

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

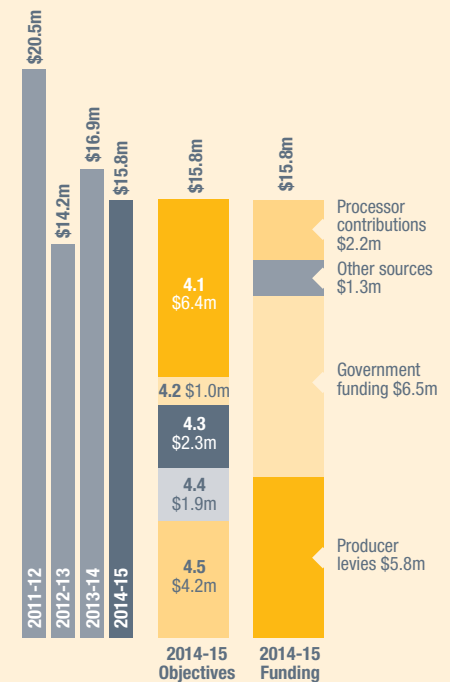
Australian Government Rural Research and Development Priorities:

- 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).



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).

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).



Weed breakthrough

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

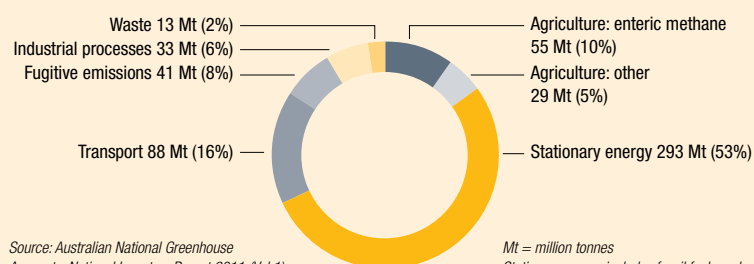
People are eating less red meat for perceived environmental or animal welfare reasons

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 (CO₂-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.

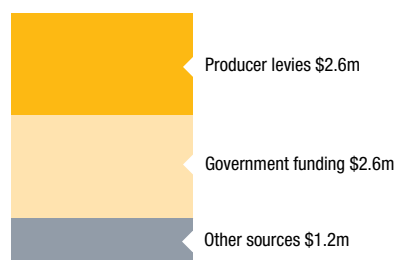
↑ STRATEGIES

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 (glyphosate) 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

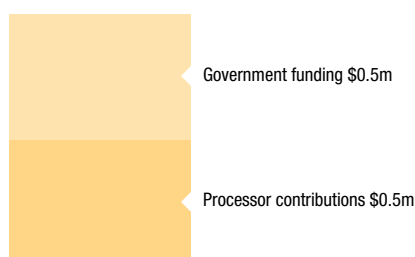
Support off-farm environmental sustainability

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	🔑 KEY MILESTONES
4.2.1 Research to improve resource use efficiency	New technologies or processes capable of reducing the total electricity usage for meat plants by 2 per cent are defined and/or validated
4.2.2 Develop technologies, tools and procedures that contribute to improved waste management systems and value add to waste products	Achieved → RESULT: Projects identified that reduce electricity use by at least 3 per cent
4.2.3 Develop mitigation strategies to reduce greenhouse gas emissions	New technologies or processes capable of reducing abattoir town water consumption by 2 per cent are demonstrated and/or validated
4.2.4 Engage industry stakeholders to demonstrate environmental stewardship and to respond to emerging regulatory and market requirements	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
4.2.5 Improve industry capability, knowledge and adoption of new technologies and processes to achieve sustainable resource management and adaptation to climate change	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 CO₂ 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 CO₂-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, carcass-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.

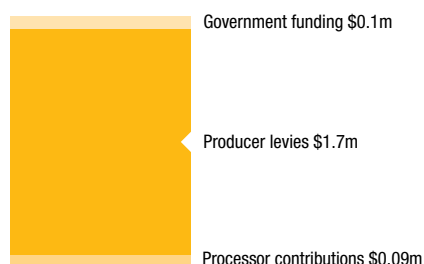
↑ STRATEGIES

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

#GoodMeat YouTube videos
200,000 views

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

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.

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

**3 new learning
guides**
developed for primary
schools

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.

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

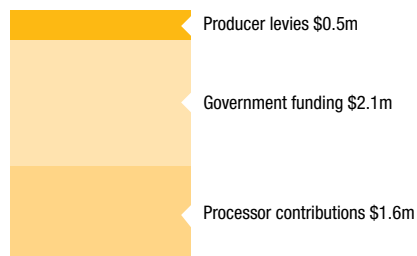
Not achieved

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

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

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).

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.