Report to Stakeholders

This *Report to Stakeholders* provides a transparent overview of MLA's actual activities and outcomes for the 2014-15 financial year, reporting against the objectives and planned activities outlined in MLA's *Annual Operating Plan 2014-15*.

The figure on the next page shows the relationship between the peak industry councils, MLA Board and Leadership Team and the documents that guide and inform MLA's focus and reporting on its progress and performance.

MLA acknowledges the matching funds provided by the Australian Government to support the R&D detailed in this report.

MLA's strategic and operational planning process

National and Rural R&D Priorities
(established by the Australian Government)

Policy direction, budget and performance monitoring
(provided by the peak industry councils and through industry consultation)

Meat Industry Strategic Plan 2010-2015
(established by the Red Meat Advisory Council)

MLA Corporate Plan 2010-2015
(overseen by MLA Board, managed by MLA Leadership Team)

R&D and marketing business plans
(managed by MLA Leadership Team)

MLA Annual Operating Plan 2014-15
(managed by MLA Leadership Team)
- Maintaining and improving market access
- Growing demand
- Increasing productivity across the supply chain
- Supporting industry integrity and sustainability
  - Objectives
  - Planned activities
  - Key performance indicators

MLA Annual Report 2014-15
(report to stakeholders)

Whole of industry consultation
(see page 73 for more information)
Industry taskforces
- International markets
- Domestic market
- Meat Standards Australia

Whole of industry R&D consultation
(see pages 73-74 for more information)
- North Australia Beef Research Council
- Southern Australia Meat Research Council
- Western Australia Livestock Research Council
- 18 regional red meat and livestock committees (excluding WA)

Maintaining and improving market access

MLA assists in the maintenance and improvement of market access for Australian beef, sheepmeat and goatmeat by supporting industry and government to demonstrate product integrity, liberalise trade and support the provision of supply chain assurance for the livestock export sector.

Objectives under this strategic imperative include:

1.1 Develop and deliver industry systems that underpin product integrity

1.2 Support industry and government to maintain and liberalise world meat markets

1.3 Maximise market options for producers and exporters in the livestock export market

Australian Government National Research Priorities:

- Promoting and maintaining good health
- Safeguarding Australia

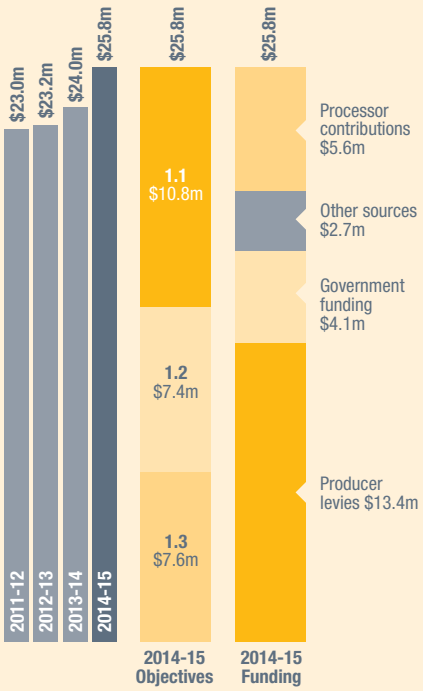
Australian Government Rural Research and Development Priorities:

- Productivity and adding value
- Supply chain and markets
- Biosecurity

Delivering MLA business units:

- Value Chain Innovation
- On-farm Innovation and Adoption
- International Markets

INVESTMENT



An additional $294,000 was attracted in voluntary contributions, matched with Government funding and invested via the MLA Donor Company.

MILESTONE SCORECARD

Of 13 milestones: 8 achieved, 3 not achieved, 2 no longer applicable

KEY ACHIEVEMENTS

More open trade
with Japan, Korea and China

Two free trade agreements entered into force, delivering both immediate and ongoing tariff reduction benefits in key export markets. An agreement was also signed with China (see page 19).

Enhanced animal welfare assurance

Planning commenced for a pilot of a new export welfare assurance system – Livestock Global Assurance Program – to enhance the long-term sustainability of the live export trade (page 21).

Meat safety R&D assists market access

MLA research found Australian cattle only have four of the seven types of *E. coli* bacteria the US market tests for, putting Australia in a position to negotiate for less stringent commercial testing (page 17).

Vaccine addresses on-board mortality

A salmonella vaccine for sheep was developed and is now undergoing further efficacy trials. It will address one of the most common causes of mortality aboard live export vessels (page 21).

OPPORTUNITIES

- The revamp and upgrade of the National Livestock Identification System (NLIS) will enable commercial software providers to develop compatible stock management software, including adaptations for smartphones and tablets, to simplify stock movement recording and reporting.
- Industry, in close consultation with government, is working on strategies and action plans to tackle the 136 technical barriers to trade identified in an earlier review.

CHALLENGES

- Tackling non-tariff barriers to trade in the Middle East and China.
- Beginning discussions with government on pursuing a free trade agreement with the European Union.
- Encouraging more producers to embrace online National Vendor Declarations and facilitate the uptake of the paperless livestock traceability system across the entire supply chain.
- For the Livestock Global Assurance Program to graduate from its pilot phase and become the accepted animal welfare standards guide for the livestock export industry worldwide.
- The $6 million NLIS upgrade project is a significant technological challenge requiring an enormous communication effort to engage all stakeholders.

OUTLOOK 2015-16

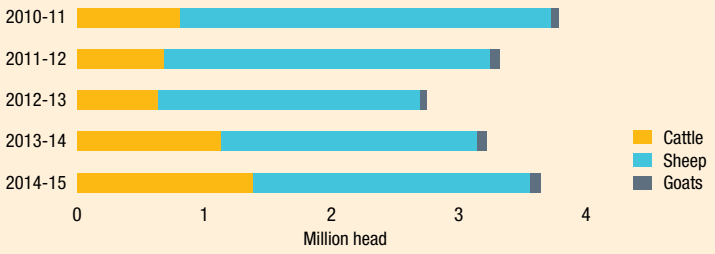
- Supporting Trans-Pacific Partnership Agreement and EU Free Trade Agreement negotiations.
- Encourage closer bilateral partnership discussions with Taiwan and continue positioning Australia as a preferred supplier to this market.
- Leading Australian scientists in *E.coli* research to attend VTEC Boston, an international conference that leads the worldwide conversation on food safety.
- Deliver an improved, modernised NLIS database with enhanced functions including expanded help sections.
- Ratification of the China-Australia FTA.
- China cattle health protocols signed.
- Potential to export livestock to the US.

FAST FACTS 2014-15

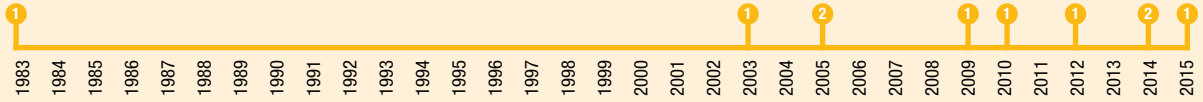
Live sheep exports
2.2 million head
up 9% on 2013-14

Live cattle exports
1.38 million head up 22%

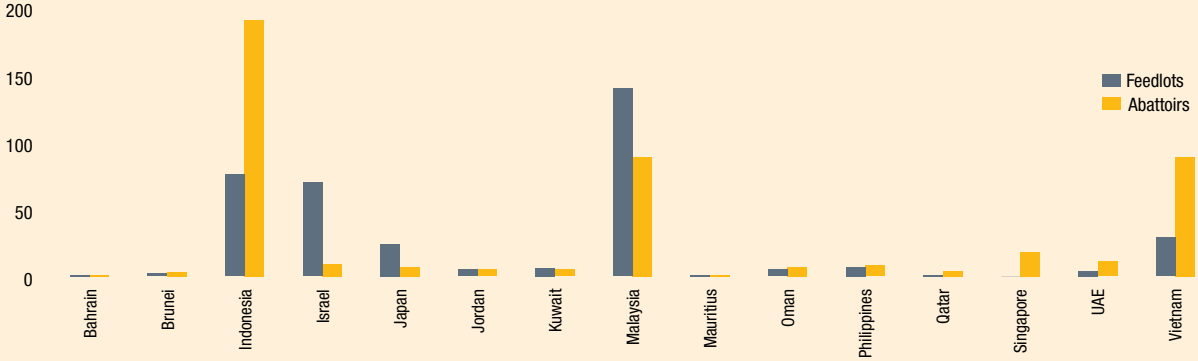
Live cattle, sheep and goat exports (million head)



10 free trade agreements signed by Australia since 1983, **3 of these** since April 2014



Number of facilities in ESCAS approved supply chains, by market



Maintaining and improving market access

OBJECTIVE 1.1

Develop and deliver industry systems that underpin product integrity

MLA supports industry to maintain its reputation for producing safe and wholesome beef and sheepmeat by managing food safety, traceability and integrity systems.

STRATEGIES

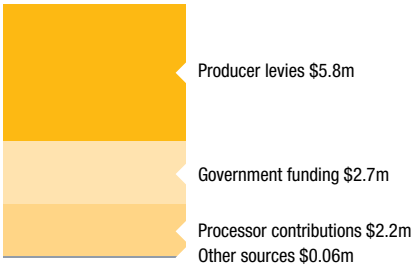
1.1.1 **Conduct** scientific research to ensure food safety systems are at the leading edge of knowledge and practice

1.1.2 **Develop and implement** appropriate meat and livestock traceability systems

1.1.3 **Support** the development and uptake of food safety and quality assurance systems by all sectors of the red meat supply chain

INVESTMENT

$10.8 million



An additional $294,000 was attracted in voluntary contributions ($139,000), processor contributions ($8,000) and matched Government funding ($147,000) for investment via the MLA Donor Company.

KEY MILESTONES

Satisfaction rating of MLA's food safety activities by industry (processors and AMIC) at more than 85 per cent

Not achieved — **RESULT: 78 per cent of surveyed stakeholders satisfied with MLA's food safety activities**

All user and third party software interfaces completed as part of ongoing National Livestock Identification System (NLIS) database refresh project

Not achieved — **RESULT: The NLIS refresh project plan was revised, delaying release to July 2015 and a final release, including all user and third-party software interfaces, to early 2016**

Industry-wide rollout of the central web-based electronic National Vendor Declaration (eNVD) database completed by June 2015

Not applicable — **RESULT: The model for the delivery of the eNVD was revised in late 2014 from a central web interface to licensed commercial software applications**

Gap analysis of through chain assurance programs completed by September 2014

Achieved — **RESULT: The gap analysis was completed, though not until November 2014**

Future funding model for SAFEMEAT programs endorsed by industry by April 2015

Not achieved — **RESULT: Future funding is being considered by the SAFEMEAT Initiatives Review Steering Group with recommendations due in August 2015**

In 2014-15 this investment included:

- maintenance and refresh of the National Livestock Identification System database
- management of the Livestock Production Assurance program
- development of tools and systems for managing food safety based on innovative science
- development of new integrity systems that respond to consumer preferences

OBJECTIVE HIGHLIGHTS

Food safety update

Projects seeking better ways to identify pathogenic *E. coli* on carcases and improve meat hygiene practices across the industry are essential for Australia's continued market access. Recent MLA research has found Australian cattle only have four of the seven types of *E. coli* bacteria the US market tests for, putting Australia in a position to negotiate for less stringent commercial testing. In another project, researchers hope to use research data to change the standards for the shelf life of vacuum-packed lamb and boost trade to the Middle East. In March, MLA hosted a food safety symposium at Charles Sturt University, Wagga Wagga NSW, where leading research on *E. coli* control and detection by Australian researchers was presented.

The net benefits of *E.coli* research is estimated to be **$1.87 million** annually in reduced costs and product losses

Online NVD progress

The National Vendor Declaration (NVD) paper trail shortened during 2014-15 with 57.5 per cent more producers using the online NVD (eDEC) than the previous year.

32,762 producers registered to use the eDEC system, a **57.5% increase** this year

To further increase the efficiency of this food safety and stock traceability system, MLA has finalised its framework for making the entire process paperless by developing consistent electronic NVD standards, data transfer and validation facilities as well as a central archive database for traceability and auditing. During the second half of 2015, MLA will conduct field trials with various software providers. For producers, accessing an online NVD will soon be as easy as clicking an icon on a smartphone, tablet or computer. Benefits include eradicating data double entry along the supply chain, improving response times to meet changing market requirements and cutting paperwork for producers, with NVDs personalised and partly pre-filled. It is estimated the system may result in industry savings of at least $5.8 million per annum by removing the costs associated with the reprocessing of NVDs at saleyards, feedlots and abattoirs.

More than **30 million cattle** and **20 million sheep and goat movements** recorded by NLIS in 2014-15

NLIS database refresh

The National Livestock Identification System (NLIS) database will soon be easier for producers to navigate online. During July, the website will be refreshed to offer an informative home page and more help options. The help section will be expanded to include 'five steps to using NLIS', frequently asked questions, links to state legislation, EUCAS (European Union Cattle Accreditation Scheme) requirements and tips on how to reconcile stock records on the database. A subsequent release is planned for early 2016 which will see movement recording and reporting simplified, including the addition of a dashboard view for producers, as well as enabling integration with smartphone and tablet technology.

More than **64,000 producers** have accounts on the NLIS database, up from 58,000 at the end of 2013-14

Food safety R&D helps market access

MLA research into food safety is paying global trade dividends with Australia's reputation as a safe and clean red meat supplier growing stronger each year. Australian scientists attend international conventions, such as VTEC 2015 in Boston, a symposium on Shiga Toxin (Verocytotoxin)-producing *E. coli*, to be part of the global conversation on food safety and to identify research directions that will boost red meat's international competitiveness while reducing unnecessary regulations and trade barriers.

In an MLA project concluded this year, researchers gathered and analysed data from Australian processors to ascertain why some are better at controlling bacteria than others. The project will release best practice guidelines which will further improve Australia's performance in food safety.

Maintaining and improving market access

OBJECTIVE 1.2

Support industry and government to maintain and liberalise world meat markets

MLA assists industry and government to defend or increase access to export markets by providing research and market intelligence services, undertaking trade liberalisation advocacy programs and building in-market alliances.

STRATEGIES

1.2.1 **Support** industry and government to defend existing favourable market access conditions in overseas markets

1.2.2 **Assist** in positioning the Australian red meat and livestock industry for the WTO Doha round

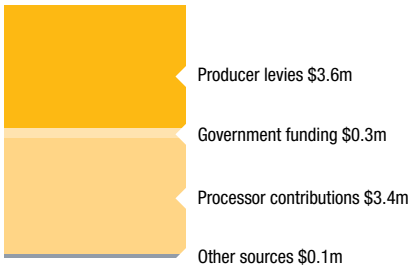
1.2.3 **Assist** in positioning the Australian red meat and livestock industry for FTA negotiations

1.2.4 **Develop** strategies to remove access barriers

1.2.5 **Provide** issues management capability to assist in avoiding loss of market access due to meat safety concerns

INVESTMENT

$7.4 million



In 2014-15 this investment included:

- assisting government to conclude free trade agreements with Korea, Japan and China
- progressing priorities during Trans-Pacific Partnership trade talks
- addressing technical trade barriers

KEY MILESTONES

Action plans for key technical market access barriers are developed and endorsed by peak councils

Not applicable — **RESULT: Delivery of the milestone has changed to MLA now working jointly with AMPC on non-tariff barriers**

Submissions prepared by MLA on economic market access barriers are endorsed by peak councils

Achieved — **RESULT: MLA prepared submissions reviewed and endorsed by peak councils**

Demonstrable progress is made on implementing the Indonesia, China and EU market access and engagement strategies[1]

Achieved — **RESULT: Demonstrable progress made in Indonesia (through the Indonesia-Australia Red Meat and Cattle Partnership), China and the EU (continuation of the EU High Quality Grainfed Beef quota)**

Trade perception of the safety of Australian red meat held at or above current levels in key markets

Achieved — **RESULT: Survey carried out biennially. Last survey indicated trade perception of safety at 93 per cent in Japan and 95 per cent in Korea**

1 Milestone relates to beef focused strategies only.

OBJECTIVE HIGHLIGHTS

The past 12 months were a watershed year for market access, with gains estimated at $20 billion secured for beef, sheepmeat, goatmeat, offal, skins and hides from a trifecta of free trade agreements negotiated by the Australian Government.

China-Australia FTA

The China-Australia Free Trade Agreement (ChAFTA), signed in June 2015, means:

- the tariffs levied on Australian beef of 12–25 per cent will be eliminated over the next nine years
- sheepmeat and goatmeat tariffs of 12–23 per cent will be eliminated over eight years
- the 12–15 per cent tariffs on offals will be eliminated over four to nine years
- the 5–14 per cent tariffs on hides and skins will be eliminated over four to eight years
- the 10 per cent tariffs on live cattle and sheep will be eliminated over four years.

China takes
25% of Australia's sheepmeat exports,
90% of sheepskin exports and is our fourth largest sheepmeat offal customer

ChAFTA is scheduled to enter into force in late 2015, delivering the first tariff cuts, with the second tariff cuts due 1 January 2016. By 2024, removal of these tariffs will deliver an estimated $830 million in annual benefits to the Australian red meat industry.

Japan-Australia Economic Partnership Agreement

The Japan-Australia Economic Partnership Agreement (JAEPA), which came into force in January 2015, saw an 8 per cent tariff reduction on frozen Australian beef to 30.5 per cent and a 6 per cent tariff reduction on chilled beef to 32.5 per cent. A second round of tariff cuts (2 per cent frozen and 1 per cent chilled) were delivered during April 2015. In the longer term, frozen beef will drop from 38.5 per cent to 19.5 per cent over 18 years and chilled beef will fall from 38.5 per cent to 23.5 per cent over 15 years. While not securing tariff elimination, the agreement does provide Australian beef with a preferential advantage over other imported beef suppliers in Japan. For sheepmeat, the JAEPA tariff will remain at 0 per cent.

Korea-Australia FTA

The Korea-Australia Free Trade Agreement (KAFTA) immediately delivered benefits to Australia's third largest volume beef export market when it came into force during December 2014, reducing the tariff on Australian beef from 40 per cent to 37.3 per cent. A second cut in January 2015 further reduced the tariff to 34.7 per cent. Most importantly, this agreement lowered the previous 8 per cent tariff difference between Australian and US beef to 5.3 per cent and ensured the difference would be no greater than 5.4 per cent during the phased 15-year tariff elimination period. Australian sheepmeat has also benefitted from two tariff cuts as has Australian offal and further processed meat products.

Other FTAs under negotiation

MLA, in partnership with industry, continues to position the red meat sector for favourable outcomes from a range of FTAs presently under negotiation. These include: the Trans-Pacific Partnership (involving Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, US and Vietnam); the Australia-India Comprehensive Economic Cooperation Agreement; the Australia-Gulf Co-operation Council FTA; the Indonesia-Australia Comprehensive Economic Partnership Agreement; and the Regional Comprehensive Economic Partnership involving the 10 ASEAN countries plus Australia, China, Japan, India, Korea and New Zealand.

China's Commerce Minister Gao Hucheng and Australia's Minister for Trade and Investment Andrew Robb with former Prime Minister Tony Abbott looking on. Image courtesy of the Office of the Australian Prime Minister.

The return on MLA's investment

When it comes to brokering trade agreements, MLA does not sit at the negotiating table but plays a vital role in helping secure advantageous results for the industry. MLA provides market insights and advice which, when combined with strong commercial involvement from producers, processors and exporters, helps assist Australian Government officials to achieve high quality trade reform outcomes.

A recent economic evaluation by the Centre for International Economics (CIE) of MLA's involvement in market access concluded that overall market access activities should generate benefits to the red meat industry valued at $6.2 billion over a 24-year period (2006 to 2030). The analysis indicates the MLA Market Access Program can be credited with $1.3 billion of the total projected value. The expected payoff to red meat producers, highlighted by the benefit-cost ratio, is high at 39.9 to 1.

Tariff eliminations under ChAFTA will add
$830 million a year by 2024
across the beef and sheepmeat industries

Maintaining and improving market access

OBJECTIVE 1.3

Maximise market options for producers and exporters in the livestock export market

Operated in partnership with LiveCorp, the Livestock Export Program provides R&D and market support services to assist cattle, sheep and goat supply chains to meet their responsibilities, particularly under the Australian Government's Exporter Supply Chain Assurance System (ESCAS) that came into force for all livestock export markets on 1 January 2013.

