production.

"Combined with the fact we are one of the few countries regulated to export meat to China, local importers are keen to establish strong, long-term relationships with Australia and secure a consistent supply of quality red meat."

Australian exports to China are surging as the Chinese Government continues tight restrictions on the entry of competing US and Brazilian product.

During the first five months of 2013, Australia sent a record 51,764 tonnes swt of beef to China, exceeding the total volume for all of 2012 (32,906 tonnes). Australian sheepmeat also boomed with 34,933 tonnes sent from January to May - up 152% on the same period last year.

"Chinese imports of Australian products are usually strong from September-December in the lead-up to the Chinese New Year in February," Andrew said.



*MLA showcases Australian red meat during SIAL at Shanghai.*

"But this year, this buying pattern continued and grew post-February with no signs of import volumes dropping off."

Australian exporters echoed this sentiment.

As the sole Australian goatmeat exporter represented, Neil Duncan of Western Meat Exporters at Charleville was still celebrating a week later after being "knocked off his feet" by enquiries at SIAL.

"We started importing very small volumes into China in 2011, about half a tonne a year, but at SIAL we received orders for 500 tonnes, so that was a great result," Neil said.

"We also export to the US, but the growing Chinese middle class creates an opportunity for us to diversify. I am confident this market is here to stay as long as the cost pressures facing the Australian red meat industry allow us to continue selling at the right price for our export markets."

Robert Wadland of Hunter Valley Quality Meats, based at Scone in NSW, was also positive.



**1.4 billion**  
people live in China

**47%**  
live in urban areas

**2.3%**  
annual rate of urbanisation

**46.7%**  
of the population is aged between 25 and 54

**4.7kg**  
annual consumption of beef/person

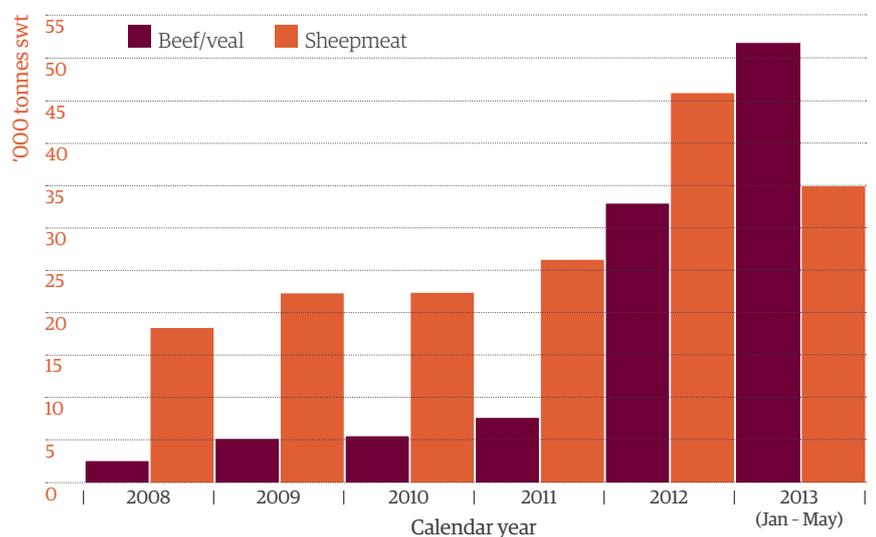
**2.9kg**  
annual consumption of sheepmeat/person

"I see this market continuing to grow. Although the current heightened demand will settle down, it presents a long-term opportunity with enough sales for everyone."

Australian exporters received orders for a variety of frozen and chilled cuts, ranging from complete full-sets to Wagyu for high-end restaurants, to master cuts suitable for traditional and western cooking styles at home.

Heading into strong winter sales, Andrew said MLA would focus on developing in-country supply chain relationships, training Chinese butchers and food service staff to improve their awareness of Australian beef and lamb, and equipping the five staff in MLA's China office to identify further business opportunities. MLA will also have a stand at the 'Food Hotel China' tradeshow in November.

Figure 1 Surging Australian beef and sheepmeat exports to China



Source: Department of Agriculture, Fisheries and Forestry

**i Andrew Simpson, MLA // T: 02 9463 9333  
E: asimpson@mla.com.au**

## Winter campaign

# Warm and cosy with winter beef

When the mercury drops, Australians reach for their favourite jumpers and nanna rugs, but nothing warms us up like a hearty beef meal.

**T**hat's the message behind MLA's new winter beef campaign, launched on 16 June.

Using the slogan 'Beef. It's how we keep warm', the campaign celebrates Australia's favourite ways to keep warm, using amusing images of people wrapped in crocheted blankets, woollen scarves and fuzzy jumpers, while enjoying hearty beef meals.