STRATEGIES

1.3.1 **Assist** supply chains to deliver continuous improvement in animal health and welfare

1.3.2 **Provide** research and support to enable improvements in supply chain efficiency and performance

1.3.3 **Provide** communications support for the Industry Reform Strategy

1.3.4 **Assist** industry and government to defend and improve market access conditions and build demand for livestock

KEY MILESTONES

85 per cent of exporter/importer requests for gap analysis, risk analysis, training and technical advice are met

Achieved — **RESULT: All exporter and importer requests were met for gap analysis risk analysis, training and technical advice across all markets**

Deliver four programs to support improvements in supply chain efficiency and performance for each of the five supply chain efficiency key initiatives

Achieved — **RESULT: Four programs delivered**

MLA advice on live export issues rated as very valuable (four out of five) by peak councils

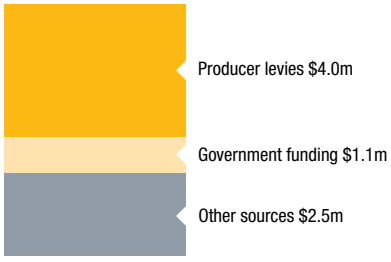
Achieved — **RESULT: Stakeholder survey completed in August 2014 rated MLA's advice on live export issues an average of 4.2 out of 5**

MLA advice and management of market access issues rated as very valuable (four out of five) by peak councils and government

Achieved — **RESULT: Stakeholder survey completed in August 2014 rated MLA's advice of market access issues an average of 4.2 out of 5**

INVESTMENT

$7.6 million



'Other sources' includes funding from LiveCorp.

In 2014-15 this investment included:

- assisting supply chains to meet their obligations under ESCAS
- monitoring outcomes and improving animal health and welfare through the supply chain
- managing R&D projects including on heat stress, respiratory diseases and salmonella

OBJECTIVE HIGHLIGHTS

ESCAS support with supply chains

Livestock exports are the fastest growing sector of the Australian red meat industry, generating $1 billion in income for 2014-15. Helping to facilitate this are MLA's livestock services managers who are positioned in key markets around the world. MLA provides support to exporters and their customers through delivering training and risk assessments that assist in the implementation and compliance to the Australian Government's Exporter Supply Chain Assurance System (ESCAS). MLA managers, through their diplomatic efforts, have effected considerable practice change (see 'Carcase ticketing adopted during Eid al-Adha', right).

In May 2015 MLA appointed a new manager to Vietnam, based in Ho Chi Minh City, to support exporters' ESCAS initiatives and the rapid escalation of live exports there, which have risen from 1,400 head in 2011 to 205,063 head from January to June 2015.

In 2014-15, the joint MLA-LiveCorp Live Export Program delivered

366 days of animal handling and welfare training in 15 countries

(throughout South East Asia and Middle East/North Africa), attended by

1,912 people

Animal welfare indicators

Australia continues to be a world leader in animal welfare research with MLA and LiveCorp managing a portfolio of key projects, such as the development and assessment of animal welfare indicators. This project aims to identify internationally accepted and currently used indicators of animal welfare for sheep, cattle and goats and to identify their relevant point along the livestock export supply chain. A list of key welfare indicators will be formed to determine the most practical, economical and quantifiable measures of livestock welfare.

A performance benchmark is also being developed to identify areas for improvement using an integrated welfare assessment that measures performance using environmental, physical, physiological and behavioural indicators. This benchmarking will enable data collection, provide continuous feedback and suggest remedial procedures that can be implemented immediately.

Salmonella sheep vaccine

A salmonella vaccine for sheep, developed by the MLA-supported Live Export Research and Development Program, is showing promise to address one of the most common causes of mortality on live export vessels. Delivered orally in water, the vaccine is undergoing further efficacy trials.

Livestock Global Assurance Program

The Livestock Export Research and Development Program is funding a major project that aims to further strengthen welfare assurance in overseas markets. The Livestock Global Assurance Program (LGAP) is being developed and piloted in 2015 to enhance the long-term sustainability of the livestock export trade. As a certified, independent conformance program, LGAP will improve audit robustness and apply more effective and direct accountability measures to assure animal welfare throughout the supply chain.

Carcase ticketing adopted during Eid al-Adha

Encouraging and facilitating change on foreign soil is always challenging, however MLA's representatives based in Australia's major live export markets have assisted industry to make significant improvements to animal welfare through nationwide practice change.

A major achievement in 2014-15 was the adoption of a carcase ticketing system during the Muslim Eid al-Adha festival celebrations in Bahrain and Qatar. To minimise stress from individual selection and handling of sheep, importers embraced a ticket-based system whereby customers collected carcases from an approved abattoir where high standards of welfare were delivered (see picture above).

This system benefited customers with reduced levels of congestion and waiting, and improved welfare outcomes for sheep. This system supports the ESCAS requirement of keeping Australian livestock within approved supply chains.

The MLA-supported Live Export Research and Development Program has funded the translation of animal handling and welfare training resources into

Russian, Vietnamese, Chinese, Indonesian, Khmer, Thai and Hebrew

Growing demand

MLA works to grow demand for Australian beef, sheepmeat and goatmeat through aggressive marketing and promotions in domestic and global markets, as well as through eating quality, nutrition research and product development programs.

Objectives under this strategic imperative include:

2.1 Develop practices and drive programs that help industry deliver consistent and optimal eating quality

2.2 Enhance the nutritional reputation of red meat

2.3 Develop new products

2.4 Aggressive promotion of beef in the domestic market

2.5 Aggressive promotion of lamb in the domestic market

2.6 Aggressive promotion in export markets – beef

2.7 Aggressive promotion in export markets – sheepmeat

Australian Government National Research Priorities:

- Promoting and maintaining good health

Australian Government Rural Research and Development Priorities:

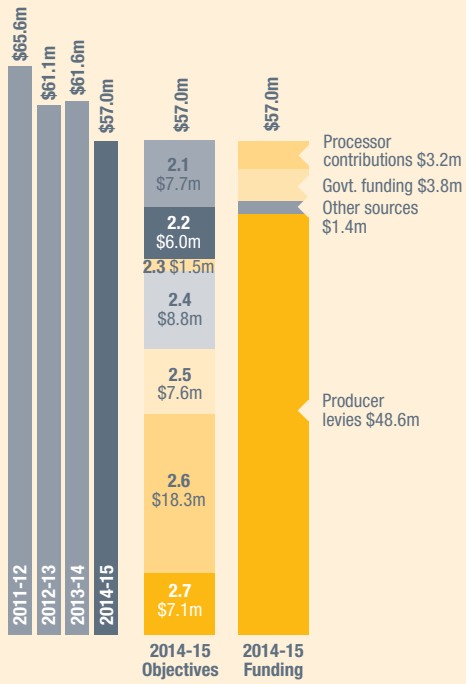
- Productivity and adding value
- Supply chain and markets
- Innovation skills
- Technology

Delivering MLA business units:

- Central Marketing and Industry Insights
- International Markets
- Value Chain Innovation
- Livestock Productivity

MILESTONE SCORECARD
Of 30 milestones: 20.5 achieved, 9.5 not achieved

INVESTMENT



An additional $5.9 million was attracted in voluntary contributions, matched with Government funding and invested via the MLA Donor Company.
A further $2.2 million was contributed by brand owners participating in the CoMarketing Program.

KEY ACHIEVEMENTS

MSA demonstrates value at farm-gate

MSA yearling cattle received a 33¢/kg premium on non-MSA yearling cattle, up from 29¢/kg in 2013-14. This equates to a $91/head farm-gate premium and also represents 9 per cent of the value/return on an MSA carcase to the producer (page 25).

Nutrition partnership

MLA raised consumer awareness – through dietitians and GPs – of the recommended red meat intake across all stages of life (page 27).

Whole-of-carcase measurement

New MSA tools mean producers can now closely track and improve the potential eating quality of a whole carcase (page 25).

Campaign cut through

MLA's Australia Day lamb campaign was named 'TV Ad of the Year' and in the week leading up to Australia Day, lamb sales rose 35 per cent. MLA's *Better on Beef* campaign saw claimed consumption by mums increase 0.17 meals to 1.73 meals per week. The campaigns saw MLA win the 'Effective advertiser of the year' award at the Australian Effie Awards (pages 31 and 33).

New customers

12 new beef and 11 new lamb customer accounts have been secured in global markets (pages 34-39).

Global branding

MLA's new international *True Aussie* brand hit global shelves (page 35).

OPPORTUNITIES

- Growing awareness in product origin is driving strong global demand and Australia is well positioned to deliver products underpinned by assurance programs that guarantee traceability (NLIS), food safety (LPA), eating quality (MSA) and other voluntary certified programs.
- Innovative technologies, which value-add red meat to overcome consumer barriers such as price, texture, portion size, shelf life and negative health perceptions, are opening up new markets.
- Growth of five-star hotels in South-East Asia, the Olympics in Tokyo in 2020 and Japan's Rugby World Cup in 2019 present opportunities to grow demand for Australian beef and lamb.
- The lower Australian dollar and reduced domestic supply of beef in the US has assisted the growth in Australian exports to the region.

CHALLENGES

- The number of independent butchers in Australia – an important way to connect with consumers – is decreasing.
- The Australian foodservice sector demands cost-effective ingredients to keep plate costs down, so industry needs to show increased value from secondary cuts.
- Russian sanctions on agricultural products from Australia, including beef and offal, to remain until August 2016.
- Australia needs to maintain a strong presence in Korea to retain the dominant position in the imported beef sector.
- Marketing grassfed beef to the US – a market that has little knowledge of grassfed beef, as almost all US beef is grainfed.
- While per capita consumption of beef and lamb has declined in Australia, this trend of declining consumption is also evident in all other major western beef and lamb markets.

OUTLOOK 2015-16

- MLA aims to grow its nutrition database to 1,500 Australian general practitioners (from 450 at June 2015).
- All MSA cattle graded using the MSA optimisation model by December 2015.
- *Dinner 3 Ways* demonstrates to consumers how to overcome constraints to cooking healthy meals using beef and lamb.
- Marketing *True Aussie* red meat to take advantage of consumer trends in Japan such as the rise of outdoor barbecues and eating beef with less marbling – a health trend called 'akaminiku'.
- A new beef and lamb campaign launched in Australia, fronted by international celebrity chef Marco Pierre White.
- Grow awareness, perceptions and sales of Australian grassfed beef in the US.
- Enhanced consumer and market insights framework to identify new red meat demand opportunities and innovation strategies.

FAST FACTS 2014-15

Chef Tarek trained over **2,000 chefs** using a wide range of lamb and beef cuts across the Middle East/North Africa

35.3% lamb sales lift in the week before Australia Day

Australia Day campaign generated **82.7 million cumulative views**

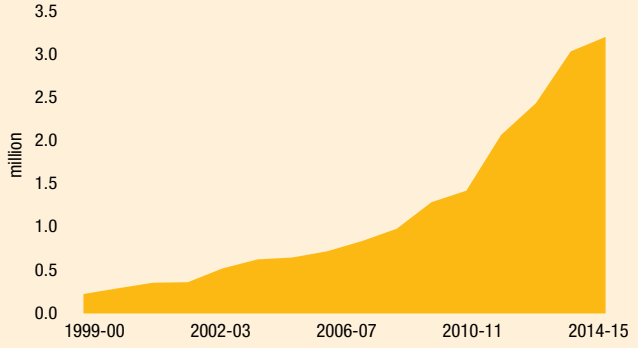
There are **3,000 independent butchers** around Australia

256 five-star hotels (87,831 rooms) opening in the Middle East over the medium term

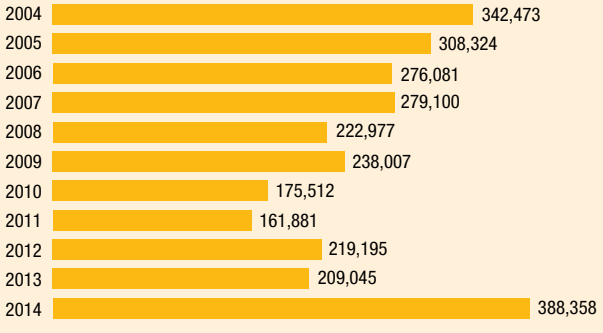
88% of Japanese consumers are aware of Australian beef (unprompted)

53% of imported beef in Korea is Australian

National MSA beef grading numbers



Australian grassfed beef exports to the US (tonnes swt)



Growing demand

OBJECTIVE 2.1

Develop practices and drive programs that help industry deliver consistent and optimal eating quality

MLA manages the Meat Standards Australia (MSA) program on behalf of industry to give consumers a consistent and predictable eating quality experience for beef and lamb.

STRATEGIES

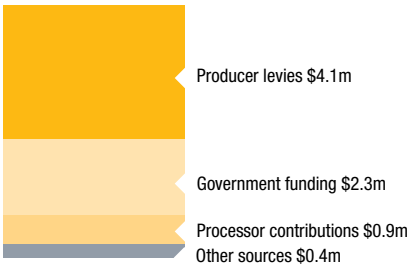
2.1.1 **Develop** and prove practices that deliver quantified, improved, consistent and optimal eating quality

2.1.2 **Ensure** sufficient integrity programs are implemented so accurate price signals drive eating quality improvement

2.1.3 **Support** adoption and build recognition of the MSA system through the value chain

INVESTMENT

$7.7 million



An additional $1.1 million was attracted in voluntary contributions ($0.55 million) and matched Government funding ($0.55 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- reducing eating quality variation within brands
- increasing the volume of MSA-graded product per carcase
- expanding the range of products available
- maintaining MSA's integrity and increasing the predictive power and accuracy of the MSA grading model
- equipping industry with the latest eating quality innovations

KEY MILESTONES

Increase MSA cattle grading numbers to 2.5 million head or more	
Achieved	RESULT: 3.2 million head of MSA cattle were presented for grading
Increase MSA sheep grading numbers to 6.2 million head or more	
Achieved	RESULT: 6.8 million lambs processed through MSA processor pathways
55 per cent or more of consumers are aware of the MSA trademark	
Not achieved	RESULT: Consumer awareness of the MSA trademark reached 45.9 per cent
All MSA licensed beef processing plants grading using MSA Optimisation	
Achieved	RESULT: All active MSA processors have implemented MSA Optimisation
MSA beef Index successfully implemented with more than 50 per cent balanced/favourable media reports	
Achieved	RESULT: The MSA Index has been implemented and the favourability rating was 60 per cent
Pilot an objective carcase measurement technology with a cuts-based grading model in a lamb processing plant	
Achieved	RESULT: Objective carcase measurement technology (lamb DEXA) demonstrated at JBS Bordertown
Identify technologies that have the capability to improve beef grading accuracy and integrity by measuring predictors of eating quality	
Achieved	RESULT: Technologies have been identified: VISNIR, novel low cost line CT scan, Carometec IMF sensors, probe and hyperspectral and beef DEXA test cell
Use consumer sensory outcomes to establish preliminary specifications for a yearling export sheepmeat category	
Not achieved	RESULT: Customer sensory testing in the US, China and Australia commencing in 2015-16.

OBJECTIVE HIGHLIGHTS

MSA metrics overview

The over-the-hooks premium for MSA-compliant yearling cattle averaged 33 cents per kg compared with 29 cents per kg in 2013-14. This equates to a $91/head farm-gate premium and also represents 9 per cent of the value/return on an MSA carcase to the producer. MSA uptake continues to grow, with grading numbers for cattle and sheep increasing in 2014-15 by 6 per cent and 25 per cent respectively. Despite dry seasonal conditions in production regions such as western Queensland, cattle compliance to MSA minimum requirements remained high at 93 per cent. More producers are adopting MSA practices with 4,357 registering in 2014-15, bringing the total to 41,973.

Beef and sheepmeat brands underpinning their products with MSA increased to 131 with 21 new brands licensed this financial year. End users of MSA are also increasing, with 917 new retail, wholesale and foodservice outlets coming on board as authorised to promote MSA, bringing the total to 3,676.

DEXA sensing

Dual emission X-ray analysis (DEXA) was a significant technological breakthrough – and a world first – for lamb and beef processing during 2014-15. Developed by MLA, New Zealand firm Scott Technology and processor partners, the DEXA prototypes allow for precision cutting that maximises product value. The lamb system has also demonstrated more accurate predictions for fat, meat and bone distribution which will provide objective measurements and eating quality predictors for the red meat supply chain in both lamb and beef.

The beef initiative was developed by voluntary partner contributions through the MLA Donor Company (MDC) (no producer levies were used). The lamb DEXA solution has benefited from producer levies and joint funding from the Australian Meat Processor Corporation and technical collaboration with Sheep CRC. DEXA technology was developed from single emission X-ray analysis (SEXA) technology used for LEAP (see page 47).

Objective lamb carcase measurement

Industry levy funds, in conjunction with the MDC and commercial partners, are funding technologies to objectively measure critical traits, such as carcase yield and eating quality, which will ultimately underpin value-based marketing in the beef and sheep industries.

In May, 100 lambs were processed in a proof-of-concept trial at the JBS processing plant at Bordertown, SA, using DEXA technology to predict yield. This delivered a predictive accuracy of 60-80 per cent, relative to CT scans. This paves the way for 600 lambs from the MLA-managed National Resource Flock to be processed through the plant's LEAP system during July to September 2015. This will further test prototype carcase measurement technologies including DEXA, 3D and multi-spectral cameras, and near-infrared probes.

Impacts of packaging on lamb eating quality

MLA combined the principles of MSA with the latest findings from meat packaging research to identify opportunities to increase eating quality and shelf life. Previous international studies found that as well as extending shelf life, some retail-ready packaging systems can change meat tenderness, flavour and colour.

MLA put new packaging technologies (Cryovac Darfresh®) and modified atmosphere packaging to the test with sensory tests on MSA lamb topside and striploins. The results indicated the eating quality of lamb in Cryovac Darfresh® vacuum skin packaging was superior to modified atmosphere packaging in terms of consistent eating quality as well as shelf life. This packaging format has recently been used for retail-ready MSA-branded lamb and veal.

Triple treat of MSA tools

The MSA index, MSA Optimisation and myMSA tools were implemented this year. The MSA Index provides a standard national measure of predicted eating quality of beef, by allocating a number between 30 and 80 (to two decimal places) to each carcase. It is independent of processing inputs and is calculated using attributes influenced by pre-slaughter production, providing a tool for producers to make on-farm decisions about management, nutrition and genetics. The myMSA online portal was launched in August 2014, giving producers access to carcase grading feedback, including MSA Index values for their cattle.

MSA Optimisation was rolled out to all MSA-accredited beef processing plants in 2014-15. It replaced the standard national boning groups with a more flexible and efficient system, customised to meet the needs of individual processors based on the cuts being harvested in their business, their target market requirements and the eating quality potential for each of those cuts.

In 2014-15:

5,457 producer logins
to the myMSA feedback system

41,973 producers
are now registered for MSA

21 new
MSA beef and sheepmeat brands registered

33 cents per kg
premium for MSA yearling cattle

Growing demand

OBJECTIVE 2.2

Enhance the nutritional reputation of red meat

MLA's nutrition program aims to increase knowledge of the health benefits of eating beef and lamb by funding credible and relevant research on the role of beef and lamb in a balanced and healthy human diet.

STRATEGIES

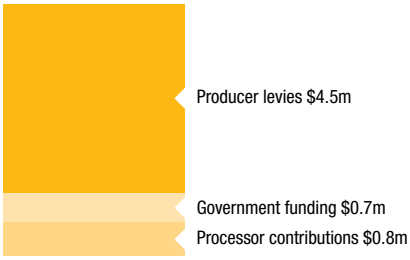
2.2.1 **Increase** our knowledge of the health benefits of red meat

2.2.2 **Maintain** consistent and fact-based dietary recommendations for red meat

2.2.3 **Communicate and promote** evidence-based nutrition information on red meat to health professionals and the broader community

INVESTMENT

$6.0 million



In 2014-15 this investment included:

- *Entice* magazine encouraging consumers to eat three to four beef and lamb meals per week by providing delicious recipe ideas
- providing information and resources for healthcare professionals on healthy eating at key life stages

KEY MILESTONES

At least 49 per cent of mothers with children in the household agree that beef makes healthy meals and 39 per cent agree that lamb makes healthy meals

Not achieved for beef

Achieved for lamb

RESULT: 46 per cent of mothers agree that beef makes healthy meals and 40 per cent agree on lamb

Less than 33 per cent of mothers with children in the household limit consumption of red meat for health reasons

Not achieved

RESULT: 38 per cent of mothers limiting red meat consumption for health reasons

Maintain the proportion of healthcare professionals who recommend lean red meat at three or more times a week at 78 per cent for GPs, 84 per cent for dietitians and 83 per cent for practice nurses

Achieved for GPs

Not achieved for dietitians

RESULT: 83 per cent of GPs and 78 per cent of dietitians recommend lean read meat three to four times per week. Practice nurses are no longer a key target

Balanced reporting of red meat and health issues in media with more than 70 per cent average of favourable and neutral reports

Achieved

RESULT: 89 per cent average of favourable and neutral media reports

OBJECTIVE HIGHLIGHTS

Healthy balanced meals

Red meat is recommended in the *Australian Dietary Guidelines* because it is a critical source of iron and zinc which are essential nutrients to keep the body functioning well every day including for growth, development, brain function, immune function, skin, vision, hair and general health and wellbeing.

MLA's investment into research on main meal choices and preparation practices has informed the development of healthy, balanced meal guidelines led by MLA which will be finalised in 2015-16. MLA has consulted extensively on the guidelines with nutrition experts and 18 key stakeholders from government, non-government organisations, professional organisations and industry partners indicating their support for the guidelines.

The importance of the meal was a key theme of the annual nutrition symposium, sponsored by MLA, hosted by the Nutrition Society of Australia and supported by the Dietitians Association of Australia and primary food industry partners, including dairy, eggs, horticulture and grains. The event was attended by more than 450 nutrition professionals and a further 275 have watched the recorded webinar. The content presented at the symposium was well received, including unique insights generated from MLA-funded research.

Healthy, balanced meals provides a useful context for understanding diet-disease relationships, including diabetes, colorectal cancer and heart disease and informing MLA's nutrition education material on healthy eating with beef and lamb.

Speciality GP hub on nutrition

MLA partnered with *Australian Doctor*, the leading media source for general practitioners (GPs), to create an online nutrition portal. The Nutrition Update – hosted on *Australian Doctor's* website and promoted through its newsletter – is a repository for MLA-commissioned articles, videos and downloadable resources. These resources relate to the nutritional needs (such as iron requirements) at four life stages – babies starting solids, young women, middle-aged women and ageing. A database has been created to overcome the challenge of directly communicating with GPs who are interested in nutrition. The first resource was downloaded by more than 900 GPs, outstripping the 750 GPs who MLA has regular contact with. Planned activities include growing the database to 1,500 GPs in 2015-16 (from 450 at June 2015).

Red meat fuels active ageing

MLA-funded research shows the protein requirements of older people should be higher than the current recommendations. The study conducted by Deakin University and published in the *American Journal of Clinical Nutrition* showed women aged 65 years and older who did resistance training twice a week and ate 160g/day of red meat to increase their protein intake reported greater improvements in muscle mass and strength than those eating a lower protein, higher carbohydrate diet. Compared with younger adults, older people need more protein to stimulate muscle synthesis, which is key in the prevention of sarcopenia, associated with the increased risk of falls, fractures and chronic disease. In addition, their requirements for vitamins B12, B6, D, calcium and potentially zinc are also increased. The challenge for older people is to ensure adequate nutrition with less food since their energy requirements decrease with age. This study showed regular intake of nutrient-rich food such as beef and lamb not only increased their protein intake, but also their intake of iron, zinc and omega-3 and, consequently, their muscle health. Further MLA-funded research is investigating the consequences of these findings for dietary recommendations for older people.

Another study by Deakin University looked at whether the combination of protein and exercise has benefits for cognition as well as muscle health.

Make every bite count

MLA's nutrition education resource for healthcare professionals continues to be popular, with 44,729 copies of the *Make every bite count* brochure distributed in 2014-15. MLA consumer research revealed that while parents know red meat is nutritionally important, they are often unsure about how to cook meat for their babies. Parents also prefer not to cook multiple types of meals for dinner. *How to make every bite* count features recipes developed by MLA and teaches parents how to feed the whole family from one meal, by turning red meat into the right texture for their children's developmental stage.

The brochure is popular with child health nurses because of the credibility and relevance of the information. Most parents will visit a child health nurse during the first year of their baby's life and many nurses are distributing the brochure as part of their advice. It is available from most child health centres in Australia as well as through NSW parenting support clinics: Tresillian Family Care Centres and Karitane.

Entice

The point-of-sale publication *Entice* had a facelift in 2014-15, with the first new-look magazine coinciding with the launch of MLA's new beef marketing campaign in March. *Entice* is part of MLA's nutrition strategy to educate consumers on how to prepare healthy beef and lamb meals which are based on the Australian dietary guidelines. As well as showcasing secondary cuts, the publication features 'inspiring meals made deliciously simple'.

Entice is available online and in hard copy: in 2014-15, 1.09 million copies were distributed to consumers through butchers, independent retailers and IGA stores, 403,000 copies through Woolworths and 180,000 copies through ALDI supermarkets.

Growing demand

OBJECTIVE 2.3

Develop new products

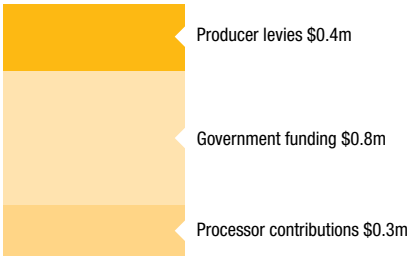
MLA works to identify and evaluate opportunities for new beef and lamb products and develop new technologies enabling transformation and value-adding of low value cuts to create a wider range of market options.

STRATEGIES

2.3.1	**Develop** innovation insights
2.3.2	**Develop** global innovation strategies
2.3.3	**Build** industry capability to adopt new products and packaging concepts and value chain business innovation
2.3.4	**Develop** technologies to enable transformation of co-products into value-added ingredients

INVESTMENT

$1.5 million



An additional $4.8 million was attracted in voluntary contributions ($2.1 million), processor contributions ($0.3 million) and matched Government funding ($2.4 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- supporting industry to identify market opportunities for value-added products
- developing and commercialising new technologies

KEY MILESTONES

Global innovation strategies for five emerging markets or market segments developed based on an upgraded innovation insight capability with demonstrated engagement of stakeholders

Achieved — **RESULT: Insights completed for five emerging markets/segments. Industry and bespoke workshops held and MDC projects and proposals since developed**

Implement 10 pilot programs with supply chain partners to develop and implement value adding strategies which create value for customers and capture value for industry

Achieved — **RESULT: 10 pilot programs implemented**

Develop at least five new red meat value-added products or packaging concepts that demonstrate increased value for customers or consumers

Achieved — **RESULT: Five new red meat value-added products developed**

Implement at least two new co-product/bioactive value chain partnerships that deliver new products to market

Achieved — **RESULT: Two new co-product/bioactive value chain partnerships implemented and products developed**

OBJECTIVE HIGHLIGHTS

Insights to innovation: active ageing

MLA's Insights to Innovation program spearheads product development and value chain development by identifying growth areas for red meat consumption. This commenced with a focus on China, Indonesia, and domestically in the 'active ageing' community (regarding the latter, see Objective 2.2). Baby Boomers are entering their senior years with vastly different economic and social expectations and spending power from previous generations of older people. There is an opportunity for 'active agers' to adopt a high protein diet which fits around their social and active life. MLA is partnering with leading brand owners of ready meals that supply to both retail and foodservice, including Meals on Wheels, to understand how to innovate and grow red meat demand within this market segment and to create and capture value for the industry. Opportunities considered include packaging innovations to assist seniors' dexterity concerns, and designing portion sizes as well as functional foods, such as combining super foods with red meat (see lupin example below).

Lupins

The MLA Donor Company (MDC) (which doesn't use producer levies; see page 75) is developing value-added products in partnership with Lupin Foods Australia by combining the health benefits of red meat (iron, zinc and protein) and the 'super food' traits of lupins (antioxidants and dietary fibre). Lupin flakes are a gluten-free alternative to binding agents and breadcrumbs when cooking dishes such as meatballs or crumbed lamb cutlets. Independent evaluation projected an annual $9.4 million benefit to Australia's red meat and lupin industries by 2017 if these products are commercialised. Lamb and lupins were the winning combination in the 2014 WA's Signature Dish competition – the top dish was Dorper lamb cutlets with a lupin-based crust, accompanied by a sweet potato salad with Moroccan flavours.

High moisture extruded meat

The MDC is partnering with ProForm Foods to use a novel application of extrusion to value-add secondary cuts of red meat. The technology, commonly used to create Twisties, breakfast cereals and pasta, turns lower-value cuts into a cooked product with natural meat texture suitable for the fast-service food industry. Prototype products, such as meat for curries, casseroles and pizza toppings, received positive consumer feedback. A demonstration site is being built in NSW with a capacity to produce 50 tonnes per week of commercial product by late 2015. There is strong interest from Asia for this product.

Lamb on the Red Rooster menu

As part of MLA's national foodservice national account program, MLA engages with several quick service restaurants by providing them with an annual presentation of beef and lamb product concepts designed to keep beef and lamb strongly positioned on their menus. These concepts are based on international food trends and the changing needs of Australian consumers. Care is taken to ensure the products can be replicated through the kitchen facilities available at each chain.

In October 2014, MLA presented a number of concepts including a lamb souvlaki with coleslaw to the Product Development Chef at Oporto, which is the parent company for Red Rooster. The goal was to give an iconic Australian wrap a healthy makeover, making it more readily available to everyday consumers. In July 2015 Red Rooster started featuring lamb shank, mash and peas, and a pulled lamb and slaw roll on its menu.

It traditionally takes 9-12 months for successful items to appear on a menu. MLA has previously presented lamb burger, steak sandwich and pulled beef roll concepts to quick service restaurant chains and some of these items (including modified versions of them) have appeared on menus.

'Active agers' – a new demographic for red meat

In 2014, seniors represented 20 per cent of Australia's population and 16 per cent of grocery and foodservice spending. By 2020 this will increase to 24 per cent and 25 per cent respectively. By 2050 there will be one person aged over 65 years for every 2.5 people under 65 years (Australian Bureau of Statistics). Those over 65 will likely expect to stay physically fit, mentally alert and socially active despite a likely loss of appetite, which will require redesigned red meat solutions. The medical profession recognises that for approximately one in eight seniors seeking medical attention, English is not their first language – therefore, it is likely ethnicity will also affect eating preferences. This represents a significant opportunity for the red meat industry to develop innovative new value chain solutions to provide age-specific, lifestyle-specific, convenient red meat products.

Growing demand

OBJECTIVE 2.4

Aggressive promotion of beef in the domestic market

MLA stimulates desire for Australian beef in its largest and most stable market at home in Australia by delivering high impact consumer promotions built around its superiority for seasonal meals and supporting retail and foodservice beef promotions.

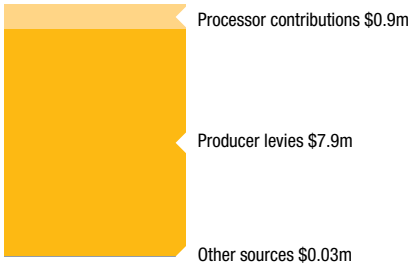
STRATEGIES

2.4.1 **Strengthen** Australian consumers' emotional bond with beef, create desire and educate consumers to cook a range of seasonal beef meals/cuts

2.4.2 **Work** with retailers and foodservice operators to raise standards of presentation, quality, merchandising and promotion

INVESTMENT

$8.8 million



An additional $517,000 was contributed by brand owners participating in the CoMarketing Program.

In 2014-15 this investment included:

- revision of consumer marketing strategy in March 2015 to boost performance
- implementing consumer marketing campaigns
- increasing whole-of-carcase utilisation in foodservice and the wholesale sector
- working with retailers to raise standards and add value to beef products

KEY MILESTONES

Maintain beef's value share at 36 per cent or higher of all fresh meat and penetration with purchase in last four weeks at 69 per cent or higher

Achieved value share

Not achieved penetration

RESULT: Beef's value share was 36.9 per cent and purchase in last four weeks was 68.3 per cent

Improve key beef attributes measured by consumer tracking: "is the most superior meat" at 36 per cent or above, and "my favourite meat" at 19 per cent or above

Not achieved

RESULT: 31.9 per cent of consumers rate beef "is the most superior meat" and 18.7 per cent "my favourite meat"

Strong retailer support for MLA programs as evidenced by more than 60 per cent of retail butchers rating their sales impact as good/very good/excellent

Not achieved

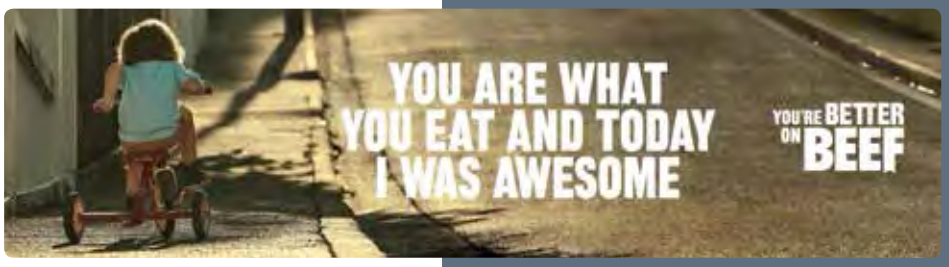
RESULT: 45.5 per cent of retail butchers rating their sales impact as good/very good/excellent

OBJECTIVE HIGHLIGHTS

You're Better on Beef

MLA's latest marketing campaign, *You're Better on Beef*, is designed to reinforce beef's health credentials. The first phase of the campaign, launched in March 2015, signalled a repositioning of beef as a brand, as part of a long-term strategy to achieve attitudinal change. The campaign is targeted at time-poor families who have nutrition high on their agenda – making up one-third of Australian households and spending more than $2 billion on beef every year.

The new campaign responds to a recent review of MLA's consumer beef marketing program which revealed the need to develop a stronger, revitalised message relevant to consumers all year round rather than at traditionally seasonally-focused campaign periods.



The campaign drove a 13 percentage point reduction in mums limiting red meat consumption due to health concerns to 34 per cent during the campaign period (from 47 per cent). Claimed consumption among the target audience increased by 0.17 meals to 1.73 meals per week and beef's value share finished the year at 36.9 per cent.

88% of the target audience
(mums) saw more than one message during the *You're Better on Beef* campaign period

The campaign has received creative accolades from around the world. It was a finalist in the 'TV ad of the year' category at the prestigious Mumbrella Awards, a finalist in the NY Festival awards and was 'Ad of the Week' for 'Best ads on TV' at launch.

Australian Butchers' Guild

The top questions consumers ask butchers in-store relate to recipes and cut selection, so MLA ran consumer and value-added recipe campaigns through the Australian Butchers' Guild. The 2,000 butchers in the Guild's database received eight consumer recipes at the start of each month, a list of the cuts required for the month's recipes, and then a beef and a lamb recipe every week with supporting digital resources such as images and instructions on how to promote the recipes in-store and via social media. In 2014-15, there was a 56 per cent uptake of the consumer recipes and 66 per cent of butchers used the value-added recipes.

The Australian Butchers' Guild also ran an in-store competition linked to *You're Better on Beef*, encouraging consumers to post #betteronbeef photos on social media for the chance to win one of 100 Fitbits. The competition reached more than 350,000 people via social media, however it unfortunately lacked traction with the butcher channel with only five butchers entering the point-of-sale promotion component.

Beef Masterpieces

The beef and lamb *Masterpieces* initiative showcased the versatility of secondary cuts to foodservice venues across Australia, including cafes, restaurants, fast-food outlets, sports stadiums and hospitals. *Masterpieces* promoted non-loin cuts as a low-cost option through recipes and chef education. The campaign reached more than 50,000 chefs and ended in November 2014 with a competition where chefs who developed a recipe using secondary cuts had the chance to win a US food tour. Competition winner Glenn Flood, Development Chef, ALH Group, said the tour provided 18-24 months of projects to execute within the group's 330 pubs.

After the *You're Better on Beef* campaign, mothers limiting red meat consumption due to health concerns
dropped 13 percentage points

MLA collects prestigious marketing award

MLA won the 'effective advertiser of the year' award at the prestigious the Australian Effie Awards in September 2015. The award is the highest accolade for an Australian advertiser as it recognises an organisation who champions marketing effectiveness.

MLA Central Marketing and Industry Insights General Manager Lisa Sharp said the award celebrated MLA's whole body of work to drive consumers to buy more beef and lamb, going beyond the impact of individual campaigns.

"Our campaigns, including *You Never Lamb Alone (Richie's BBQ; see page 33)* and *You're Better on Beef'* were recognised as part of the inaugural award but most importantly, it was the effectiveness of these campaigns to drive demand and deliver value back to producers, that impressed the judging panel.

"We continually look for improvements across all aspects of our marketing business. We do this because as a levy funded organisation we understand the importance of making the most of every dollar we invest in promoting red meat.

"This is a terrific outcome for MLA's domestic marketing team and represents an area that we can celebrate tangible returns on investment to our stakeholders," Ms Sharp said.

Growing demand

OBJECTIVE 2.5

Aggressive promotion of lamb in the domestic market

MLA marketing programs in the largest and most stable market for Australian lamb at home in Australia aim to defend market share and keep lamb top of mind via high impact seasonal promotions, improving retail standards and supporting foodservice promotion of lamb.

STRATEGIES

2.5.1 **Maintain** lamb as a routine habitual purchase by building national pride in lamb and encouraging consumers to buy and cook a wider range of lamb cuts/meals via consumer promotional efforts around specific occasions through the year

2.5.2 **Work** with retailers and foodservice operators to raise standards of presentation, quality, merchandising and promotion

KEY MILESTONES

Grow lamb market share of fresh meat at retail to more than 13.5 per cent

Not achieved — **RESULT: Lamb's market share (value share) was 13.4 per cent**

Improvement in key lamb attributes as measured by consumer tracking: "top of mind awareness" to 16 per cent or above and "is loved by Australians" to 72 per cent or above

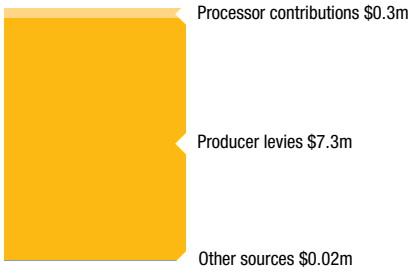
Not achieved — **RESULT: Lamb's "top of mind awareness" at 14.7 per cent and "is loved by Australians" at 70.9 per cent**

Strong retailer support for MLA programs as evidenced by more than 55 per cent of retail butchers rating their sales impact good/very good/excellent

Not achieved — **RESULT: 52 per cent of retail butchers rating their sales impact as good/very good/excellent**

INVESTMENT

$7.6 million



An additional $70,000 was contributed by brand owners participating in the CoMarketing Program.

In 2014-15 this investment included:

- implementing consumer marketing campaigns
- revision of consumer marketing strategy in March 2015 to boost performance
- partnering with retailers and foodservice operators to enhance differentiation and build appeal for secondary cuts

OBJECTIVE HIGHLIGHTS

Australia Day campaign

MLA's 2015 Australia Day Lamb campaign was named 'TV Ad of the Year' and was highly commended in the 'Ad Campaign of the Year' category of the 2015 Mumbrella Awards. In the week preceding Australia Day, sales of lamb lifted 35.3 per cent compared to the weekly average. The ad captured the spirit of Australia's national day with a lamb barbecue and a game of backyard cricket, featuring the late cricket legend Richie Benaud and a host of famous Aussies.

The campaign reflected MLA's move away from using a single brand spokesperson. Sam Kekovich remains MLA's Lambassador (making a cameo appearance in the 2015 ads). Future campaigns will remain fresh by featuring different iconic Australians. For every $1 spent on media, the campaign delivered $2.76 in value. The campaign generated the highest press value in MLA's campaign history, with 849 pieces of coverage generating 69.4 million cumulative views.

You never Lamb alone

You never Lamb alone is the message behind MLA's lamb marketing campaign which launched in September 2014 to coincide with peak lamb production. The campaign focused on the notion that lamb brings people together for all occasions. It signals a move towards more consistent messaging and a year-round theme, rather than traditional seasonal-focused themes like 'spring' racing fashion and 'spring' romance. The message *You never Lamb alone* ties in with the over-arching brand position of *We love our Lamb.* The campaign delivered a surge in lamb's value share to 14.5 per cent (exceeding the target of 13.5 per cent), and 81 per cent of independent butchers participated in the campaign with 55 per cent reporting a good or better impact on their business.