"Winter sees a natural spike in beef sales because people love eating warming meals like beef curry and casserole," MLA's Group Marketing Manager - Consumer, Andrew Cox said.

"We're celebrating Australians' favourite ways to keep warm while reminding consumers that the best way to keep warm from the inside out is to eat a hearty beef meal."

Consumer research has helped MLA understand how behaviour changes in winter.

"In winter, consumers crave heartier, warming meals, and beef is the perfect winter food because it satisfies those cravings," Andrew said.

"We're leveraging that association between colder weather and beef, and we're also taking the opportunity to remind people of beef's versatility, providing recipes for a wide variety of meals from quick-cook curries to casseroles and roasts."

The campaign is covering a range of media including television advertising and large outdoor posters at metropolitan bus stops and train stations.

Retailers are displaying point-of-sale material including posters and stickers, while The Main Meal website and Entice magazine, distributed to retailers nationwide, feature warming meal recipes across a range of beef cuts.



**BEEF CURRIES  
& NANNA BLANKETS**  
IT'S HOW WE KEEP WARM

**NOTHING BEATS BEEF**

## Entice Winter, 2013

### → Consumer insight

With the onset of Winter, consumers are looking for meals that are hearty, warming and nourishing.

### → Objectives

**Educate** consumers on how to cook versatile, healthy dinner meals the whole family will love.

**Inspire confidence** through easy to prepare meals with easy to follow recipes.

### → Concept

A dinner recipe collection featuring different cuts, pantry staples and plenty of veggies - a deliciously simple way to help give your body the nutrients it needs.



Andrew Cox, MLA // T: 02 9463 9158  
E: acox@mla.com.au



[www.themainmeal.com.au](http://www.themainmeal.com.au)

Recipe

# Beef osso buco

Grab the nanna blanket, pull on the ugg boots and start cooking casseroles to warm up for winter. Here's a classic slow-cooked favourite.

**Serves: 4**

**Preparation time: 10 minutes**

**Cooking time: 2 hours**

## Ingredients

4 pieces (about 250g each) 2cm thick beef osso buco, fat-trimmed  
 ½ cup plain flour  
 1 tbsp olive oil  
 1 brown onion, diced  
 2 stalks celery, diced  
 2 parsnips, diced  
 1 cup red wine  
 400g can chopped tomatoes  
 1 cup beef or veal stock

4 cloves garlic, sliced  
 2 sprigs rosemary  
 Mashed potatoes and steamed greens or spinach to serve

## Gremolata

1 bunch parsley, finely chopped  
 1 clove garlic, crushed  
 1 lemon, zest finely grated  
 1 tbsp lemon juice  
 1 tbsp extra virgin olive oil

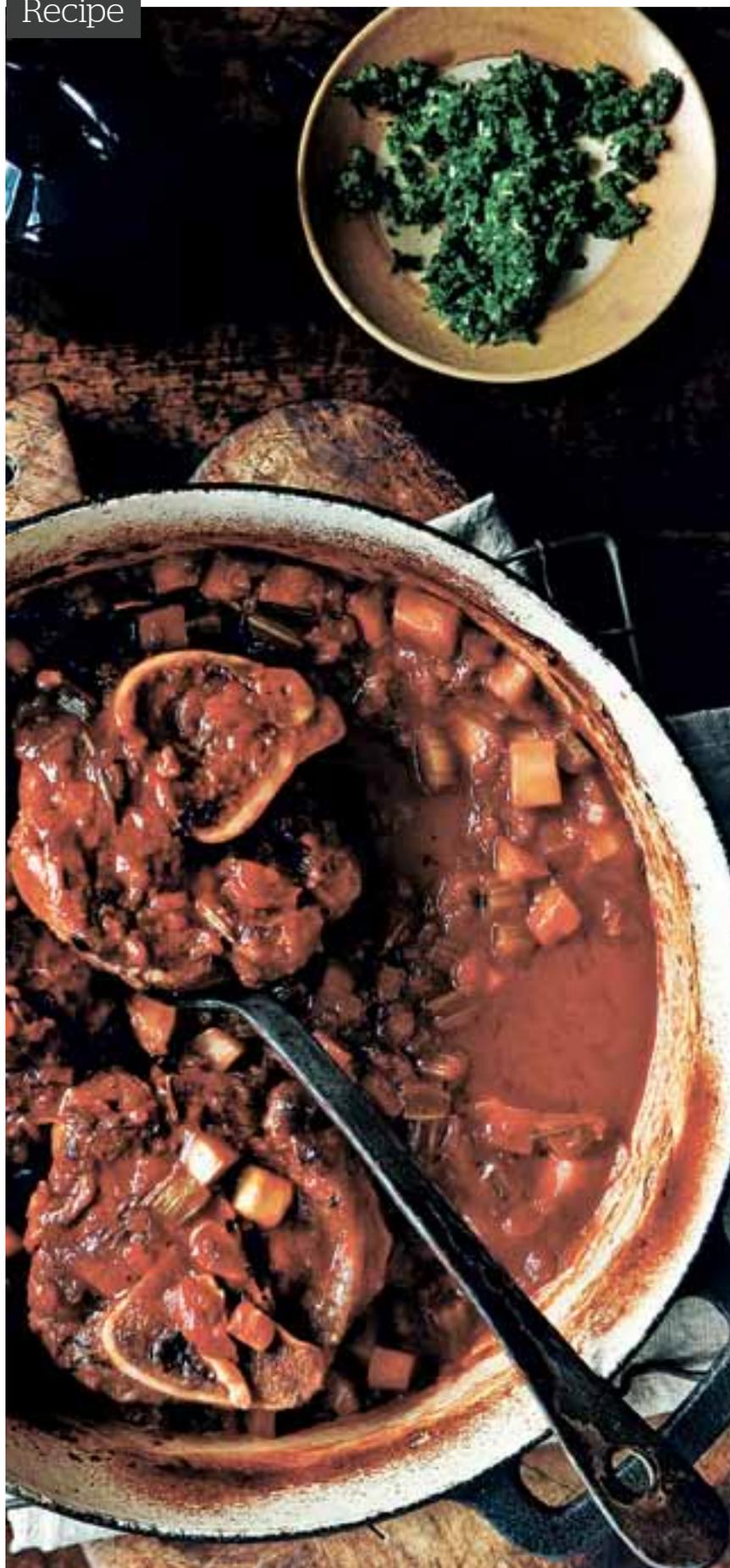
## Method

1. Preheat oven to 160°C. Dust meat in flour and shake off excess.
2. Heat oil in wide cast iron pan and cook beef on both sides until golden brown. Set aside. Cook onion, celery and parsnip until golden. Add wine and allow to simmer for one minute. Place meat on top of vegetables, in a single layer if possible.
3. Add tomatoes and stock to cover the meat, then garlic and rosemary. Press a round of baking paper over the meat, cover with a lid, and cook in the oven for 1½ to 1¾ hours until meat is very tender. Check halfway through and add extra stock to cover meat if needed.
4. For gremolata, combine ingredients in a small bowl and drizzle with oil. Serve osso buco with gremolata, mash and spinach.

## Switch to make beef osso buco with hearty winter vegetables

Try swapping parsnips with carrots and use thyme sprigs instead of rosemary. It tastes delicious with sweet potato instead of potato mash.

For more winter warmers go to  
[www.themainmeal.com.au](http://www.themainmeal.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 SOUTH KOREA

#### AACo anniversary

MLA and Korean retailer E-Mart hosted a Darling Downs Wagyu media session to mark the 10th anniversary of Australian company AACo's partnership with E-mart. The event also promoted Australian beef brand *Hoju Chungjung Woo* to Koreans.

Australian Ambassador to Korea Bill Paterson attended, along with AACo director David Crombie and E-mart Chief Executive Officer Inn-Chul Hur. The Ambassador thanked E-Mart, one of Australia's largest customers in Korea, for their long-term support for Australian beef, before both men handed out beef samples. The event was well supported by photo journalists, and generated more than 25 news articles.

AACo marks its

# 10th

anniversary with E-mart

### 2 US

#### Lamb shines in San Fran

Chef Victor Scargo, from Bardesono Resort and Spa, and MLA demonstrated the versatility of Australian lamb cuts to chefs and major hotel chain staff at the Greystone Flavour Summit in San Francisco, organised by the Culinary Institute of America. The demonstration showed the versatility of the lamb rump, how a carcass is broken down, and fore rack and boneless shoulder options.

### 3 MONACO

#### Beef brand launch

Sixty distributors from across Europe gathered in Monaco for the launch of an Angus grainfed beef brand. The two-day event included meetings and presentations from the Australian supplier and MLA.

### 4 BELGIUM

#### Chef's Table draws a crowd



MLA and the Australian Embassy to Belgium held a Chef's Table in May at Campus Wemmel (a TAFE-like college in Brussels) where five courses of Australian beef and lamb were served. The Australian Ambassador, H.E. Duncan Lewis (above), addressed the 46 attendees which included importers, retailers, food service operators and the food media.

The event was broadcast on local television channel Ring TV and featured an interview with the Ambassador and Campus Wemmel's principal discussing the event and highlighting the Australian products served.

MLA has since begun working with the executive chef and purchasing director of a major hotel chain in Belgium in a bid to have Australian beef and lamb added to their restaurants' menus.

**5 GERMANY****Grainfed beef**

Australian grainfed beef was featured in a new product event at a German cash and carry outlet in May. Around 500 people - including 120 chefs and restaurateurs - attended the function which included taste-testing of a recently launched Australian grainfed beef brand.