The *Meat Cuts* app features 41 beef cuts, 25 lamb cuts, 21 veal and 20 goat cuts, and
107 recipes

Meat Cuts app

MLA's third consumer-focused smartphone app, *Meat Cuts*, has been downloaded 50,000 times since it launched in July 2014. The app (for Apple and Android) guides consumers through the process of selecting and cooking a wide range of red meat cuts. *Meat Cuts* identifies beef, lamb, veal and goat cuts, suggests cooking methods for each (as per the Meat Standards Australia recommendations), recommends alternative cuts and provides recipes. *Meat Cuts* featured as the best new app in the Apple App Store when launched and is a regular 'kitchen tool' feature in the Apple App Store.

The Dinner Project

The Dinner Project series premiered on Foxtel's LifeStyle FOOD Channel on 2 November 2014. It inspired consumers to cook healthy lamb and beef meals at home. The six-episode series starred cook and popular former *MasterChef* contestant Hayden Quinn as he travelled Australia meeting everyday people at different life stages to find out challenges to cooking healthy meals, such as time, convenience, budget, skills and knowledge. The TV episodes were repackaged and promoted through the Jetstar Australia inflight entertainment network and MLA's BeefandLamb.com.au YouTube channel. An integrated strategy, which saw *The Dinner Project* content and key messages repurposed for other media channels, delivered $3.07 in value for every $1 MLA invested in the campaign.

For every $1 spent on media, *The Dinner Project* series delivered
$3.07 in value

Lamb sales in the week preceeding Australia Day lifted 35 per cent.

The Dinner Project host goes on farm

Cook and former *MasterChef* contestant Hayden Quinn headed to Armidale for *The Dinner Project,* to visit cattle and sheep producers and owners of the Milly Hill Lamb brand, Sally and Peter Strelitz and their four children (pictured). He gained an understanding of livestock production and helped Sally overcome her hurdle of 'dinner inspiration' by cooking family-friendly recipes such as smoky lamb loin chops with egg and green bean salad. During the series, Hayden visited other families to help them overcome hurdles around time, preparation, budget, skills and knowledge to provide inspiration for simple, quick and healthy recipes.

100,553 people reached per episode of *The Dinner Project*,
400,000 people through content syndication and video seeding (paid distribution of video content through online platforms such as YouTube) and 29,800 people reached through Facebook

Growing demand

OBJECTIVE 2.6

Aggressive promotion in export markets – beef

MLA delivers marketing and promotions in export markets to maintain sales in traditional beef markets such as Japan and Korea and maximise sales growth in emerging markets such as China, South-East Asia, the Middle East and Russia.

STRATEGIES

2.6.1 **Disseminate** comprehensive export marketing information

2.6.2 **Develop** new trade and consumer opportunities for Australian beef internationally

2.6.3 **Position** Australian beef as safe, consistent, versatile and nutritious via trade and consumer educational activities

2.6.4 **Assist** in the creation and promotion of strong brand identities through implementation of individual cooperative programs

KEY MILESTONES

An additional eight major customers are recruited globally for Australian beef

Achieved — **RESULT: 12 additional major customers were recruited globally for Australian beef**

Over 80 per cent of Australian exporters and importers satisfied with MLA business development activities (trade shows, missions, etc)

Achieved — **RESULT: More than 80 per cent satisfaction for MLA business development activities**

Successful launch of MLA's *True Aussie Beef* and project market strategies developed in key beef markets of Japan, United States, Korea, China and the Middle East (GCC states)

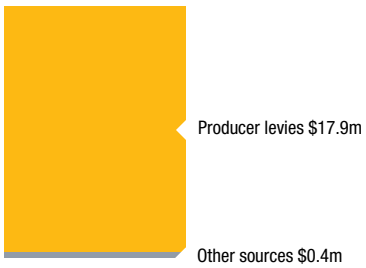
Achieved — **RESULT: *True Aussie Beef* brand launched and market strategies developed in key beef markets**

Increase the proportion of strategic marketing initiatives supported under the CoMarketing Program to more than 40 per cent

Achieved — **RESULT: Over 90 per cent of initiatives classified as strategic initiatives**

INVESTMENT

$18.3 million



An additional $1.4 million was contributed by brand owners participating in the CoMarketing Program.

In 2014-15 this investment included:

- implementing tailored marketing strategies in each major international market for Australian beef
- carrying out business development activities in emerging markets
- working cooperatively with Australian exporters to develop and grow sales for individual beef brands
- monitoring in-market consumer and business trends

OBJECTIVE HIGHLIGHTS

True Aussie

MLA's new international red meat brands, *True Aussie Beef, True Aussie Lamb* and *True Aussie Goat*, started appearing on retail shelves around the world in July 2014. The brand is built on Australia's strong reputation in overseas markets for its clean, safe, natural image and high quality standards and aims to differentiate and add value to Australian beef, lamb and goat in export markets.

In the past year, *True Aussie* was launched at trade shows such as SIAL China, Asia's largest food trade show attended by more than 60,000 trade visitors from around the world; promoted in retail outlets with in-store consumer activities such as product sampling and point-of-sale material; and on social media to promote the clean, safe and natural image of Australian red meat. The *True Aussie* brand has also been localised to respond to regional challenges and opportunities. For example, in Korea, the existing key Australian beef messaging *Hoju Chungjung Woo* – 'clean and safe' – has been paired with the new logo and other point-of-sale material to ensure ongoing consumer recognition of the product during the transition period.

MLA is applying the brand in innovative ways, such as partnering with a red meat importer to sponsor a *True Aussie* online resource for chefs to access Australian beef recipes developed by leading Netherlands chefs, and promoting *True Aussie* lamb in the US through in-store videos, magazine advertising and editorials to Costco members, who shop at more than 550 retail warehouse outlets in North America. In Japan alone, MLA distributed more than 30 million *True Aussie* pack stickers to retailers, and now over 60 per cent of Australian beef sold at retail in Japan carries the *True Aussie* brand, and is promoted through more than 11,000 foodservice outlets.

CoMarketing

MLA's new CoMarketing Program supports Australian companies to develop marketing strategies for their beef, lamb and goatmeat brands. In 2014-15, 50 beef companies had collaborative marketing programs with MLA. These companies collectively have 186 brands (91 grainfed, 84 grassfed and 11 veal) and sold an average of 95,000 tonnes swt of beef a month (see page 39 for lamb CoMarketing statistics). In the past 12 months, MLA supported 618 collaborative marketing activities in 25 countries, including in established markets such as Australia, US, Japan and Korea and the developing markets of China and South-East Asia (beef and sheepmeat).

CoMarketing program supports on average **95,000 tonnes of branded beef** sales per month

Collaborative marketing activities include: in-store sampling to raise awareness and sales of branded Australian beef and lamb; educational seminars with hotel chefs to improve understanding of branded products, specifications and applications of a range of cuts in different cuisine styles; sponsoring trade delegations to inspect individual supply chains from paddock to plate to build stronger relationships back down the supply chain to producers; and traditional and social media campaigns.

The program aims to create value along the supply chain for the branded product and capture that value back down the chain to the producers. See pages 75-76 for more on the CoMarketing Program.

United States

MLA has been working closely with exporters and importers to position Australia as the number one imported supplier of grassfed beef to the US market. MLA

The True Aussie Beef brand started appearing in global markets from July 2014.

Producers tap into CoMarketing Program

South Australian beef producers Tim (pictured) and Sarah Burvill are carving out a market for dry-aged beef in Denmark thanks to an MLA CoMarketing arrangement. They started exporting Hereford beef to the A Hereford Beefstouw group of steakhouses, owned by Danish restaurateur Lars Damgaard, in 2006. The Burvills and Lars now own two beef properties in SA, a facility to dry age beef on the bone, and the 'A Hereford Beefstouw' restaurant in Adelaide.

Tim plans on launching the 'A Hereford Beef' brand of dry-aged loin cuts into Denmark in December 2015, and leveraged the CoMarketing Program to design high-end packaging and point-of-sale material, develop social media strategies and access guidance from brand and marketing specialists.

"Like many producers, we don't have the full suite of marketing and brand development expertise, so the CoMarketing Program allowed us to work closely with experts in these fields to develop a comprehensive strategy to market our beef brand," Tim said.

"MLA's CoMarketing Program is an important vehicle to improve farm gate returns for producers, as it creates competition for quality livestock, and thus demand for Australian red meat, by assisting small to medium companies to grow their branded products."

Tim and Sarah are also participating in a complementary MLA Donor Company project (which doesn't use producer levies) for dry-aged beef (within Objective 2.3).

Growing demand

has been implementing brand awareness and business development activities by reaching out to retail meat buyers and foodservice chains to consider taking on Australian grassfed beef. Australian grassfed beef is now available at more than 15 retail chains across North America – collectively representing more than 3,500 stores – and forms part of a number of high profile restaurant chain menus across the country. In the past 12 months, MLA targeted its limited marketing resources towards the regions in the US where some consumers are more predisposed towards seeking alternative protein sources such as grassfed beef. These include the North-East and mid-Atlantic regions (Boston, NYC, Washington DC), South-East regions (Florida); and West Coast (San Francisco, Los Angeles).

Activities in 2014-15 included partnering with chef associations, media campaigns and education activities for importers, chefs and retailers seeking more information about Australian beef and how it is produced. MLA conducted three full-day culinary immersions in Miami, Boston and Chicago, attended by 45 foodservice operators including 19 substantial chain restaurant chefs. Consumer campaigns included 31 outdoor billboards on streets in the Boston area as part of MLA's focus on that city for grassfed beef promotions. MLA partnered with *Fine Cooking* magazine to run a competition (receiving 7,000 entries) and produce an e-zine recipe book of 20 new grassfed beef recipes (most cattle in the US are grainfed). A three-week PR blitz from late May to early June saw 500,000 media impressions on grassfed beef messaging. MLA's 'Home Plate' email newsletter was also distributed directly to more than 44,500 North American consumers.

South-East Asia

MLA's marketing activities in South-East Asia during 2014-15 included supporting Australian red meat exporters and producer groups at major trade shows in the region (WOFEX Philippines, Food & Hotel Vietnam and Food & Hotel Myanmar). Participating exporters attracted new leads, averaging 30-50 new inquiries per event.

MLA-supported cuisine events included the Banqueting Innovation Workshop in Manila and the 'Revolution in Asian Cuisine' conference in Kuala Lumpur. The Asian cuisine conference introduced Asian chefs to the concept of using non-loin cuts of beef (and lamb) to produce high quality and delicious Asian dishes, without compromising cultural cuisine. Following the event, participating chefs used beef and lamb non-loin cuts during the Hari Raya Ramadan celebration period in June-July. MLA was also the major sponsor for the Beef Noodle Festival in Taipei, supported Master Butcher and *MasterChef* competitions in the Philippines, Macau and Indonesia, and hosted a group of chefs from South-East Asia at Beef Australia 2015.

Australian red meat exporters attending South-East Asian trade shows collectively receive **30-50 new inquiries** per event

During 2014-15 MLA trained more than 400 chefs in South-East Asia, to encourage innovation and develop their ability to use Australian non-loin cuts in Asian cuisine as a tender, halal and safe meat choice. MLA's involvement in these events supports chefs to be innovative and creative in a region where stronger economies mean they must meet higher expectations of discerning customers with higher disposable incomes.

Korea

The *True Aussie* logo was released in Korea in March 2015, retaining key messaging from the previous *Hoju Chungjung Woo* brand. The logo is now used at 504 retail outlets across the country including all of the 224 Greater Seoul Hypermarkets which are the major users of Australian beef. There have been 6.2 million *True Aussie* stickers distributed in Korea, MLA's Korean *True Aussie Facebook* page reached 15,000 followers since the launch, and the campaign has achieved over $1.7 million in value through media releases and promotional events. MLA consumer awareness activities include 9,051 sampling days in 896 stores and an online event to promote beef barbecue while camping during summer, which generated 33,400 views online and 1,200 Facebook interactions. Trade relationships have been strengthened through MLA briefings and forums with 550 Korean industry participants – overall satisfaction ratings from trade on the information provided by MLA was above 88 per cent. MLA also worked with the foodservice sector, conducting product training with 34 chefs and an educational forum with four R&D chefs from leading food companies. MLA conducted menu promotions with eight restaurant chains which collectively operated 1,749 stores.

MLA conducted menu promotions with **8 Korean restaurant chains** which collectively operated 1,749 stores

European Union

Trade marketing in the EU focused on driving volume and value at events such as the SIAL tradeshow in Paris where seven Australian beef and lamb export companies exhibited. The *True Aussie* brand was launched at SIAL, which was attended by more than 150,000 people.

MLA partnered with importers, exporters and organisations including Tourism Australia throughout 2014-15 to promote Australian red meat. Examples of collaborations include: partnering with a Swedish importer to promote Australian beef at a trade show, resulting in new commercial opportunities for the trade in this high value sector of the EU market; working with an Australian exporter to deliver an Australian beef training program to a large foodservice company in Sweden, giving staff a greater knowledge of the systems that support the safety, sustainability and eating quality of Australian beef; and partnering with another importer to sponsor a *True Aussie* online resource that enables chefs to quickly create new dishes by presenting a range of Australian beef recipes to use in their restaurants.

Middle East/North Africa

Egyptian chef Tarek Ibrahim continues to be an ambassador for Australian beef in the Middle East and North Africa (MENA) region. Working full-time with MLA, Chef Tarek trained more than 2,000 chefs across the MENA region in 2014-15. He also reached an audience of 300 million TV viewers through two TV shows. In the number-one rated series, *Mashawi (Grilling)*, Chef Tarek showcased Australian beef recipes for the barbecue. Each of the 15, 60-minute episodes had 20-second *True Aussie Beef* 'bumpers' (announcements between programming and commercials). The show was supported with an online competition (to win a trip to Australia) with partners Gold Coast Tourism and Qantas. This competition had a social media impact of 17,923 page views, 6,761 active users and 2,392 entries.

In his second TV show *Hakawi (Stories from our Kitchen)* on the Fatafeat network, Chef Tarek joined forces with Syrian chef, Mohammad Orfali. During the 15-episode series, Chef Tarek and Chef Orfali showcased beef recipes for Ramadan. The first run of the show aired twice daily through Ramadan (June-July 2015). Five episodes featured *True Aussie Beef* bumpers. Chef Tarek was a guest of MLA at Beef Australia, Rockhampton in May 2015, where he, together with chefs including MLA's Sam Burke, prepared two dinners for 600 guests and participated in two lunches.

MLA's Chef Tarek trained more than **2,000 chefs** across the MENA region in 2014-15

Japan

Australia remains the market leader for beef in Japan, growing market value and market share for the first time since the phased US beef re-entry commenced in 2007. Japanese consumers bought 15 per cent more Australian beef by value than the previous year. MLA partnered with companies that use Australian beef, including some of the largest global users of Australian beef: Aeon supermarkets, Zensho Holdings, McDonald's Japan, Prince Hotels and Bronco Billy.

Provenance is an important marketing tool in Japan. MLA and McDonald's Japan worked to restore faith with consumers after a food safety scare involving imported chicken, developing a campaign in December 2014 to build trust in Australia's beef supply chain. This involved producing 10 million tray mats, digital and print media, and public relations activities. As well as working on specific programs with 50 restaurant chains, MLA engaged many more through events such as trade shows and wholesaler seminars. MLA promoted the benefits of Aussie beef directly to consumers through seasonal campaigns such as the summer barbecue campaign, aimed at building a strong image of Aussie beef as a 'genki' (energy) meal choice.

China

MLA provided opportunities for more than 100 red meat exporter and producer groups to participate in major trade shows across China, including SIAL China (Shanghai), World of Food Beijing in Beijing and the 2014 China (Ningxia) International Beef and Mutton Products and Equipment Exhibition. In post-event surveys, 100 per cent of exporters had positive feedback about gaining immediate business from MLA-hosted trade shows, highlighting the strength of combined activity and drawing the attention of buying groups.

Improving knowledge of cuts and carcase breakdown remains an ongoing challenge in China, so MLA has continued to utilise three full-time local butchers (based in Taiwan) to work across greater China to complement the growing needs of training and meat safety. In 2014-15, 2,143 foodservice professionals (professional chefs, culinary students, restaurant owners and foodservice staff) were trained in using Australian beef, lamb and goatmeat across China, Hong Kong, Macau and Taiwan. In September 2014, MLA opened a new office in Beijing and the launch was attended by Australia's Minister for Agriculture Barnaby Joyce, among other dignitaries.

Let's Barbie in Japan

MLA launched its first summer barbecue campaign in Japan, *Let's Barbie*, in June 2015 with television, magazines, billboards and social media elements. Outdoor barbecue areas are growing in popularity in Japan, so MLA is encouraging Japanese consumers to grab some *True Aussie Beef* before hitting the barbecue this summer.

The new *True Aussie* brand is gaining recognition in this region, with MLA's Japan *Facebook* followers increasing from less than 500 to 26,000, and website hits rising from 275,000 to 615,000 following the *True Aussie* launch.

The *True Aussie* logo is on the menus of 32 accounts in Japan, totalling **11,000 stores**

Growing demand

OBJECTIVE 2.7

Aggressive promotion in export markets – sheepmeat

MLA delivers marketing and promotions in export markets to maintain sales in traditional lamb markets, especially through foodservice, and partners with Australian exporters to build loyalty around Australian product.

STRATEGIES

2.7.1 **Disseminate** comprehensive export marketing information

2.7.2 **Grow** awareness, trial and purchase of Australian lamb in overseas markets through various promotional activities including advertising and sampling

2.7.3 **Position** Australian lamb in overseas markets by leveraging its generic positive attributes (product integrity, halal integrity, consistent quality, delicious, nutritious and easy to prepare)

2.7.4 **Support** the growth of branded lamb supply chains to develop trade and consumer loyalty under cooperative programs such as the CoMarketing Program

KEY MILESTONES

An additional eight major customers are recruited globally for Australian lamb

Achieved — **RESULT: Eleven additional major customers were recruited globally for Australian lamb**

More than 80 per cent of Australian exporters and importers are satisfied with MLA business development activities (trade shows, missions, etc)

Achieved — **RESULT: More than 80 per cent satisfaction for MLA business development activities**

Successful launch of MLA's *True Aussie Lamb* and project market strategies developed in lamb markets of United States, Middle East (GCC states), China and Europe

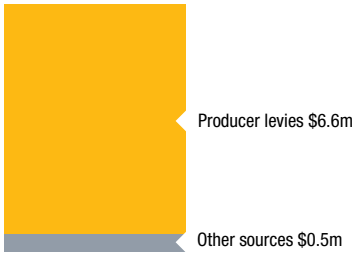
Achieved — **RESULT: *True Aussie Lamb* launched and market strategies developed in key lamb markets**

Increase the proportion of strategic marketing initiatives supported under the CoMarketing Program to more than 40 per cent

Achieved — **RESULT: Over 90 per cent of initiatives classified as strategic initiatives**

INVESTMENT

$7.1 million



An additional $208,000 was contributed by brand owners participating in the CoMarketing Program.

In 2014-15 this investment included:

- implementing tailored marketing strategies in each major international market for Australian lamb
- carrying out business development activities in emerging markets
- working cooperatively with Australian exporters to develop and grow sales for individual lamb brands
- monitoring in-market consumer and business trends

OBJECTIVE HIGHLIGHTS

Middle East/North Africa

MLA's Middle East/North Africa (MENA) team joined forces with Weber BBQ to run a six-month marketing campaign. The attributes of Australian red meat were promoted through radio sponsorship, advertising, social media and sampling at UAE's sporting and social events. MLA's co-sponsorship of Arabian Radio Network's prime time sport show, *The Grill,* included *True Aussie Lamb* title introductions, advertising spots, live reads and on-air quizzes to promote lamb.

MLA and Weber BBQ's partnership was leveraged at Dubai's Rugby Sevens competition in December 2014 and the Abu Dhabi Golf HSBC Championship where players and fans sampled *True Aussie Lamb* (see page 35 for more on *True Aussie*) cooked to perfection on Weber barbecues. The campaign reached an on-air audience of 3.2 million and a combined crowd of 182,000 at the sporting events. Three live on-air barbecue cooking competitions on Al Khaleejiya and Al Arabiya radio stations also reached an audience of more than 250,000. There were 2,200 lamb posts across social media platforms in MENA during the marketing campaign.

United States

MLA targeted consumers, retail meat buyers and chefs in Florida in key consumption periods of spring (Easter) and winter (Christmas). MLA partnered with steakhouse chain Texas de Brazil (TDB) to run a four-week trivia contest, 'Get Grilled on Australian Lamb', which gave one million TDB e-newsletter subscribers the chance to answer lamb questions to win a trip to Australia. TDB and other restaurants hosted lamb showcase events for consumers, chefs and media.

Australian native, chef Aaron Brooks, became MLA's US 'lambassador' – giving TV lamb cooking demonstrations, hosting a lamb dinner for media and chefs, and serving up lamb in a popular food truck. MLA ran one-day culinary immersions in spring and winter to educate and inspire 24 chefs to use Australian lamb, and ran a contest for Miami area chefs, offering the chance to win a 10-day culinary trip to Australia if they added Australian lamb to their menu for a minimum of two weeks. MLA partnered with Costco Wholesale to integrate in-store activities including lamb tasting demonstrations, magazine articles and TV visuals. The in-store commercial received 1.17 million views.

South-East Asia

MLA ran more than 100 retail butcher training sessions as well as four major retail training events in Taipei, Manila, Penang and Jakarta. MLA now has more than 43,000 Facebook followers in Indonesia and more than 30,000 in Taiwan.

Europe/Russia

MLA supported the marketing activities of an importer to supply branded Australian lamb legs to a large supermarket chain in Denmark. MLA co-sponsored an in-store Australian lamb chump promotion with a major UK retail chain, resulting in a 112 per cent sales increase. MLA partnered with Austrade to host a red meat stand at World Food Moscow, and received inquiries from Russian and European trading companies who have commercial opportunities for Australian beef in China, South-East Asia, the MENA and South America. Activities with importers included a lamb workshop in Novosibirsk (third largest city in Russia) for foodservice and retail end users, and supporting the largest importer of Australian lamb to promote a range of cuts in Krasnoyarsk and Moscow. MLA supported two importers to attend Kazakhstan FoodWeek, where significant leads were generated.

Getting a taste for lamb

Americans have a growing taste for lamb, with Australian lamb exports in 2014-15 the highest on record, at 48,152 tonnes swt. This was 13 per cent higher than the record set the previous financial year. During 2014-15, lamb exports to the US were worth $532.6 million, up 34 per cent on last year's fiscal year record.

MLA's targeted marketing in the US saw the number of followers of Australian Lamb's Facebook page grow by 6,134, and the e-newsletter subscriber list increase by 11,635. Consumer research revealed that unprompted awareness of Australian lamb in the US rose from 24 per cent in a year to 36 per cent – and passed New Zealand for the first time (33 per cent), while prompted consumers had 73 per cent awareness, up from 47 per cent a year ago. In June 2015 MLA's 2014-15 lamb campaign was recognised with a Stevie Award for marketing from the American Business Association.

CoMarketing

MLA's new CoMarketing Program supports Australian companies to develop marketing strategies for their beef, lamb and goatmeat brands. In 2014-15, 19 lamb companies had collaborative marketing programs with MLA. These companies collectively have 32 lamb brands and sold an average of 23,000 tonnes swt of lamb a month. For more on the CoMarketing Program refer to pages 75-76).

Increasing productivity across the supply chain

MLA invests in R&D that creates opportunities for cattle, sheep and goat producers and supply chains to improve the productivity and profitability of their enterprises.

Objectives under this strategic imperative include:

3.1 Identify and deliver opportunities to increase on-farm productivity

3.2 Identify and deliver opportunities to increase off-farm productivity and capability

3.3 Deliver valued supply chain and market information

3.4 Support industry to improve animal health and biosecurity

3.5 Increase producer engagement with MLA tools and information to build capability

Australian Government National Research Priorities:

- An environmentally sustainable Australia
- Promoting and maintaining good health
- Safeguarding Australia
- Frontier technologies for building and transforming Australian industries

Australian Government Rural Research and Development Priorities:

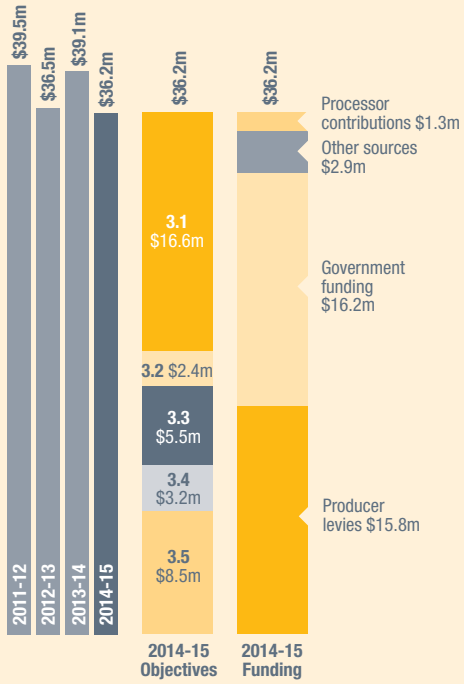
- Natural resource management
- Productivity and adding value
- Supply chain and markets
- Biosecurity
- Innovation skills
- Technology

Delivering MLA business units:

- On-farm Innovation and Adoption
- Livestock Productivity
- Value Chain Innovation
- Communications and Stakeholder Engagement
- Central Marketing and Industry Insights

MILESTONE SCORECARD
Of 27 milestones: 18 achieved, 7 not achieved, 2 no longer applicable

INVESTMENT



An additional $19.3 million was attracted in voluntary contributions, matched with Government funding and invested via the MLA Donor Company.

KEY ACHIEVEMENTS

A world first

MLA-funded trial work contributed to the commercial release of the sheep vaccine, Barbervax, the world's first vaccine for a gut-dwelling parasite of livestock (see page 51).

Profitable practice change

A review of MLA's *Making More from Sheep* and *More Beef from Pastures* programs revealed participating producers not only embraced education and practice change but improved their profits as a result (page 53).

Robotics adoption

Lamb processing automation technology is continuing to be developed and adopted and beef processing automation technology is being trialled (page 47).

Psyllid-resistant leucaena

Seed from a new psyllid-resistant variety of leucaena will soon be available to commercial cattle producers, opening the way for productivity gains in northern Australia (page 43).

Supply chain feedback

The first commercial supply chain rollout of Livestock Data Link – a web-based application for analysing carcase performance information – commenced (page 49).

Better genetics

A new genomic days-to-calving estimated breeding value for Brahmans has been developed, providing a partial solution to low reproductive performance in the northern beef industry (pages 44-45).

Information expansion

The Western Young Cattle Indicator was developed and is released weekly for West Australian producers. NLRS added five more saleyards to its reporting network (page 49).

OPPORTUNITIES

- The latest endemic diseases survey will be a critical tool for assessing research and development priorities and will provide valuable information to producer consultation groups when forming their R&D agendas.
- Producers' utilisation of the new genomic days-to-calving estimated breeding value (EBV) has the potential to lift the fertility of Australia's Brahman herd by 10 per cent which would improve profitability.
- *Market Snapshots* aim to keep industry more informed, generate conversations between supply chain partners and help identify business opportunities.
- Lamb and beef processing automation projects can significantly improve Australia's competitive edge through value-adding and improved yield outcomes.

CHALLENGES

- Increasing the uptake of the new genomic test for the Brahman days-to-calving EBV to improve its economic viability and speed up its turnaround time.
- Encouraging producers to embrace technological improvements such as Livestock Data Link, *Market Snapshots* and new market reporting tools under development and use them to their full potential.
- Ensuring reliability of processing automation systems and assist processors to manage technical and capability risks of installation.
- Delivering engaging extension programs that achieve on-farm practice change to deliver productivity benefits.

OUTLOOK 2015-16

- NLRS will add Deniliquin, Corowa and Moss Vale in NSW and Charters Towers in Queensland to complete its coverage of every major saleyard in Australia.
- Developing a web-based interactive data querying tool to provide producers and industry with better access to the NLRS database.
- The 'LEAP V' module, the automated lamb forequarter bone-in processing system, is anticipated to be in production.
- A safety system, complementary to BladeStop®, is being developed that can be retrofitted to existing saws.
- The Pasture Variety Trial Network project will provide economic value estimates on commonly used pastures via an online tool.
- Further work will be undertaken to assess the Barbervax vaccine's efficacy on goats.
- A prototype decision support tool to the extension package *Feeding Forages in the Fitzroy* is being developed.

FAST FACTS 2014-15

The endemic diseases survey included goats and diseases diagnosed at abattoirs, but originating on-farm, for the first time

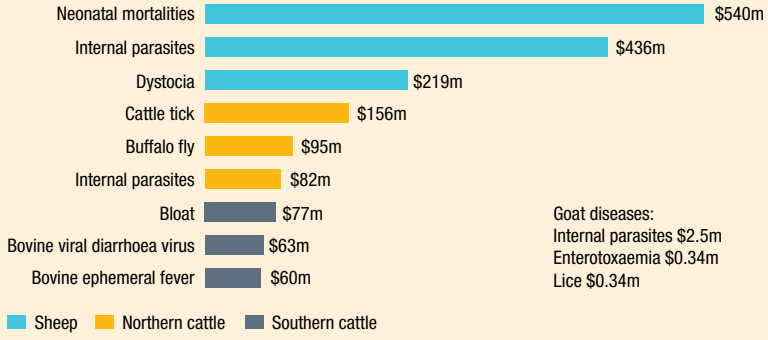
10,000+ MLA Market Information App downloads

70,000 varieties to be stored in the Australian Pastures Genebank, which will house the world's largest collection of pasture and forage species

The automated LEAP III and LEAP IV lamb boning systems are operating at **2 sites** and are commercially available for about **$4.8 million** for the complete system (excluding site-specific installation costs)

More Beef from Pastures and *Making More from Sheep* delivered participants **4.8% productivity improvements** from adopting practice change

Top three most costly northern cattle, southern cattle, sheep and goat diseases ($ million)



Source: Priority list of endemic diseases for the red meat industries – MLA final report

Increasing productivity across the supply chain

OBJECTIVE 3.1

Identify and deliver opportunities to increase on-farm productivity

MLA assists livestock producers to increase their on-farm productivity by investing in R&D that creates opportunities to enhance genetic performance of animals and pastures, feed productivity and utilisation rates, animal reproductive efficiency, business performance and labour efficiency.

STRATEGIES

3.1.1 **Enhance** rates of genetic improvement in livestock and feedbase performance

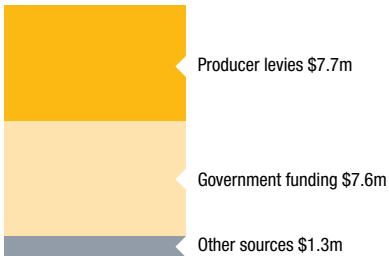
3.1.2 **Improve** productivity in grazing and feedlot systems

3.1.3 **Develop and implement** new practices and technologies to increase labour efficiency and compliance to market specifications

3.1.4 **Use** producer participatory R&D to maximise rate and effectiveness of development and evaluation of new technologies

INVESTMENT

$16.6 million



'Other sources' includes funding from Australian Wool Innovation towards the Sheep Genetics program.

An additional $4.8 million was attracted in voluntary contributions ($2.4 million) and matched Government funding ($2.4 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- implementation of the Feedbase Investment Plan
- lamb and weaner survival program
- lamb supply chain and animal information program
- southern beef compliance program
- priority activities within the RD&E priorities prospectus for the northern Australia beef industry
- implementation of a comprehensive research program addressing feedlot nutrition and heat stress
- supporting investments in the Sheep CRC and MLA Resource Flock

KEY MILESTONES

Private seed companies engaged in trialling and implementing new methods in breeding programs for phalaris and annual legumes

Partially achieved — **RESULT: An industry adoption plan was outlined to private seed companies, raising awareness of the two pre-breeding projects and informing use of the new technologies. Technologies not due for delivery from the project so new methods are not available for adoption by seed companies**

Evaluation system of new pasture species (taking account of potential return on investment) established with results published

Achieved — **RESULT: Program has been expanded with an MDC project with the Australian Seeds Federation. Analysed data has been published via a website developed with end users (anticipated to be launched in late 2015)**

300 lead producers are actively engaged in participatory R&D contributing to conduct and interpretation of research projects

Not achieved — **RESULT: An estimated 180 producers are actively involved in feedbase research via 25 Producer Research Sites projects across southern Australia**

Sheep CRC extension contracted and projects established

Achieved — **RESULT: Sheep CRC extension contracted and projects underway**

Productivity improvements from identification and use of animals that convert feed more efficiently established through net feed intake testing of at least 600 progeny from the Beef Information Nucleus herds

Achieved — **RESULT: 936 Angus, 102 Charolais, 214 Hereford and 402 Limousin steers have been measured through the Tullimba feedlot at UNE between 2012 and 2014**

Residue testing of Kleanup product for feedlot dag treatment completed and research permit for further evaluation of the product under Australian conditions obtained

Not achieved — **RESULT: Inability to source details of the composition of Kleanup meant a research permit was not granted from the Australian Pesticides and Veterinary Medicines Authority**

At least two series of workshops conducted across regional Australia to communicate latest feedlot research outcomes and deliver industry training requirements

Achieved — **RESULT: Two workshop series were conducted, attended by 350 feedlot personnel**

OBJECTIVE HIGHLIGHTS

Economic value of high-output forages

A recent MLA-funded benchmarking project is helping central Queensland beef producers make more informed forage choices. Focused on the three sub-regions of the Fitzroy River catchment, the project was a joint exercise with Queensland's Department of Agriculture and Fisheries (DAF). It compared the performance of oats, forage sorghum, lablab, leucaena-grass, butterfly pea and perennial grass pastures across 24 sites in the Fitzroy River catchment during 2011–2014.

Despite the wide variation in productivity and profitability for annual and perennial forages in the area, it was found perennial legume-grass pastures were more profitable than perennial grass pastures and annual forages. Leucaena-grass had the highest gross margin of $184/ha/year and produced the highest average total beef production of 198kg/ha/year.

The project found annual forages were generally not able to add economic value to a beef enterprise due to their higher growing costs.

The project has delivered producers new decision support tools as well as commercially relevant advice. Key achievements of the project were the development of an extension package, *Feeding Forages in the Fitzroy*. Available in booklet and electronic form, it brings together information on agronomy, management, cattle production and economic performance from high quality forages.

It also developed a series of gross margin spreadsheets for comparing the costs and benefits of forages grown in each of the three sub-regions and work on a prototype decision support tool is ongoing. To help producers apply these decision support tools to their own business, MLA and DAF have offered support activities such as webinars and field days and information from the project is being incorporated into the Grazing Best Management Practice (Grazing BMP) program.

Sheep CRC update

As part of the extension of the Sheep CRC in 2014, MLA supported three new research programs for animal wellbeing and productivity, genomic testing and quality-based sheepmeat value chains.

Researchers are developing risk models to underpin on-farm decision making tools, such as 3D cameras, to measure body condition/wrinkle score for nutrition and flystrike management.

The genomic program is refining *Australian Sheep Breeding Values* to give producers better tools to select genetics which improve eating quality of prime lambs and potentially a yearling sheep meat product.

The MLA Donor Company (which doesn't use producer levies) and commercial and research partners are developing measurement technologies – such as CT, dual energy X-ray, cameras and probes – in collaboration with the Sheep CRC to objectively measure carcase quality and yield.

As part of this, 2,480 lamb and yearling samples will be tasted in China, US and Australia to better understand how consumers perceive different lamb and sheepmeat products.

Protein-packed algae

With funding from MLA, the University of Queensland has established an Algae Energy Farm to cultivate and harvest microalgae for a range of uses, including as a feed supplement for beef cattle. The project findings offer an opportunity to close the gap in dry season protein availability using an economically sustainable feed source with minimal use of land and water.

Psyllid-resistant leucaena to bolster northern production

Seed from a new psyllid-resistant variety of the tropical legume pasture leucaena (pictured being eaten by a heifer) will soon be available to commercial cattle producers, opening the way for massive productivity gains in northern Australia.

Leucaena is a fast growing perennial tree which offers one of the most productive feedbase options for northern cattle producers, but its susceptibility to attack by the leucaena psyllid (Heteropsylla cubana) has limited its adoption in high-rainfall and coastal areas.

This is set to change following the development of a new variety named Redlands, which was developed by University of Queensland with funding from MLA, and is resistant to psyllid attack.

"We estimate that the new variety could open up a further 1.5 million hectares of Queensland to potential leucaena production, as well as significant areas of the Northern Territory, which could in turn produce a net benefit to the industry of $500 million or more per year," MLA's General Manager of On-farm Innovation and Adoption, Dr Matthew McDonagh said.

"MLA has now signed agreements with two partners in Central Queensland, Carnarvon Pastoral Company and Leucseeds, to grow seed plots for the psyllid resistant variety, with commercial volumes of seed expected to be available for purchase within three years."

Increasing productivity across the supply chain

New breeding programs for phalaris and annual legumes

MLA-funded research is applying genomics to plant breeding with several projects aimed at identifying DNA markers to improve the productivity, adaptability and pest and disease resistance of some of Australia's most common pasture and legume species. A $1.5 million phalaris project, conducted by the University of Melbourne, is using genomics to select for traits, such as yield and persistence, and to identify markers for seed retention, a common problem in phalaris breeding. These markers will be used to develop a rapid screening tool aimed at encouraging more private companies to invest in phalaris breeding.

The research team, supported by CSIRO and Victoria's Department of Economic Development, Jobs, Transport and Resources, is also developing a process to assess the economic value of plant traits, enabling breeders to make useful comparisons between varieties being considered for commercial release and their potential pay-back to producers. It is hoped this work on phalaris will form the basis for improved breeding methodologies in other perennial grass species such as cocksfoot.

The $1.5 million, MLA-funded pre-breeding in annual legumes project is harnessing genetic technologies to rapidly improve varieties. Work on subterranean clover so far has shown the number of generations that can be produced in one year could be improved from one to between three and five. Researchers hope it could potentially cut breeding times of some species by up to four years.

The project has defined the genome of subterranean clover and this will be formally published after critical review. Other subterranean clover traits under the microscope include: cotyledon resistance to redlegged earth mites, optimum levels of hard seed and other seed dormancy traits, genes for increased persistence and increased seedling growth under cooler temperatures. The techniques are also being adapted for annual medics (self-regenerating pasture legumes).

Producer Research Sites

MLA-supported Producer Research Sites are contributing valuable scientific outcomes to Australia's red meat industry and are directly involving producers in research and development. During 2014-15, 25 projects were contracted across southern Australia, all contributing to and building on key research projects under MLA's Feedbase Investment Plan.

MLA funded
25 Producer Research Sites
around Australia

Projects included: improving efficiency of phosphorus fertiliser and pre-breeding phalaris (Victoria); comparing legume species that require less phosphorus than subterranean clover and pasture persistence and establishment (Western Australia); trialling sub-tropical pastures (NSW) and investigating soil-borne root disease (South Australia).

Most projects are entering their second year of the $2.5 million, three-year program, with the exception of Tasmania which is in its first year of a phosphorus-efficient legumes trial.

Producers involved are leaders in their field, not only contributing their own experiences and observations to improving their skills and knowledge base but also taking personal risks with capital, land resources and time. Each project is managed by one of MLA's five state coordinators, who also conduct annual reviews with each producer group, and a facilitator who oversees the trial design.

These projects help fill the gap between researchers and producers, provide better direction for valuable research funds and are expected to result in faster adoption rates at the end of the research. Producers robustly test scientific theory under commercial conditions and the ensuing field days, workshops and over-the-fence discussions bolster research extension.

New fertility test for Brahmans

The new genomic test for female reproduction in Brahmans has the potential to lift fertility across the northern beef herd by 10 per cent. A significant achievement for industry and the Brahman breed, the new days-to-calving direct genomic value means all Brahman producers can now obtain more accurate genetic prediction of daughter reproduction performance on their young bulls.

Blending of direct genomic values increased the accuracy of the days-to-calving breeding value by
10% on average, and up to 35%

MLA, through its support of the Beef CRC, the Animal Genetics Breeding Unit and the Australian Brahman Breeders Association (ABBA), has helped engineer a partial solution to one of the most significant issues affecting northern beef enterprise profitability – low reproductive performance.