**500**

people taste Australian grainfed beef

**6 US****New leads in Chicago**

Around 61,000 foodservice and retail visitors descended on the National Restaurant Association (NRA) show in Chicago in May where MLA promoted Australian lamb, grassfed beef and Wagyu in partnership with five importers. The MLA booth fielded hundreds of expressions of interest, with importers generating 61 new leads to follow up with further information, presentations and product trials.

It can take up to 18 months or longer to turn new leads into ongoing business, so maintaining a presence at tradeshows like NRA plays a critical role in developing relationships and increasing momentum towards Australian lamb and beef appearing on more restaurant menus in North America. MLA also met with existing customers at the show and discussed promotional activities for Australian beef and lamb in 2013-14.

**61,000 visitors**  
**61 new leads**

generated at NRA show

**7 UK****Trying out grainfed beef**

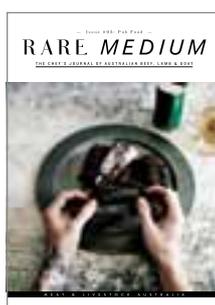
An importer, in partnership with MLA, conducted in-store trials of Australian grainfed beef with a major international retailer in the UK. This marked the next phase towards securing a permanent offer of Australian beef across the retailer's UK stores. The trials followed a presentation by the importer and MLA to senior management from the retail outlet in March, including taste-tests of four beef cuts.

**8 JAPAN****Iron Beauty spin-off**

*Nutrition and Food* magazine, produced by the top nutrition university in Japan, published a two-page colour spread on the health benefits, clean, green environment and meat safety systems of Australian beef. The article followed a recent trip to Australia by the senior editor of the magazine with the MLA Iron Beauty mission. The magazine has a circulation of more than 250,000 and leads the way in providing the latest nutrition information for health professionals and health-conscious Japanese consumers.

**9 AUSTRALIA****A chef's journal**

The latest edition of *Rare Medium* - a journal to inspire chefs to use Australian beef, veal, lamb and goat in creative ways and equip them with knowledge around how red meat is produced - has been distributed to more than 7,000 chefs around Australia. The edition focuses on pub style meals and contains inspiring beef, veal and lamb recipes including five shared by pub chefs.

**7,000**

chefs receive *Rare Medium*

**On the ground****Middle East/North Africa**

**Jamie Ferguson**  
MLA Regional Manager  
Middle East/North Africa  
E: [jferguson@mla.com.au](mailto:jferguson@mla.com.au)



**T**he Middle East North Africa (MENA) region continues to be an expanding market for Australian beef and lamb, with exports valued at \$1.2 billion last year.

Australian beef exports to the region have increased from 7,094 tonnes swt in 2003 to 32,737 tonnes in 2012 and a record tonnage is expected for 2013. Strong demand from Saudi Arabia has been the catalyst for growth, as a BSE-related ban on Brazilian beef in late 2012 created a gap in the market, presenting an opportunity for Australian beef (see feature on pages 36-37).

Sheepmeat exports have set a record-breaking pace this year, led by strong growth in lamb exports to Bahrain and Iran.

As Ramadan (9 July to 7 August) nears, Australian beef and lamb exports are expected to remain strong to accommodate the increased demand during celebrations.

Ramadan is marked with a month of daytime fasting and, each day before dawn, Muslims observe a pre-fast meal called *Suhoor*. At sunset, families prepare for the fast-breaking meal celebration, known as *Iftar*. MLA will run Ramadan campaigns throughout the region to encourage families to celebrate their *Iftar* with Australian beef and lamb.

MLA continues to keep up with developments in the region's tourism industry as it provides important foodservice markets for Australia's high quality lamb and beef brands.

Recent figures in Dubai indicate a 9% growth in hotel guest and cruise passengers in 2012 to 10 million, a 14% increase in guest nights to 37.4 million, and hotel revenue rising by 17.9% to A\$4.95 billion. This trend looks set to continue with Dubai's Vision for Tourism forecasting that by 2020, Dubai is expected to welcome 20 million visitors/year, and the annual contribution made by tourism to the city's economy is forecast to triple.

## Market observations

## And now for the good (beef) news...

For the first time, Australian beef exports have exceeded one million tonnes swt in a 12 month period (June 2012 – May 2013). Importantly, 30% went to markets other than the US, Japan and Korea, compared to only 11% in 2006 (the previous record year) – highlighting the increasing demand from developing markets.

**Tim McRae**  
MLA Economist



**A**ustralian beef exports also surged into uncharted territory in May, exceeding the previous monthly high and breaking through 100,000 tonnes swt for the first time.