The test underpins the existing pedigree-based days-to-calving estimated breeding value (EBV) that has been in use for some years. However, the practical implications of collecting reproduction information have impacted on its availability. Blending of the genomic values with the EBVs has been shown to increase accuracy, on average, by 10 per cent and up to 35 per cent. MLA continues to support ABBA in building its database with nearly 4,000 days-to-calving records added since 2013.

However, there has been little to no genetic trend for days-to-calving in the breed and the new genomic test, coupled with increased levels of recording, provides a unique opportunity for the breed to improve female reproduction by selection.

Almost
4,000 days-to-calving records
have been added to the Brahman BREEDPLAN database since 2013

The challenge remains to continue building on the research outcomes delivered by the Beef CRC and to extend this genomic test to other northern beef breeds.

Greater usage of the test will increase its affordability for Brahman breeders over time and further build the accuracy of the breed's fertility data. Additional genomic values will be generated from MLA and industry-funded projects to further expand the trait information available for Brahmans.

Pasture Variety Trial Network

The *Pasture Variety Trial Network* will address a major issue limiting pasture improvement in Australia – the lack of comprehensive information on the merits of pasture varieties. During the past four years MLA has invested $1.8 million in the development of a national variety testing scheme to provide objective data to southern livestock producers on the merits of a range of commercially available pasture species.

The project has involved the implementation of an auditing and accreditation scheme for seed company pasture trials and the establishment of six independent trial sites in south-west, central and eastern Victoria, southern and central NSW and Tasmania.

Three years of seasonal production data of annual legumes, lucerne, phalaris, fescues, cocksfoot and annual Italian and perennial ryegrasses have been compiled and are being statistically analysed to outline local performance differences. In future there will be opportunity to include new breeding lines in the network, enabling breeders to focus on those traits that will deliver the greatest gains for producers. The aim is to deliver economic value estimates for varieties and assess whether more recent germplasm can provide better options within species.

A new project, in partnership with seed companies and the Australian Seed Federation, will see the number of trial sites increase across southern Australia. This is hoped to boost producer confidence in their outcomes and result in more effective use of the data collected from them. MLA's website will communicate these results in late 2015/early 2016, when analysis is expected to be complete.

Pastures genebank

MLA invested almost $400,000 in 2014-15 in the Australian Pastures Genebank, a comprehensive seed collection aimed at conserving the diversity of the nation's pasture and forage species.

Created in response to the 2011 National Strategic Rural Research and Development Investment Plan, the genebank will house the world's largest and globally unique collection of pasture and forage species.

Grazing enterprises, including all food and fibre production, as well as crop rotation, are worth
$48 billion per annum
to the Australian economy

This will ensure access to plant genetic diversity, which is critical to national and global food security and underpins Australia's ability to maintain agricultural productivity in the face of environmental and economic challenges.

The Australian Pastures Genebank will strategically acquire, document, conserve and make available plant genetic diversity of all pasture plants important to agriculture in Australia. This includes plants to be grown for livestock, crop rotation and the environment. Australia has been a major beneficiary from the importation and utilisation of genetic resources in pasture and forages and it is important to maintain this material and not have to reimport.

MLA, along with state and federal governments, Dairy Australia, GRDC, AWI and research institutions, is investing funds to transition seed and data from major state genebanks into the Australian Pastures Genebank to rationalise collections and minimise running costs.

The Brahman fertility test process at a glance

MLA, through its support of the Beef CRC, the Animal Genetics Breeding Unit and the Australian Brahman Breeders Association (ABBA), has helped engineer a partial solution to one of the most significant issues affecting northern beef enterprise profitability – low reproductive performance.

The Brahman days-to-calving genomic test combines traditional performance records with information from an animal's DNA to generate a unique estimated breeding value (EBV) for every animal. The test process involves: sending a hair sample to the Australian Brahman Breeders Association which registers the animal and includes it in the BREEDPLAN analysis; hair is sent to the University of Queensland for genotyping and then to the Animal Genetics and Breeding Unit for analysis where direct genomic values (DGVs) are produced and included in the Brahman BREEDPLAN analysis. Blended EBVs are then reported directly to the breeder by the breed society.

Increasing productivity across the supply chain

OBJECTIVE 3.2

Identify and deliver opportunities to increase off-farm productivity and capability

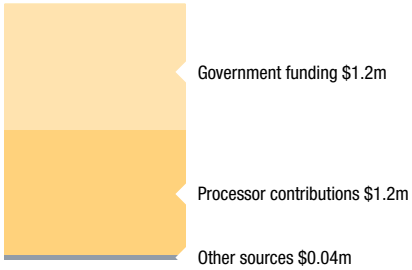
Working in partnership with technology providers, individual processors and the Australian Meat Processor Corporation (AMPC), MLA manages an R&D portfolio to improve processing efficiencies, address labour availability and OH&S, and increase innovation and capability. Much of this investment comes from voluntary and processor contributions which are matched with Government funding via the MLA Donor Company.

STRATEGIES

- 3.2.1 **Develop** new technologies and systems that improve productivity and processing efficiencies
- 3.2.2 **Assist** the processing sector to improve work health and safety
- 3.2.3 **Develop** new systems to support processing decision making
- 3.2.4 **Improve** industry capability, knowledge and adoption of new technologies to increase productivity

INVESTMENT

$2.4 million



An additional $11.3 million was attracted in voluntary contributions ($4.6 million), processor contributions ($1.1 million) and matched Government funding ($5.6 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- enabling collaborations to develop cost effective automation and manual assist technologies
- developing novel objective measurement systems

KEY MILESTONES

Realise net benefits of $1 million per annum from processing technologies developed under the MDC program and for which installation is completed in 2014-15

Achieved

RESULT: LEAP IV lamb processing system installed at Australian Lamb Company alone provides $3.9 million per annum benefit. Other technologies with benefits include McLaren waterjet French racking DEXA imaging for lamb, X-ray beef rib cutting and goat head browning

Total aggregated net benefit of MDC-funded technologies installed both in 2014-15 and previous years reaches $8 million per annum

Achieved

RESULT: Confidential ex post cost benefit analysis completed at two processors for LEAP III and LEAP IV lamb automation installations show $17.6 million per year benefit

Five MDC-funded commercial innovations achieved at least 80 per cent of their annual adoption strategy targets including associated cost benefit analyses

Achieved

RESULT: 11 out of 20 off-farm technologies achieved their technical or commercial adoption targets. Where appropriate these are supported by independent cost benefit analyses

OBJECTIVE HIGHLIGHTS

A LEAP for lamb processing

Australia is leading the world in the automation of beef and lamb processing, with the help of the MLA Donor Company (MDC) (which doesn't draw upon producer levies). During the past year, lamb processing advancements alone have added up to $4.20/head in extra value at participating sites. LEAP III and IV, X-ray guided lamb primal cutting and middle processing systems, are already paying dividends to industry, with two commercial demonstration installations – the Australian Lamb Company in Sunshine and JBS Australia in Bordertown. The latest LEAP III is now also at Australian Lamb Company's Colac plant. Both machines allowed the companies to recoup their purchase and installation costs in less than a year.

LEAP II is the hindquarter deboning system, a technically complex module of the LEAP development suite that will have important yield and operational health and safety outcomes once adopted by industry. Research has demonstrated the system's feasibility and the MDC, along with its strategic technology partner and commercialiser, Scott Technology, New Zealand, hopes to see LEAP II undergoing trials within a year.

Lamb automation processes at
10 per minute
(similar to non-automated plants) but with millimetre accuracy

Further development of the LEAP V module, the lamb forequarter bone-in processing system, is also anticipated to start production in Australia within a year.

A LEAP for beef processing

The Beef Automation Transformation program, also funded by the MDC, has taken the first steps towards the development and adoption of semi-automated system modules and operator aids. In 2014-15, a loin deboning saw and oven-prepared rib saw were trialled in a number of participating plants. Work continues to quantify the value proposition of automation in beef processing, however it is anticipated to be as significant as it is with lamb.

BladeStop® and GloveCheck®

BladeStop®, an ultra-high-speed brake mechanism for bandsaws, has proven to be an adoption success during 2014-15. There are now over 80 BladeStop® products operational across industry, with each of Australia's largest processors installing two or more. Developed through the MDC with strategic technology partner, Machinery Automation & Robotics, this major safety initiative, which stops the bandsaw blades upon human contact, could prevent an estimated 10 serious accidents a year, many of them near amputations.

BladeStop® is estimated to
prevent 10 serious accidents
a year, many of them near amputations

In addition to BladeStop®, Machinery Automation Robotics has also developed GloveCheck®, an additional safety feature that involves a saw operator wearing a camera-sensitive glove. If the glove enters the danger zone ahead of the blade, the saw stops, again preventing serious injury. GloveCheck® became commercially available during 2014-15 with more than 10 units now in operation. Developing the world first 'know-how' around this technology has taken almost 10 years and a co-investment of $3.3 million, and has enjoyed strong long-term support from industry.

Taking a leap forward

JBS innovation manager Graham Treffone first encountered the 'LEAP' system in 2011 when he visited the Scott Technology facility in New Zealand.

"Coming from a beef processing background, it was hard to imagine how a 24kg lamb carcase could add so much complexity and variation into a processing business," he said.

"This complexity increases cost and requires accuracy and consistency, so I was impressed to see that the LEAP system used X-ray technology to determine coordinates for accurate cutting. This precise cutting presented JBS with the opportunity to take inconsistencies out of cutting carcases and maximise high value cuts such as the loin and rack."

The team at JBS did the calculations and, based on potential savings through reduced labour, increased yield and the 'knock-on' effect of reducing workplace injury risk, the project was given the green light at the JBS Bordertown plant. Installation began in June 2013 for the LEAP primal cutting system, and in early 2014 for the LEAP IV middle cutting system.

Graham said a critical component of investing in LEAP was the associated R&D support from the partnership between JBS, the Australian Meat Processing Corporation and Scott Technology, and the MLA Donor Company through matched government dollars. (No producer levies were used to support this project.)

"The system delivers our customers quality and consistency – they can now expect a consistent number of ribs in every rack, loins that are the same size and so on," Graham said.

Increasing productivity across the supply chain

OBJECTIVE 3.3

Deliver valued supply chain and market information

MLA delivers market and supply chain information that provides monitoring, analysis and reporting on the fundamentals of Australia's livestock industries. These tools and information enable businesses and supply chains to make informed decisions based on accurate market intelligence and feedback.

STRATEGIES

3.3.1 **Collect and maintain** domestic and international meat market data of relevance to the Australian meat and livestock industries

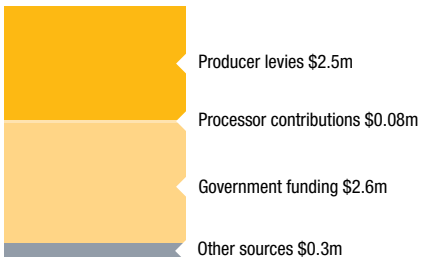
3.3.2 **Disseminate** incisive analyses of relevant world meat market developments

3.3.3 **Facilitate** improved information flows within supply chains

3.3.4 **Work** closely with peak councils and government and seek opportunities with like-minded organisations to identify priority industry issues and commission research to address these issues

INVESTMENT

$5.5 million



In 2014-15 this investment included:

- operation of MLA's livestock reporting service
- digital provision of market information and analysis
- improved supply chain data through Livestock Data Link
- industry issues research

KEY MILESTONES

Over 90 per cent of clients find MLA market information valuable to their business, with over 60 per cent finding it highly or extremely valuable

Not available — **RESULT: Quantitative survey not undertaken this year. However, qualitative research indicated the majority of producer stakeholders were satisfied, however, some refinements could be made**

20 processing plants uploading data to Livestock Data Link

Not achieved — **RESULT: 13 processing plants uploading data to Livestock Data Link across eight supply chains. There was a change in focus during the year to work more closely with the existing Livestock Data Link plants to drive adoption of the feedback tool within these supply chains**

60 per cent of Livestock Data Link plants actively delivering feedback to their suppliers

Not achieved — **RESULT: 30 per cent of Livestock Data Link plants are actively delivering feedback to their suppliers using Livestock Data Link**

Develop methodology, implement and commence reporting on Australian beef 'cutout values'

Not applicable — **RESULT: A current project aims to address the benefits and costs of mandatory price reporting, including an Australian cutout value**

Increase reporting and analysis of cattle markets in northern and Western Australia

Achieved — **RESULT: Increase market analysis in the north including live export prices and coverage of new saleyards. Western Young Cattle Indicator launched**

Maintain ISO accreditation for MLA's market information activities

Achieved — **RESULT: ISO accreditation maintained**

Complete industry issues research as requested by Red Meat Advisory Council and peak industry councils

Achieved — **RESULT: Research completed as requested by RMAC and peak industry councils**

OBJECTIVE HIGHLIGHTS

Market Snapshots

Beef producers benefited from a new MLA initiative during 2014-15 with the launch of *Market Snapshots*. The reports give a big picture perspective, including domestic and export market information, analyses of consumer and customer trends and valuable insights into the latest developments in global beef markets.

Market Snapshots was produced in response to producer feedback received at forums which revealed that while MLA was producing significant detailed analysis, producers were seeking more of a broad overview of core market trends. It is hoped these market insights will promote more informed discussion along the entire supply chain and help producers to make more informed on-farm decisions that will contribute to their business profitability. So far *Market Snapshots* cover nine key beef markets: Australia, the US, China, Japan, Korea, Indonesia, South Asia, Middle East and the EU. As the service develops it will also incorporate information on Australia's main competitors such as New Zealand, India and Brazil. *Market Snapshots* will be developed during 2015-16 for Australia's core sheepmeat markets.

Market information enhancements

MLA's National Livestock Reporting Service (NLRS) continues to expand with another five selling centres added during 2014-15. Market information from Boyanup, WA, Mt Compass, SA, Gracemere and Emerald in Queensland, and Cootamundra in NSW, are contributing to a more complete picture of saleyard action nationally.

More than 13,000 people
and more than 25 newspapers subscribe to the NLRS email service

Market reports, generated by 26 trained livestock market officers based around Australia, are available free an hour after the sale and disseminated by radio, available on MLA's website and MLA's Market Information App. In a new project, MLA is working on a customised online market tool which will select information for users based on their business objectives and geographic location. It is expected to be operational by early 2016. To further improve MLA's information services, beef and sheep industry projections have transitioned from six-monthly to quarterly and beef projections are now accompanied by a short video summary.

With 909,860 views in 2014-15
market information and NLRS price data is highly sought after via MLA's website

Livestock Data Link and adoption by JBS

Livestock Data Link (LDL), a web-based application that allows processors and producers to analyse carcase performance information, is being rolled out on a supply chain basis. Embraced by JBS Southern, MLA is working with a further five supply chains to ensure this feedback service is available to a wide range of producers over the coming year. So far it is accessible to 2,300 JBS producers under the JBS Farm Assurance program.

LDL connects slaughter data from the National Livestock Identification System and Meat Standards Australia database with analytical tools and benchmark reports and the 'Solutions to Feedback' library. The library is an online resource that helps producers address non-compliance issues on farm. MLA is continuing to enhance its functionality by adding an animal health and disease feedback module. The aim for 2015-16 is to increase LDL's uptake by processors and producers and to enhance its functionality to make it more user-friendly.

In other news

West Australian producers are benefiting from improved market information with the launch of a Western Young Cattle Indicator (WYCI).

In July 2015 MLA hopes to build its northern market reporting capacity by creating a monthly overview of markets north of the Tropic of Capricorn. The new information service will include reports on the live export trade, over-the-hooks and saleyard prices (via daily radio broadcasts) to deliver meaningful sales data to all members of the supply chain.

With 5,983 views and downloads
MLA's three 2015 beef industry projections and online videos were highly valued by stakeholders

Increasing productivity across the supply chain

OBJECTIVE 3.4

Support industry to improve animal health and biosecurity

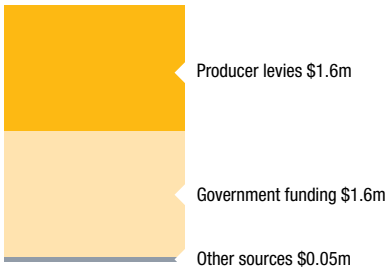
MLA invests in R&D to help industry address major animal diseases affecting the livestock industries and improve biosecurity measures to contain them. Any outbreak of a major animal disease could have severe impacts on international trade and adverse effects on productivity.

STRATEGIES

3.4.1 **Improve** animal health and biosecurity

INVESTMENT

$3.2 million



An additional $3.1 million was attracted in voluntary contributions ($1.54 million) and matched Government funding ($1.54 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- integrated sheep parasite management
- footrot diagnostics and vaccine development
- theileriosis diagnosis and control
- cattle tick vaccine
- bovine respiratory disease in feedlots
- the national livestock disease survey

KEY MILESTONES

Phases one and two of the National Livestock Disease Survey completed	
Achieved	RESULT: Final report published
Technologies to identify poor performing cattle in feedlots prioritised for further evaluation in feedlots	
Achieved	RESULT: Two scoping study reports have been received and are currently being reviewed by the ALFA R&D Committee, with a view to undertaking further development of applicable technologies
Assessment of the bluetongue vector potential of midges in southern Australia completed, and mathematical prediction model for the spread of the disease completed	
Achieved	RESULT: Final report published
Efficacy of two-in-one bovine respiratory disease vaccine established and plan developed to attract a commercial partner for its further development	
Not achieved	RESULT: Plan developed to attract a commercial partner. Potential partners sought a further efficacy pen trial and delays ensued. Discussions with partners may recommence following results
Review of the impacts of fluoroacetate toxicity completed	
Achieved	RESULT: Review completed and concluded toxicity causes increased mortality and reduced stocking rates and has the potential to affect approximately 2.9 per cent of the Australian herd

OBJECTIVE HIGHLIGHTS

Barbervax

MLA-funded trial work on the world's first vaccine for a gut-dwelling worm parasite of livestock has contributed to a major advancement in ovine internal parasite control. Barbervax will control barber's pole worm, a sheep parasite that occurs mainly in south-east Queensland and north-east NSW. It can cause sudden mass mortalities and is a significant contributor to the $400 million annual cost of internal parasites to the Australian livestock industry.

Barbervax is expected to cost **$3 per head** for an entire program

Barbervax had a limited commercial release during September 2014 for use in lambs and experienced an immediate sell-out of the initial batch of 600,000 doses. With extra vaccine supplies being produced for the 2015 barber's pole worm risk window, it is expected to cost 60 cents per dose or $3 per head for an entire program.

The vaccine is now also registered for use in yearlings and adult sheep with the Australian Pesticides and Veterinary Medicines Authority and can deliver significant, ongoing cost savings to producers. Barbervax will reduce dependence on chemical worm control, helping to address issues of drench resistance, while vaccine-resistant worms are not expected to evolve.

The vaccine has no residue issues or withholding periods, meaning it is safe for organic producers to use without compromising their accreditation. It can also be used in conjunction with clostridial vaccines, if injected at a different site, drenches (which may be needed if sheep are infested with more than just barber's pole worm) and insect and/or lice medication. Work is continuing to assess the vaccine's efficacy for goats.

There is an MLA Donor Company partnership project underway (which isn't using producer levies) seeking to register a Barbervax treatment for goats.

Updated endemic diseases survey results

A comprehensive economic assessment of the most significant endemic diseases affecting Australia's red meat industry will provide the principal criteria for prioritising research and development investments. The MLA-funded report, which considered the goat industry for the first time, highlighted 17 cattle, 23 sheep and nine goat diseases as having the greatest economic impact.

For cattle, pestivirus appeared on the list for the first time as a significant disease affecting the southern beef industry but internal parasites were estimated as having the highest annual cost for northern and southern sectors at $82 million per year. When setting research priorities however, the report recommended considering weighing this outcome against existing disease knowledge and the availability of control mechanisms. Diseases and conditions that still had relatively high annual costs (greater than $5 million) and lower overall knowledge and available controls (less than 50 per cent) included neonatal calf mortality, vibriosis and *Theileria*.

The endemic diseases survey's list of priority diseases included **17 cattle, 23 sheep and 9 goat diseases** as having the greatest economic impact

For sheep, neonatal mortalities ($540 million) and internal parasites ($436 million) had the highest estimated annual economic impacts.