According to the Department of Agriculture, Fisheries and Forestry, beef exports totalled 103,207 tonnes swt – 19% higher than May 2012, and more than 8,000 tonnes swt higher than the previous monthly record set in November 2006 (94,693 tonnes swt).

Historically high beef production led to the milestone, as average weekly eastern states slaughter during April and May were up 18% year-on-year, at 137,535 head and 157,093 head/week, respectively – driven by drought and deteriorating seasonal conditions, especially in Queensland. The lower cattle prices throughout the month helped offset the impact of the high A\$ (albeit falling), maintaining Australian beef in a competitive position in most markets.

Exports to Japan, Australia's largest export beef market, registered a solid month at 30,374 tonnes swt.

Volumes to the US continue to be below expectations, largely due to stronger competition from Asia and the Middle East for manufacturing beef. Exports to the US in May totalled 19,580 tonnes swt – steady year-on-year and the highest volume so far in 2013.

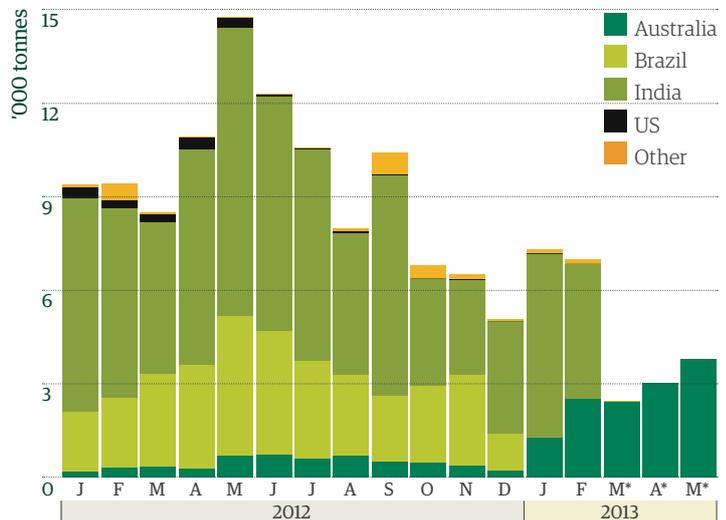
The battle for Australia's third largest beef export market continued between China and Korea. Long-time title holder, Korea, registered 12,423 tonnes swt during May (up 36% year-on-year), compared to 11,486 tonnes swt to China (up 1,520% year-on-year). However, in the previous three months, volumes to China exceeded those to Korea. China continues to be the most promising market, with shipments a year earlier just 709 tonnes swt and the May 2013 volume just shy of the all-time high set in March, at 12,320 tonnes swt. Illustrating the rapid growth to China, Australian beef exports to China in the 12 months to May 2013 totalled 82,418 tonnes swt – more than double the volume exported in the previous 12 years.



**Tim McRae, MLA**  
T: 02 9463 9112  
E: tmcrae@mfa.com.au

## Access to global markets

Figure 1 Beef exports to Saudi Arabia (tonnes swt)



\* March, April and May 2013 figures only currently available for Australia

## The upside of restrictions

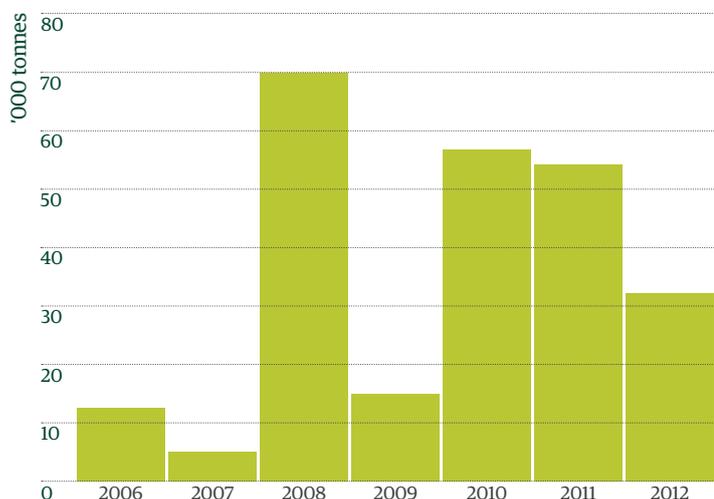
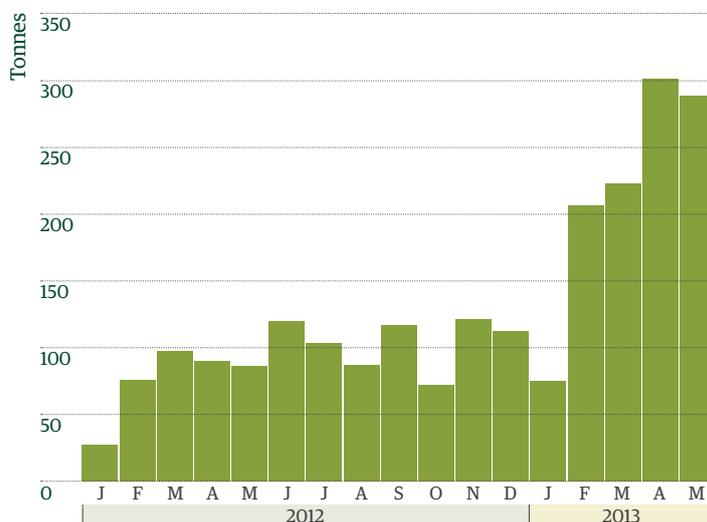
**With two-thirds of Australia's beef and half its sheepmeat production destined for export, ongoing access to export markets is critical. Any market access restrictions or disadvantages have implications for the entire industry – from Australian producers to exporters.**

**This economic impact has been highlighted by recent difficulties in attaining free trade agreements (FTA) with China and Japan, combined with the tariff disadvantage faced in Korea – the US has already secured an FTA but Australia's FTA is still being negotiated.**

Understanding the impact of these constraints is crucial. It is also important to understand the restrictions on our competitors and the influence this can have on Australian beef and lamb exports.

A look in the rear-view mirror defines several periods when Australian exporters increased volumes into markets when competitors' products were either restricted or banned. A prime example was the fallout from the confirmation of BSE in the US in late 2003, which led to US beef being locked out of markets including Japan and Korea. This had a positive effect on Australian cattle prices and export volumes, and brought increased returns to the industry.

Foot and mouth disease outbreaks in South America, as well as the Argentinean Government restricting beef exports in 2006 and beyond, generated shock waves across global beef markets – resulting in new opportunities for Australian beef to fill the void, particularly with exports to Russia.

**Figure 2 Australian beef exports to Russia (tonnes swt)****Figure 3 Australian chilled beef exports to Russia (tonnes swt)**

Recent examples of competitors' restrictions include the bans levelled on US beef entering Russia and Saudi Arabia, and restrictions on Brazilian beef to several markets.

### Surging exports to Saudi Arabia

Market access restrictions placed on Brazil and US beef in Saudi Arabia in 2012 (BSE related) were the catalyst for an increase in Australian beef exports to the market (see Figure 1). In 2012, Brazil exported 33,396 tonnes swt to Saudi Arabia, while the US shipped 5,273 tonnes swt in 2011.

Australian beef exports to Saudi Arabia have averaged 4,256 tonnes swt over the past five years. However, for the first four months of 2013, Australian exports totalled 9,223 tonnes swt - well surpassing previous records and up more than eight-fold year-on-year.

Traditionally a large sheepmeat market, Saudi Arabia has become Australia's largest beef market in the Middle East in 2013. This illustrates the impacts of the restrictions placed on Brazil and the US.

Saudi Arabia has been demanding a similar mix of frozen beef cuts to the ones typically sent to Russia and the US - manufacturing beef, topside/inside, silverside/outside, and blade. In response to the increased shipments to Saudi Arabia (and also China), Australian frozen beef exports have been diverted from both Russia and the US this year.

### Rushing into Russia

Russia's emergence as a large market for Australian beef in 2008 has provided Australia with a valuable alternate market outside of Australia's three dominant customers: Japan, the US and Korea (see Figure 2).

A slowdown in Australian frozen beef exports in 2012 and 2013 caused a decline in overall volumes to Russia. However, a ban on US beef imports in February 2013, due to Russian fears over the use of

ractopamine, has boosted Australian chilled beef exports (see Figure 3). Australian chilled exports totalled 806 tonnes in the first four months of 2013, up almost three-fold compared year-on-year.

Australian chilled beef historically has competed with US beef in the high end foodservice sector in Russia, with a roughly even market share in 2012. Australian chilled exports totalled 1,109 tonnes swt in 2012, while Russian imports of chilled US beef reached 1,047 tonnes swt in 2012.

With the high-quality chilled trade remaining sluggish in Japan, the increased interest from Russia is helping absorb the higher beef production since the beginning of the year.

### Market access essential

These examples reinforce the importance of maintaining favourable market access arrangements, while preventing any restrictions or unfavourable access arrangements having an impact on Australian product.

A focus for MLA is to maintain and improve market access through assisting industry and government secure free trade agreements in a number of markets - most importantly Japan and Korea. MLA also supports industry to alleviate technical trade barriers which can be just as restrictive as import tariffs or quotas (for more on this, see the article on page 3).