Internal parasites had the highest estimated annual impact on the goat industry, costing $2.5 million. The next two priority diseases were enterotoxaemia and lice. This project completes phases one and two of a four-phase MLA initiative.

Barbervax – a family collaboration

Scottish father and son team, David and Robin Smith, collaborated to develop Barbervax, the ground-breaking vaccine against barber's pole worm (see Barbervax story at left). David, a scientist at Moredun Research Institute near Edinburgh, has devoted his career to researching immunity to, and vaccines for, parasitic worms of sheep and cattle. For him, the advent of Barbervax ended a 30-year quest. Contributing significantly to this success was his engineer son, Robin, who developed a worm-harvesting machine, the NemESys (Nematode Extraction System). This enabled the cost-effective collection of large amounts of intestinal enzymes from clean worms, keeping the vaccine economically viable.

Barber's pole worm females are prolific egg layers, laying up to **10,000 eggs per day**

Increasing productivity across the supply chain

OBJECTIVE 3.5

Increase producer engagement with MLA tools and information to build capability

MLA produces a range of information, tools and services that help livestock producers to make sound business decisions, manage challenges and capture opportunities to boost their productivity. MLA's work in communications and extension aims to inform producers of their opportunities, influence their decision making and enquiry, and involve them in developing and evaluating programs of relevance.

STRATEGIES

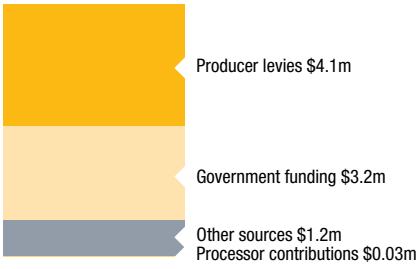
3.5.1 **Keep** producers informed about the activities and opportunities created by their levy investment in R&D and marketing

3.5.2 **Facilitate** the uptake of MLA information, tools and learning opportunities to influence positive practice change

3.5.3 **Partner** with producers and stakeholders who use and value MLA tools and information to help influence their peers as well as inform future MLA programs and activities

INVESTMENT

$8.5 million



'Other sources' includes funding from the Department of Agriculture for the Farm300 program, and from Australian Wool Innovation for the *Making More From Sheep* program.

An additional $135,000 was attracted in voluntary contributions ($67,500) and matched Government funding ($67,500) for investment via the MLA Donor Company.

KEY MILESTONES

Increase satisfaction with MLA communications activities from 3.6 to 3.8 out of 5

Achieved — **RESULT: Member satisfaction with MLA communications rated an average of 3.8 out of 5 in the August 2015 member survey**

At least 50 per cent of commercial sheep and cattle producers engage with MLA information or tools

Not achieved — **RESULT: An average of 44 per cent of MLA members engaged with MLA information or tools**

At least 50 per cent of those producers engaged with MLA information, tools and learning opportunities improve their knowledge, skills and/or capacity to change practice as a result of this engagement

Achieved — **RESULT: 74 per cent of producers that engage with MLA information, tools and learning opportunities adopt at least one practice change**

At least 25 Producer Demonstration Sites in operation to deliver localised R&D information to producers

Not achieved — **RESULT: 21 Producer Demonstration Sites are currently in operation to deliver localised R&D information**

Implement a new monitoring, evaluation and reporting framework to enable more effective reporting against strategic objectives

Achieved — **RESULT: The framework has been developed for extension projects to demonstrate practice change and impact and has been applied to pilot projects. Application to extension projects more broadly has commenced**

In 2014-15 this investment included:

- continued rollout of the flagship extension programs including *More Beef from Pastures*, joint MLA-AWI programs *Making More From Sheep* and *Pastoral Profit* and the *FutureBeef* collaboration
- development of new producer resources
- delivery of *Feedback* magazine, *Friday feedback*, producer forums and events and online tools

OBJECTIVE HIGHLIGHTS

LambEx and Beef Australia 2015

MLA supported Australia's two major meat industry events this year, connecting with beef and lamb producers and showcasing the latest research outcomes and industry insights.

About 90,000 people attended Beef Australia 2015 in Rockhampton where MLA presented a packed program of information sessions and networking opportunities. Popular attractions included MLA's Innovation Marquee sessions, which delivered the latest research and development outcomes, as well as the packed-out Producer Forum, which covered some key programs where MLA is investing producer levies.

The lamb industry event of the year, LambEx in Adelaide, attracted processors, exporters, researchers and agribusinesses. MLA gave presentations to attendees on growth markets, opportunities and consumer trends that are likely to impact lamb sales.

Website refresh

MLA has delivered a refurbished website which puts producers as its primary audience. Featuring a modern look that is consistent with other communication channels, streamlined navigation and new emphasis on levy investment transparency, the new website should encourage more online traffic and underpins MLA's aims and objectives. The project's second phase, to be delivered in early 2016, will introduce more personalisation, including a home page featuring news and market information pertinent to the user's enterprise and geographic location. MLA's aim is to improve accountability to levy payers and to share the existing online resources more effectively through improved delivery.

Pastoral Profit program

Producers in the pastoral zone can ramp up their business skills with the support of a new MLA and Australian Wool Innovation-funded program to boost farm profits. The *Pastoral Profit* program is regionally customised and features multiple delivery platforms including webinars, phone conferences and online resources, as well as face-to-face tutorials. Its launch webinar in June 2015, featuring agricultural consultant and livestock profitability specialist Dr Phil Holmes and pastoral producer Andrew Miller, attracted 120 producers. The program, which runs for three years, aims to upskill producers to make informed decisions on the business and management options they have available.

Farm300

More than 300 beef and sheep producers Australia-wide participated in Farm300, a program aimed at improving producers' awareness and skills at reducing on-farm emissions while also increasing productivity. The two-year, $950,000 project, funded by the Federal Government and managed by MLA, finished in May 2015 and succeeded in training 128 advisors and 333 producers to manage emissions. Two-thirds of the participants intended to implement practice change as a result and the program has significantly enhanced the online resources available to producers. Economic modelling from the program showed reductions in emissions and increases in profit were possible.

Extension delivers practice change and profitability

Producers involved in the MLA-funded *More Beef from Pastures* (MBfP) program lifted their average net on-farm income by $6,000 per business. A two-year review of the program's efficacy also showed that 75 per cent of producers who participated made changes they said they would, or made another change, as a direct result of attending MBfP.

Similarly, an in-depth review of the *Making More From Sheep* (MMFS) program showed participants gained an additional $10/ha in income, on average, and 76 per cent of all attendees were making changes to their business following workshops.

After attending MMFS workshops, 98 per cent of attendees said they had increased confidence to adopt practice change and 56 per cent said they had decreased their stock losses as a direct result of applying their workshop learnings on farm. The review also showed that 89 per cent of participants felt they had increased their knowledge and skills and 85 per cent observed improved animal wellness on their farms.

Supporting industry integrity and sustainability

MLA invests in programs that support industry's environmental, animal welfare, community communications and workforce sustainability practices.

Objectives under this strategic imperative include:

4.1 Support on-farm environmental sustainability

4.2 Support off-farm environmental sustainability

4.3 Provide industry with solutions to meet high standards of animal welfare without reducing productivity levels

4.4 Support industry's effective engagement with the community

4.5 Develop sustainable innovation capability within the industry and its service providers

Australian Government National Research Priorities:

- An environmentally sustainable Australia
- Frontier technologies for building and transforming Australian industries

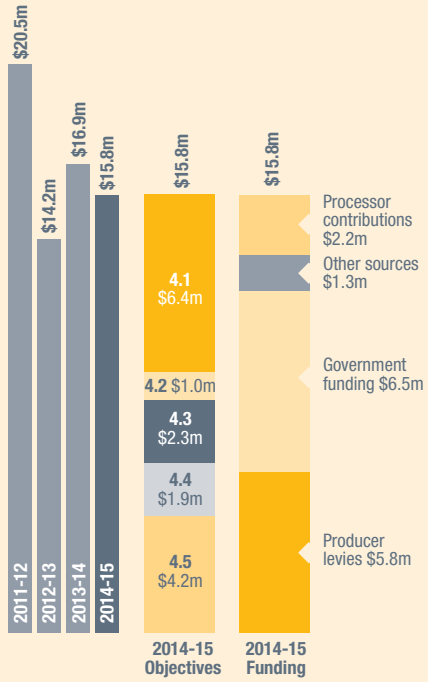
Australian Government Rural Research and Development Priorities:

- National resource management
- Climate variability and climate change
- Innovation skills
- Technology

Delivering MLA business units:

- On-farm Innovation and Adoption
- Communications and Stakeholder Engagement
- Value Chain Innovation

INVESTMENT



An additional $4.4 million was attracted in voluntary contributions, matched with Government funding and invested via the MLA Donor Company.

MILESTONE SCORECARD

Of 20 milestones: 14 achieved, 6 not achieved

KEY ACHIEVEMENTS

An Australian first

The commissioning of a new waste-to-energy plant at Oakey Abattoir is the first time the COHRAL™ technology from Europe has been used in Australian meat processing (see page 59).

Rabbit control

The isolation of K5, a strain of rabbit haemorrhagic disease virus (RHDV), will target rabbits in cooler, wetter regions where RHDV is currently less effective, helping to minimise the impact of Australia's most destructive pest (page 57).

Pain relief

Buccalgesic pain relief gel available for calves launched and NumNuts, a fast-acting pain-relieving local anaesthetic for lambs, was ready for commercialisation (pages 60-61).

Weed breakthough

Two parkinsonia biological control projects offer potential solutions to a rampant weed problem in northern Australia (pages 56-57).

Less methane

The federally funded and MLA-managed $32.8 million National Livestock Methane Program found leucaena plantations in northern cattle systems can lift productivity by up to 22 per cent and lower methane emissions by up to 20 per cent (page 57).

Utility reduction

Electricity usage in participating processing plants has been reduced by at least 3 per cent (pages 58-59).

OPPORTUNITIES

- Commercial partnerships to reduce animal welfare product development costs.
- Strategies to reduce the major energy consuming activities in red meat processing plants, such as refrigeration and the production of steam and hot water.
- Methane emissions research has opened the door to a range of new directions in productivity gains in livestock.
- Using biological controls to reduce weeds, such as parkinsonia, is not only a low-cost option for producers but further underpins Australia's clean, green image for food production.
- The establishment of new dung beetle species in temperate Australia will improve pasture growth and soil health.
- MLA-funded rabbit control research has found a way of 'recycling' viruses, addressing issues of rising immunity among rabbit populations and significantly reducing the cost of introducing new viruses.
- The 2015 release of K5, a Korean strain of rabbit haemorrhagic disease, should reduce the rabbit population in Australia's temperate regions. Further research into refining and progressing the rabbit virus 'recycling' discovery will continue.
- Discoveries from the National Livestock Methane Program have the potential to feed into the Emissions Reduction Fund methodologies.

CHALLENGES

- Replacing, refining and relieving painful animal husbandry practices.
- The red meat industry uses significant quantities of fuel and electricity in processing activities such as rendering.
- The success of dieback-inducing fungi control of parkinsonia has been proven but a commercial partner is needed to further develop this work into a market-ready product.
- For successful distribution of new dung beetle species, researchers need to better understand failures of the past and why many previously imported species have failed to persist.
- Discoveries from the National Livestock Methane Program need to be translated into extension activities, such as Farm300, to utilise productivity opportunities.

OUTLOOK 2015-16

- Develop a cost-effective method to increase adherence of dehorning patches.
- Pain relief product for sheep, developed through the MDC-Troy partnership, is due for release later in 2015.
- Research to optimise how to deliver pain relief to cattle during castration and dehorning.
- MLA and industry partners will continue to work on identifying energy efficiency opportunities and implement new energy-smart technologies.
- *Target 100* will market learning guides with MLA-developed content to schools around Australia (via video-conferenced lessons).
- A second YouTube series showing on-farm practices and addressing community questions, following from #GoodMeat, will be developed in 2015-16.
- Refining mass rearing techniques will enable the new imported dung beetle species to be distributed over more locations.
- During 2015-16 MLA will continue its research and extension work on livestock methane emissions.
- MLA will continue its partnership with the Invasive Animals Cooperative Research Centre.
- An additional 145 growers have agreed to conduct demonstration trials for the coming silverleaf nightshade season.

FAST FACTS 2014-15

#GoodMeat YouTube videos have received
200,000 views

The lack of dung beetles in temperate Australia in late winter/early spring represents an
annual loss of 17-25%
of potential benefit

National Livestock Methane Program research shows that with the right tools and strategies, up to
40% or more
of feed energy that is lost in methane, can be captured and put to productive purpose

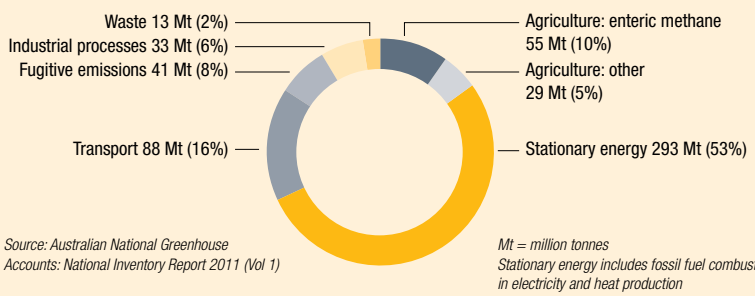
People are eating less red meat for perceived environmental or animal welfare reasons

Environment ⬆ 3.9% in 2015 from 2.6% in 2010

Welfare ⬆ 3.3% in 2015 from 0.7% in 2010

Source: Pollinate research, 2015

Major sources of greenhouse gas emissions in Australia (CO_2-e Mt)



Source: Australian National Greenhouse Accounts: National Inventory Report 2011 (Vol 1)

Mt = million tonnes
Stationary energy includes fossil fuel combustion in electricity and heat production

Supporting industry integrity and sustainability

OBJECTIVE 4.1

Support on-farm environmental sustainability

MLA supports the livestock industry to further its environmental sustainability through R&D focused on improving natural resource management, responding to climate change and increasing productivity while demonstrating environmental stewardship.

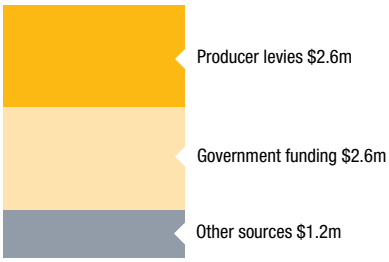
STRATEGIES

4.1.1 **Manage** natural resources

4.1.2 **Respond** to climate change

INVESTMENT

$6.4 million



'Other sources' includes funding from the Department of Agriculture for the National Livestock Methane Program.

An additional $56,000 was attracted in voluntary contributions ($28,000) and matched Government funding ($28,000) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- controlling major weed species
- new invasive animal controls
- self-assessment tools for natural resource management
- research into reducing greenhouse gas emissions and adapting to climate variability

KEY MILESTONES

Documented evidence indicating 10,000ha of perennial summer weed infected areas in southern Australia are under best management during the 2014-15 control season	
Achieved	RESULT: Up to 51,000ha of infected land is under best management from the 2014-15 season
Implementation of parkinsonia control in northern Australia with the registration and commercialisation process underway for a bioherbicide and looper caterpillars released at six locations	
Achieved	RESULT: Two species of looper caterpillars have been released at 72 sites across northern Australia. One species 'uu' has been confirmed as established and is spreading. A registration application of a bioherbicide for parkinsonia has been completed and is being assessed by the Australian Pesticides and Veterinary Medicines Authority
Release of starter colonies of the dung beetle *O. vacca* at three sites across southern Australia, and commencement of mass rearing of *O. vacca* and *B. bubalus* with collaborators for public releases in spring 2015	
Not achieved	RESULT: Release of starter colonies has occurred at three locations. No (lab) mass rearing program was commenced due to budget reduction
Development of a strategy for investment in climate adaptation with contracting of two significant projects	
Not achieved	RESULT: A climate adaptation strategy has been developed and presented to peak councils for review. No projects have been contracted due to budget reduction
Incidence of heat stress events in Australian feedlots for a range of future climate variability scenarios established and reported to industry	
Achieved	RESULT: Project was completed and the final report is available on the MLA website
Benefit of lignite as an ameliorant for feedlot manure nitrogen-based greenhouse gas emissions established and reported to industry	
Not achieved	RESULT: Experimental work has been completed and the final report is currently being reviewed. Information will be made available to industry later in 2015

OBJECTIVE HIGHLIGHTS

Parkinsonia – bioherbicide and loopers

Parkinsonia, one of the 20 Weeds of National Significance that occupies more than 3.5 million hectares across northern Australia, was the target of an MLA-funded bioherbicide project. Involving large-scale field trials across Western Australia, Northern Territory and Queensland, the project proved the feasibility of using a dieback fungi, in capsule form, as a control agent. Successful dieback was achieved in all trees and a co-treatment with a low dose of herbicide (glysophate) stimulated infection, particularly in very healthy populations. In densely populated locations, tree-to-tree spread was also successful. Storage and viability testing of the bioherbicide capsule found it remained active after 12 months at 4 degrees celsius and was still viable after nine months at 25 degrees, demonstrating it would be compatible with standard transport and storage conditions. Two successive MLA projects (2007–2010 and 2010–2013) funded the discovery and testing of biocontrol agents for parkinsonia.

MLA is also supporting the mass rearing and release of two parkinsonia loopers, non-descript moths whose juveniles are caterpillars that defoliate parkinsonia. More than 600,000 agents have been released across Queensland and Western Australia with six nursery sites across four regions. Releases will progress in the Northern Territory from 2016. Plant inspections up to 5km from release sites have shown the agent is established and spreading.

Release of dung beetle starter colonies

An MLA-funded dung beetle project aims to improve soil health and pasture growth in temperate Australia through the importation of two new climate-matched dung beetle species. It is hoped *Onthophagus vacca* and *Bubas bubalus*, from France and Spain, will address a dearth of early spring-active beetles, particularly in the cattle grazing areas of temperate Australia. More than 50 species have been imported and released across Australia since the 1970s and 23 species have established. Tunnelling and dung burial by the beetles improves water penetration, soil aeration and movement of nutrients to the root zone, improving pasture growth and soil health. MLA has funded CSIRO to import the beetles, acclimatise them and refine mass rearing methods to speed up generation time and reduce premature deaths. The beetles were released at five sites across southern Australia during 2014 and field rearing was established at three sites in South Australia. It is hoped beetles will be recovered within three to five years, enabling further distribution.

Feeding red macro-algae has the potential to lift productivity and reduce emissions in cattle and sheep **by up to 60%**

National Livestock Methane Program

Managing livestock methane emissions has become an increasingly important issue for Australian producers which is why MLA became a key partner in the Commonwealth Government's $32.8 million National Livestock Methane Program. From 2012 to 2015, researchers confirmed close links between lower methane emissions and productivity gains and formulated management practices and techniques producers can use now to improve sustainability and increase productivity. One example includes using leucaena plantations in northern cattle systems to lift productivity by up to 22 per cent and lower methane emissions by up to 20 per cent. Research findings are also being applied and extended in other areas such as influencing Emissions Reduction Fund methods, allowing producers to claim carbon credits as well as reap the production benefits.

Methane is a potent greenhouse gas and in Australia about **10% of all national emissions,** and two-thirds of agricultural emissions, come from enteric methane produced by cattle and sheep

Pest animal control

MLA is committed to reducing the impact of pest animals on the red meat industry through its investment in the Invasive Animals CRC, a $72 million, 27-partner collaboration. Through this mechanism MLA continues to support both tactical and strategic research for new control methods.

Rabbits continue to be Australia's most destructive pest, costing agriculture more than $200 million annually. During 2014-15, MLA-funded research resulted in the discovery of new biological controls which will form part of our future integrated management approach. Bioprospecting revealed a new South Korean strain of rabbit haemorrhagic disease virus (RHDV), formerly known as calicivirus. The new K5 strain will target rabbits in cooler, wetter regions where a benign strain of calicivirus has provided temporary protection from RHDV infection. Other MLA research, in conjunction with CSIRO, is investigating the use of natural selection processes to produce new RHDV strains that are able to overcome immunity and potential resistance to existing RHDV strains. If successful this would enable a continuous supply of suitable RHDV strains for subsequent release that could sustainably address Australia's rabbit problem.