**Ben Larkin, MLA EU/Russia analyst** // T: 02 9463 9395  
E: blarkin@mla.com.au



**Andrew McCallum, MLA Manager of International Markets and Trade Services** // T: 02 9463 9153  
E: amccallam@mla.com.au

Learn more about what is going on with global markets at:  
[www.mla.com.au/oveseasmarkets](http://www.mla.com.au/oveseasmarkets)



*Kempsley High School won the carcass competition. Teacher Gavin Saul is pictured with students and Shane Rutledge, MSA grader at Wingham Beef Exports.*

## MSA focus at Wingham

**M**ore than 300 school students attended workshops during Wingham Beef Week in May. MLA helped run events such as the carcass competition for MSA producers, the hoof and hook contest judged using MSA grading, an MSA producer forum and a 'beef appreciation' contest for high school students.

**More information:** [www.winghambeefweek.com.au](http://www.winghambeefweek.com.au)

## MSA Beefing up Naracoorte

**M**ore than 200 producers gathered at the Naracoorte Town Hall in South Australia on 23 May for an MSA Beefing up performance forum. Terry Farrell from MSA was joined by Geoff Teys from Teys Australia. Geoff gave a presentation on the role that MSA plays in Teys' business and the opportunities for producers. Geoff also gave his views on the challenges and opportunities in the meat industry.

**More information: MSA**  
**T: 1800 111 672**  
**E: [msaenquiries@mla.com.au](mailto:msaenquiries@mla.com.au)**  
**[www.mla.com.au/msa](http://www.mla.com.au/msa)**

## Lucindale field day

**C**attle industry innovations were on display at Lucindale as part of a More Beef from Pastures field day. More than 65 producers and beef industry members attended the event, which included presentations on cattle management, a global outlook for agriculture production, iHerd - a beef cattle herd management app and reducing cattle emissions.

**More information: Tiffany Bennett**  
**Rural Solutions SA**

**E: [tiffany.bennett@sa.gov.au](mailto:tiffany.bennett@sa.gov.au)**

**T: 08 8762 9126**

**[www.agconnectse.org.au](http://www.agconnectse.org.au) - click on 'library' then type in 'beef innovation' as a key word**



*Learning more about cattle at Lucindale were L-R: Melissa Rebbeck, SARDI; Jessica Rayner, Biosecurity SA - Animal Health; Riley Fleming, Biosecurity SA - Animal Health; Georgia Sands, Laucke Mills Victoria; and Jess Revell, Landmark Animal Production.*

## Behind the scenes at Muchea

**T**he Muchea Livestock Centre Open Day, which coincided with Monday's cattle trade sale on 6 May, provided cattle producers with the opportunity to not only see the centre in action, but also to speak to industry representatives across the supply chain. Producers found out more on how to prepare their stock for transport, get the most out of using the centre and using MLA's National Livestock Reporting Service market reports to their advantage. More than 100 people attended.

**More information:**  
**[www.wamia.wa.gov.au](http://www.wamia.wa.gov.au)**

## Upcoming events

### Planning for success

This workshop equips sheep producers to review their business, undertake a SWOT analysis, develop achievable goals, strategies and actions, and develop a monitoring program. The process will also allow producers to see areas where they can create joint projects to maximise efficiency and pool resources.

#### When and where:

Session 2: 10 September,  
 Carrieton SA

**Bookings:** 08 8841 4500  
[www.makingmorefromsheep.com.au/events.htm](http://www.makingmorefromsheep.com.au/events.htm)

### Graham Centre sheep field day

This field day provides an opportunity to hear the latest news and research in sheep management and production, and network with researchers and industry experts.

#### When and where:

9 August, Wagga Wagga NSW

**Bookings:** 02 6938 1806  
[tnugent@csu.edu.au](mailto:tnugent@csu.edu.au)

#### More information:

[www.mla.com.au/events](http://www.mla.com.au/events)  
[www.csu.edu.au/research/grahamcentre/field-day/sheep.htm](http://www.csu.edu.au/research/grahamcentre/field-day/sheep.htm)

### AgForce state conference 2013

This conference is your chance to hear speakers relevant to your business, talk to AgForce staff and meet other primary producers from across the state. The conference is also the place to communicate the issues and concerns which need to be addressed by industry.

#### When and where:

17-19 September, Townsville Qld

#### Bookings:

[www.agforceqld.org.au](http://www.agforceqld.org.au)



Find more events and information at [www.mla.com.au/events](http://www.mla.com.au/events)

## Going wild in North Queensland

**W**ild Dog Week involved an awareness campaign in April/May targeting North Queensland cattle producers. The project was co-funded by MLA and Australian Wool Innovation.

Agforce hosted workshops at Mt Garnet, Einasleigh, Croydon, Burketown, Gregory Downs and Camooweal to increase awareness of the impact of wild dogs on cattle production. The workshops covered monitoring, control and eradication techniques and integrated management control.