Supporting industry integrity and sustainability

OBJECTIVE 4.2

Support off-farm environmental sustainability

MLA conducts R&D in collaboration with AMPC to identify strategies to mitigate and manage the impact of meat manufacturing on the natural environment and capture beneficial effects and practices.

STRATEGIES

4.2.1 **Research** to improve resource use efficiency

4.2.2 **Develop** technologies, tools and procedures that contribute to improved waste management systems and value add to waste products

4.2.3 **Develop** mitigation strategies to reduce greenhouse gas emissions

4.2.4 **Engage** industry stakeholders to demonstrate environmental stewardship and to respond to emerging regulatory and market requirements

4.2.5 **Improve** industry capability, knowledge and adoption of new technologies and processes to achieve sustainable resource management and adaptation to climate change

KEY MILESTONES

New technologies or processes capable of reducing the total electricity usage for meat plants by 2 per cent are defined and/or validated

Achieved — **RESULT: Projects identified that reduce electricity use by at least 3 per cent**

New technologies or processes capable of reducing abattoir town water consumption by 2 per cent are demonstrated and/or validated

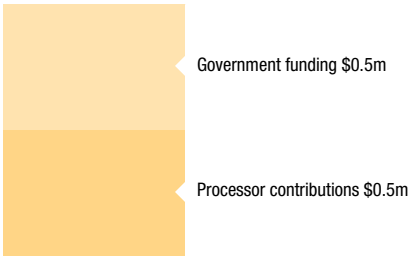
Achieved — **RESULT: Research found that average potable water usage in the industry was down 8 per cent. An economic assessment tool for a plant to evaluate any proposed recycled water scheme was developed**

At least two off-farm pre-commercialisation innovations have achieved at least 80 per cent of their annual adoption strategy targets

Achieved — **RESULT: Covered anaerobic lagoons and energy saving technologies have achieved 80 per cent of their annual adoption strategy targets**

INVESTMENT

$1.0 million



An additional $1 million was attracted in voluntary contributions ($0.3 million), processor contributions ($0.2 million) and matched Government funding ($0.5 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- reducing resource use (water and energy)
- generation of clean energy
- more effective waste treatments
- greenhouse gas mitigation

OBJECTIVE HIGHLIGHTS

Reduced electricity usage in meat plants

MLA Donor Company (MDC) (which doesn't use producer levies) projects surpassed their target of reducing electricity usage by 2 per cent in red meat processing plants across Australia. These included a project to reduce gas consumption at the Thomas Foods International plant at Murray Bridge, SA, where increasing the efficiency of boilers and utilising biogas could contribute to a 3 per cent energy saving per annum. A feasibility study at a plant in Victoria identified that switching from commercial-type Freon refrigeration equipment to a centralised industrial system could reduce the site's power consumption by 28.8 per cent. A third project identified opportunities such as refrigerator and boiler upgrades which could save 8 per cent of another site's total annual energy usage.

3% energy saving
by using biogas and increasing boiler efficiency

Anaerobic pond at Oakey

The development of an innovative, covered, high-rate anaerobic lagoon (COHRAL™) to treat wastewater at the Oakey Abattoir in Oakley, Qld via the MDC is progressing, with the wet and biological commissioning phase taking place in April 2015. This involved using 'seed sludge' from a nearby sewage treatment plant to commence the biological activity in the system. The treatment plant is expected to reach full operation by late 2015. The COHRAL™ technology will harness methane-rich biogas from the facility's wastewater in the existing anaerobic lagoon system. It has potential to cut the plant's gas usage by 20 per cent and reduce CO_2 emissions by 15,000 tonnes per year.

First time
COHRAL™ technology from Europe has been used in Australian meat processing

Turning the sod at the new waste-to-energy technology project at Oakey Abattoir: (L-R) Michael Bambridge – managing director of CST Wastewater Solutions, Pat Gleeson – general manager of Oakey Abattoir and the then Federal Minister for Industry, Ian Macfarlane.

Filling the knowledge gap on lagoons

The MLA Donor Company (MDC) (which doesn't use producer levies) funded research, along with the Australian Government and the Australian Meat Processor Corporation, to consolidate industry knowledge and research on Covered Anaerobic Lagoon (CAL) technology, the production and utilisation of biogas from lagoons and how to manage wastewater to treatment to maximise biogas production and end of pipe wastewater quality.

The research was carried out in two stages using CAL technology at the Murray Bridge, SA abattoir operated by Thomas Foods International (TFI). TFI processes four megalitres of wastewater a day, which is then used to irrigate 120 hectares of pasture.

The first stage of research focused on the most effective design of a CAL, along with effective automated sludge removal and biogas collection and handling. The research found that the preferred design was a Dissolved Air Flotation unit without a polymer addition, because the polymers significantly inhibited biogas production.

Stage two investigated the ideal organic load for CALs to enable maximum biogas production, while avoiding overloading and crust accumulation that leads to treatment failure. The research identified many important learnings, including that the pH balance (which should be greater than 6.5) and ensuring a consistent flow of wastewater into the CAL were important for the system to run effectively.

Together with allowing TFI to treat their wastewater to a high standard, the optimised CAL technology has enabled the equivalent of 13,000 (9kg) barbecue gas bottles of biogas to be captured each week and used by the plant as energy, saving 30 per cent of plant requirements. TFI has saved the equivalent of 27,200 tonnes CO_2-e of greenhouse gas emissions per year.

Supporting industry integrity and sustainability

OBJECTIVE 4.3

Provide industry with solutions to meet high standards of animal welfare without reducing productivity levels

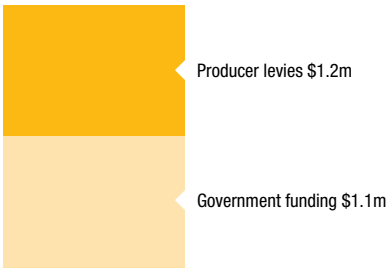
MLA invests in R&D to create cost-effective opportunities for industry to support continuous improvements in the welfare of livestock being raised, handled, transported and processed in Australia.

STRATEGIES

4.3.1 **Manage and improve** livestock welfare to meet community expectations

INVESTMENT

$2.3 million



An additional $0.5 million was attracted in voluntary contributions ($243,000), processor contributions ($24,000) and matched Government funding ($267,000) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- pain relief for aversive procedures
- promoting and measuring animal welfare standards on farm and at processing establishments

KEY MILESTONES

Uptake and use of the polled gene marker test by 10 Brahman bull breeders	
Achieved	RESULT: 10 Brahman bull breeders use the poll gene marker test
Evaluation and monitoring of MLA co-funded predator control projects within the Invasive Animals Cooperative Research Centre (IACRC)	
Achieved	RESULT: Evaluation and monitoring of IACRC projects achieved. Corrective actions were identified for two projects
Euthanasia guidelines for feedlot cattle developed and series of workshops to introduce them to industry completed	
Not achieved	RESULT: Guidelines have been completed and are undergoing final review before they are released to industry. MLA/ALFA are developing timelines for workshops in 2015-16 where the guidelines will be introduced to industry
Significant progress towards commercial release of an alternative to surgical spaying of cattle	
Not achieved	RESULT: Two MDC programs were unable to be negotiated due to differing objectives regarding intellectual property. A vaccine option is still underway
One new practical product that gives pain relief for castration developed	
Achieved	RESULT: Buccalgesic for cattle released May 2015 and NumNuts, a device which injects a fast-acting pain-relieving local anaesthetic into lambs while applying rubber rings for castration and tail docking, is ready for commercialisation

OBJECTIVE HIGHLIGHTS

Dehorning patch

MLA-funded research has delivered a simple, practical strategy for producers to enhance animal welfare after dehorning. Although there is a major shift in the north Australian beef industry towards breeding polled cattle, dehorning is still practised, which can cause frontal sinus exposure.

11% reduction
in infection due to gauze dehorning patches

Dehorning can contribute to the loss of 1 per cent of dehorned calves a year in northern cattle operations. In the trial at Mittiebah Station on the Barkly Tableland Qld, biodegradable gauze patches (swabs) placed on dehorning wounds reduced haemorrhaging, cut infection by 11 per cent and sped up healing.

54 cents per head
cost of purchasing and the labour of applying patches when dehorning

Effective application of swabs could replace the traditional application of chemicals used for insect and infection control.

Needle-free pain relief

A new easy-to-administer pain relief product for calves hit the market in April 2015, funded by a million dollar partnership between the MLA Donor Company (which doesn't use producer levies) and Troy Laboratories Australia. Buccalgesic (which producers can source through their veterinarians) is the first practical product for extensive enterprises.

The gel formula allows rapid absorption via the mouth, becoming effective six minutes after application, with pain relief lasting up to 48 hours. Buccalgesic replaces previous injected products which presented operator-safety, carcase-quality and welfare issues. It has a withholding period of 14 days and an export slaughter interval of 21 days.

90 cents per head per dose
cost to administer Buccalgesic to a 60kg calf prior to dehorning, mostly for labour

More pain relief products on the way

MLA's animal welfare commitment is to replace, refine and relieve painful animal husbandry practices.

Buccalgesic

A commercial partnership between the MLA Donor Company (MDC) (which doesn't use producer levies) and Troy Laboratories Australia saw the release of the pain relief product, Buccalgesic, in April 2015 (see left). The MDC-Troy partnership has also produced a similar pain relief product for sheep (see image above), which is due to be released later in 2015.

NumNuts

A new device – known as NumNuts – which injects a fast-acting pain-relieving local anaesthetic into lambs while applying rubber rings for castration and tail docking is ready for commercialisation. The device has been developed by Scotland's Moredun Research Institute with funding from MLA and Australian Wool Innovation.

Dr Matthew McDonagh, MLA's General Manager of On-farm Innovation and Adoption, said he expected the device would generate significant animal welfare and production benefits.

"The availability of a single, rapid pain-relief tool for tail docking and castration would also help livestock producers get on the front foot in demonstrating to consumers and the community that our industry is focused on continuous improvement in animal welfare," Dr McDonagh said.

Supporting industry integrity and sustainability

OBJECTIVE 4.4

Support industry's effective engagement with the community

MLA supports industry bodies and individual producers to authentically communicate the integrity of livestock production practices to the broader community and demonstrate industry's commitment to improvements underpinned by science.

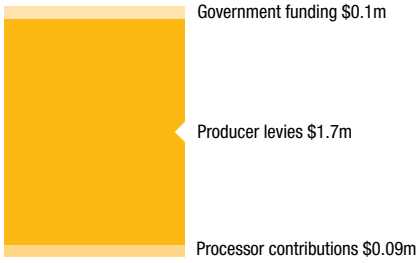
STRATEGIES

4.4.1 **Support** the industry to maintain the community's trust and confidence in the integrity and ethics of the Australian red meat industry by building knowledge and providing experience

4.4.2 **Equip and empower** producers and their representatives to build our industry's reputation through facts and engagement

INVESTMENT

$1.9 million



In 2014-15 this investment included:

- continued building of the *Target 100* program to showcase industry sustainability
- incorporating education materials and resources to schools
- industry social media capability
- participation in urban events to reach key influencers

KEY MILESTONES

Increase engagement in *Target 100* by 10 per cent through the key platforms of the website, social media channels and events

Achieved

RESULT: Engagement with *Target 100's* social platforms saw YouTube video views increase 720 per cent; Facebook likes increase 304 per cent; Twitter followers increase 31 per cent; and visits to the *Target 100* website increase 32 per cent

300 producers actively engaged in industry advocacy activities utilising MLA-developed resources

Achieved

RESULT: 350 producers involved in *Target 100*, including 100 who attended advocacy events at Beef Australia

Percentage of consumers stating they are reducing red meat consumption due to perceived animal welfare reasons is below 5 per cent

Achieved

RESULT: Reduction in red meat consumption for animal welfare reasons was 3.3 per cent, higher than the 2.8 per cent in 2014

Percentage of consumers stating they are reducing red meat consumption due to perceived environmental reasons is below 5 per cent

Achieved

RESULT: Reduction in red meat consumption for environmental reasons was 3.9 per cent, higher than the 2.2 per cent in 2014

OBJECTIVE HIGHLIGHTS

#GoodMeat

Target 100 developed a three-part, 12-episode YouTube series to explore community perceptions about how beef is produced. The program took animal enthusiast Andrew Ucles, chef Guy Turland from Bondi Harvest and Channel Ten's *Bondi Rescue* lifeguard Andrew Reid on a journey to discover why Australian beef is good meat. Each of the hosts explored a topic – animal welfare in Australian feedlots, climate change from methane emissions, and protecting the Great Barrier Reef from sediment run-off – through farm visits, discussions with experts and research projects. The videos were released weekly from 11 March and received 200,000 views, an average of 15,000 views per episode. The series was supported by an online and social media campaign which included the three personalities promoting the series through their own extensive social media networks. During the 12-week campaign, *Target 100* more than doubled its Facebook 'likes', from 6,000 to 15,000. A second YouTube series will be developed in 2015-16.

#GoodMeat YouTube videos
200,000 views

Target 100 Facebook likes jump from 6,000 to
15,000 in 12 weeks

School curriculum update

In 2014-15, *Target 100* developed and released three primary school learning guides to accompany the previous five high school resources. The materials align with the Australian Curriculum and were developed for students to study sustainability in food production, in order to respond to food security issues in Australia and around the globe. Three interactive digital learning tools supporting the three new guides were also launched on the *Target 100* website, designed to be used on electronic whiteboards in schools. Through its membership of the Primary Industries Education Foundation Australia, MLA also contributed to the development of 17 study guides across all year levels, and learning areas, as part of the Federal Government's Agriculture in Education initiative. The guides were launched in May 2015 by the then Minister for Education and Training, the Hon Christopher Pyne MP.

3 new learning guides
developed for primary schools

Consumption metrics

Concerns in the community about animal welfare, environment and different production systems have the ability to impact the trust of consumers domestically and in export markets. Currently, concern for these issues is limited to a small segment of the population, with more than 60 per cent of Australian consumers having no concerns about the industry. However, MLA consumer research shows an increase in the percentage of people eating less red meat for perceived environment or animal welfare reasons over the past five years. In 2015, 5.9 per cent of people reported eating less red meat due to concern with environment/animal welfare.

5.9% of people
report eating less red meat due to environment/welfare concerns

#GoodMeat feedlot series

In the first #GoodMeat YouTube series, wild man and animal enthusiast Andrew Ucles (pictured above left) heads to Gundamain Feedlot, near Orange NSW, run by Tess and Andrew Herbert (on right), to investigate animal welfare in Australian feedlots. He talks to animal welfare scientist Dr Andrew Fisher, learns about feedlot design and animal husbandry, and even taste tests the ration and tries his hand as a pen-rider. In the second episode, Andrew Ucles cooks rump cap and eye fillet on a homemade spit and grill. These two 'journey' episodes are supported by an animated video which debunks some common myths and explains the role of feedlots in Australia and a Q&A session where Andrew responds to questions asked by the social media community. The four episodes on animal welfare in feedlots received the most views of the three topics with 72,500 views, including 28,831 for the feedlot visit.

Supporting industry integrity and sustainability

OBJECTIVE 4.5

Develop sustainable innovation capability within the industry and its service providers

MLA supports industry innovation and research strategies by working to ensure industry has appropriately skilled people both at the enterprise level and among research providers.

STRATEGIES

4.5.1 **Work** with stakeholders to promote opportunities for innovative people and processes across the industry

4.5.2 **Collaborate** with industry to implement professional and skills development programs

4.5.3 **Support** the development of essential science, research, technical and extension capabilities

KEY MILESTONES

Initiate strategic investments developed from the education pipeline review and business plan

Achieved

RESULT: Mackinnon residents' program and Livestock Consulting Internship program both commenced to upskill graduates as farm advisers for the red meat and livestock industry

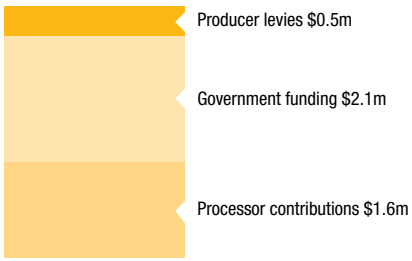
All collaborative innovation partners meet at least 80 per cent of their documented innovation strategy KPIs

Not achieved

RESULT: The weighted average across all program participants was greater than 80 per cent of innovation KPIs being achieved. All but one innovation partner achieved 80 per cent of their innovation KPIs for 2014-15

INVESTMENT

$4.2 million



An additional $2.8 million was attracted in voluntary contributions ($0.8 million), processor contributions ($0.6 million) and matched Government funding ($1.4 million) for investment via the MLA Donor Company.

In 2014-15 this investment included:

- supporting enhancing science and technical skills and increasing general innovation skills within enterprises and supply chains
- ensuring long-term R&D capability is available in required disciplines

OBJECTIVE HIGHLIGHTS

Collaborative Innovation Strategies Partnership program update

MLA's Collaborative Innovation Strategies Partnership (CISP) program continues to co-develop innovation capability within red meat value chains. In 2014-15, the MLA Donor Company (MDC) (which doesn't use producer levies) worked with 13 value chains, representing 66 per cent of the industry's total processed livestock. Overall, there has been more than 80 per cent achievement of innovation performance indicators set by all but one of these clients. These include increasing the number of value-added products to market, reducing utility consumption and waste generation and increasing investment in innovations. Through the program, MLA also helped deliver workshops to more than 400 producers, allowing producer programs to be run by companies to provide farm-gate premiums for livestock which meet market requirements. The program has secured partner investment for long-term transformational objective measurement projects. CISP's focus has broadened from individual enterprises to complete value chains. This involved establishing 'flagship value chain programs' so the industry can develop whole-of-value chain innovation programs to respond to market diversification opportunities.

MLA's CISP partners represent **66% of processed livestock**

WA value chain program update

The MDC invested in two new projects in Western Australia during the year. The four-year programs, funded by Department of Agriculture and Food WA (DAFWA) Royalties for Regions, build on the success of the Beef Industry Change Program (an initiative between MLA, the WA Beef Council and DAFWA to develop beef supply chains). The $15 million Northern Beef Futures project aims to transform WA's northern beef industry by developing capability and infrastructure to expand markets, such as breeding heifer exports to Indonesia, boxed beef to China and offshore processing of slaughter-ready cattle. The $10 million Sheep Industry Business Innovation project aims to position the WA sheep industry as internationally competitive. The program aims to build capacity to supply new markets for sheepmeat and live exports, particularly in nearby Asia and the Middle East. Key activities include Lifetime Ewe Management and the Lamb Survival Initiative, adoption of genetic technologies (using the MLA co-funded Resource Flock at Katanning), and industry placements and study tours (see story at right).

The Northern Beef Futures project aims to help transform more than **110 pastoral beef** businesses in the Kimberley and Pilbara into a resilient, prosperous industry

A Sheep Industry Business Innovation project goal is that by 2018, **4 million ewes, or 50% of WA's ewe flock** will be managed by producers who have completed Lifetime Ewe Management training

JBS Farm Assurance

Through the MLA CISP, a core activity has been supporting processor JBS in developing a farm assurance program. This program is one of the largest of its kind and the only grassfed, multi-species branded program in Australia. JBS Farm Assurance involves more than 2,000 lamb and beef suppliers, who produce high quality grassfed meat to suit specific market requirements and consistently meet food safety and animal welfare standards in their farming practices. Last year the program delivered $19 million in farm-gate premiums for program suppliers. A specific CISP investment was funding a Masters student, Jose Webb, to manage the rollout of Livestock Data Link across JBS's Farm Assurance program and develop the useability of the feedback system and user capability (see page 49).

Grand result from China tour

A tour to China in July 2015 not only gave West Australian producer Neville McDonald (pictured above left, next to Kelvin Flugge, Department of Agriculture and Food WA), seven other sheep producers and industry representatives an insight into the supply chain and market requirements, but saw a Memorandum of Understanding (MOU) signed by MLA, V&V Walsh, Grand Farm Group and Department of Agriculture and Food, WA (DAFWA) to supply an additional 500,000 lambs per year into Grand Farms' Chinese distribution channels.

The tour was part of MLA's involvement through the MLA Donor Company (which doesn't use producer levies) to co-invest in a number of targeted, strategically-aligned programs within the $300 million DAFWA Royalties for Regions program to secure the profitability and sustainability of WA's food and agriculture sector (see 'WA value chain program update' at left).

MLA will use the V&V Walsh and Grand Farm supply chain model to develop other projects which aim to sustainably increase lamb production and improve supply chain efficiencies and returns to producers.