Fifty-five landowners, property managers, jackaroos/jillaroos, shire council staff and NRM Group staff attended the workshops. The campaign also set up two displays at the annual Gregory Downs races, attracting 40-50 enquiries.

The week focused on inter-industry collaboration through education and extension to ensure a 'whole of state' approach to eradicating wild dogs to ultimately improve production levels in the cattle, sheep and wool industries.

**More information: Michael Allpass, AgForce Queensland**  
**T: 07 3236 3100 // E: allpassm@agforceqld.org.au**  
**www.agforceqld.org.au**

*Clynton Spencer demonstrating laying a trap at Mt Garnet*



*Dr Colin Trengove (University of Adelaide) demonstrating a sheep autopsy at Karoonda, SA*

## Diagnostics and demonstrations at Karoonda

**T**he Veterinary diagnostic and animal health day held at Karoonda, South Australia on 15 April attracted 26 attendees. Topics covered during the day included vaccination and common sheep diseases, undertaking autopsy, pests including worms and lice and introducing new stock to your property. The autopsy demonstrations assisted the participants to understand health issues and disease management.

Guest speakers included Dr Colin Trengove, vet, University of Adelaide - General animal health issues and preventative disease management and Amelia Bartlett, Biosecurity SA - lice, and Ovine Johne Disease.

**More information: John Squires, Rural Directions**  
**T: 08 8841 4500 // E: jsquires@ruraldirections.com**  
**www.ruraldirections.com**

### Sheepvention

Want to hear more about sheep genetics? Head to Sheepvention where MLA will present an innovation workshop at which Sheep Genetics Australia's Luke Stephen and Hamish Chandler will update you on the latest research.

**When and where:**  
 5-6 August, Hamilton Vic

**More information:**  
[www.mla.com.au/sheepvention](http://www.mla.com.au/sheepvention)

### Agribusiness today forum

During the Agribusiness Today forum there will be discussions on Australian sheep production in a global market, the future of Australian sheep, lamb and wool markets, and retailers and processors will provide their perspective on a competitive market.

**When and where:**  
 8 August, Borenore NSW

**Bookings:** RSVP by 1 August.  
 Download registration form from [www.rdacentralwest.org.au/events](http://www.rdacentralwest.org.au/events)  
 Sharon Rabey T: 02 6369 1600  
 or Karl Behrendt T: 02 6365 7119  
 E: [events@rdacentralwest.org.au](mailto:events@rdacentralwest.org.au)

### Bred well. Fed well.

A hands-on workshop with topics including: improving ewe nutrition, developing a breeding goal, developing a feed budget and breeding better ewes.

**When and where:**  
 17 July, Wirrulla SA  
 18 July, Tumby Bay SA  
**Bookings:** 0407 187 878

**When and where:**  
 22 July, Barham NSW  
**Bookings:** 0428 372 357

**When and where:**  
 25 July, St Arnaud Vic  
**Bookings:** 0427 546 151

**More information:**  
[www.mla.com.au/events](http://www.mla.com.au/events)

### BeefUp forums

Discover how to make more money from beef production at MLA's BeefUp forums. The forums deliver clear and practical information and tools that producers can take home and put into practice on-farm immediately.

**When and where:**  
 28 August, Adelaide River NT  
 30 August, Mataranka Station NT

**Bookings:** 1800 675 717  
[www.mla.com.au/events](http://www.mla.com.au/events)

# Looking to grow your lamb business?

Take part in one of MLA's Innovation workshops at Sheepvention for new ideas and skills to help build a better sheep business



## Innovation workshops

Focusing on the key profit drivers in your sheep business, MLA's series of one hour Innovation workshops will deliver practical information and tools that can make a difference to your bottom line.

### 10am-11am

#### The consumer and lamb eating quality

Richard Apps, Sheep R&D Manager, Meat & Livestock Australia

Learn about what impacts eating quality and what producers can do to deliver the product that consumers want. This workshop will also include an update on MLA's lean meat yield and eating quality R&D and a practical demonstration on the impact of ageing on lamb quality.

### 11:30am-12:30pm

Join us in the Taste of the Great South West pavilion for an MSA lamb barbeque demonstration and tasting.

### 2pm-3pm

#### How can ASBVs be used in ram selection

Hamish Chandler, Sheep Genetics Manager, Sheep Genetics  
Luke Stephen, Project Officer, Sheep Genetics

Hear about the latest genetic research and how ASBVs can help you reach your targets.

### When:

**Monday 5 and Tuesday 6 August 2013**

### Where:

**Sheepvention  
Hamilton Showgrounds, Hamilton  
Victoria**

### Cost:

**MLA workshops - FREE**

### Register:

**[www.mla.com.au/sheepvention](http://www.mla.com.au/sheepvention)  
or 1800 675 717 (option 4)**

**MLA staff will be available for discussions throughout Sheepvention.**