

eating quality

evaluationseries 2.1 Achieving consistent

Eating quality The industry impact

PROMISE

Differentiation of product quality leading to higher demand for Australian beef and lamb.

PROGRESS

More than 2.4 million head of cattle and 5.4 million sheep have been graded under the Meat Standards Australia (MSA) quality system, which underpins 82 brands and more than 2.400 retailers and other end users.

PERFORMANCE

A total industry investment estimated at between \$319 million and \$396 million for the 13-year period under review (1998-99 to 2010-11) is expected to return a total industry benefit of \$1.45 billion in present value terms over 20 years to 2019-20. This represents a benefit-cost ratio between 3.7 and 4.5 to 1.

Eating quality

Where we started

MLA's eating quality program was developed as a major component of MLA's strategic imperative to grow demand for red meat. The program's objective is to equip the industry with the tools and knowledge to produce red meat of improved, consistent and predictable eating quality. This will ensure consumer satisfaction and support market share in the face of adverse market conditions such as rising prices. The program also aims to ensure that the industry can cost-effectively implement improvements or changes in procedures along the value chain that positively impact on the consumer experience.

A strategic response

MLA's eating quality program includes a large number of activities in four main areas:

- research and development
- training and extension
- scheme integrity
- marketing and retail communications

Since 1998 the industry, through MLA and the Australian Meat Processor Corporation (AMPC), has spent about \$105.4 million on eating quality initiatives. This translates to an average of \$8.1 million each year, with an 85 per cent contribution from the beef industry and 15 per cent from the sheepmeat industry.

About 8 per cent (\$8.7 million) of this investment has come from non-levy sources including fees paid by processors to become accredited for the Meat Standards Australia (MSA) program.

What we did

The cornerstone of MLA's eating quality program was the creation of the flagship MSA initiative in 1999, involving all sectors of the supply chain from paddock to plate.

MLA-backed research and development (R&D) produced management strategies and genetic options that helped producers to establish a 4.6 million head cattle population that could be a potential annual supply base for MSA beef. The record 2.4 million head of cattle MSA-graded in 2012-13 means that about 50 per cent of these animals are already part of the MSA program. The challenge is to engage a proportion of the remaining 2.2 million head of cattle.



What we've achieved

MLA's eating quality program is an overall success story. More than two million beef carcases are graded each year, attracting significant premiums at retail level for higher value beef cuts.

- In 2012–13, more than 2.4 million beef carcases and 5.4 million lamb carcases were MSA graded
- About 30,400 producers and 51 processors have become MSA accredited, the quality system underpins 82 brands, and more than 2,400 end user outlets are MSA licensed
- MSA is used almost exclusively for beef and lamb sold to the domestic market. The awareness of graded product in export markets is very limited

In 2012-13, beef retail premiums were \$1.48 per kilogram higher on average across all graded primals and cuts than the equivalent ungraded product (see Figure 1).

Figure 1: MSA average price differentials (retail) by cut, 2009-10 to 2012-13

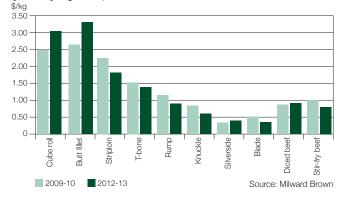


Figure 2: Estimated market penetration of MSA since 1999-2000

kt product weight

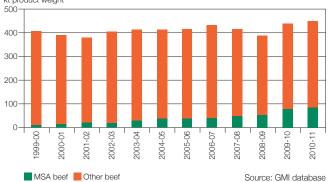
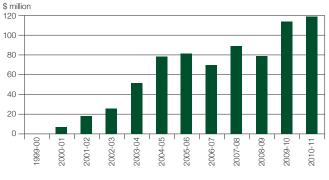


Figure 2 (above) illustrates the estimated market penetration of MSA beef since 1999-00. In 2010-11, the estimated MSA beef yield (average 87,000 tonnes) represented about 19 per cent of domestic disappearance (volumes across all channels). With demand for all red meat unchanged, the increasing share of MSA product in the market confirms that the consumer is beginning to develop a preference for MSA branded product.

MSA boosts retail value

In 2010–11, \$119 million in additional value resulted from selling MSA product. This figure represented a \$5 million increase on the previous year, when a fall in the average premium was partially offset by higher product volumes (see Figure 3 below).

Figure 3: Additional value from MSA beef sales



Source: MLA

MSA lamb benefits difficult to calculate

There is no routine data collection for retail premiums on MSA lamb sold in the domestic market. This reflects a number of factors:

- MSA for sheep is less sophisticated than for beef, as it is based on a mob or lot rather than on individual cuts
- Given strong current market conditions for lamb at retail and through saleyards, it is widely recognised that processors may not be able to command a premium as a result of being MSA accredited
- For some supermarket customers, MSA Sheepmeat has been incorporated directly into the minimum specifications of supply so that a premium cannot be observed

It is therefore difficult to conduct an analysis of sheepmeat that parallels that of beef. The logical conclusion is that benefits to processors, in terms of prices received and contract terms, must equal their additional supply costs in providing sheepmeat to specification.



Electrical stimulation

From 2004-05 onwards, MLA invested about \$2.5 million each year in electrical stimulation until 2008-09, when funding increased to \$3.5 million. R&D activity subsequently ceased.

The total MLA, AMPC, industry and partnership (Meat and Wool New Zealand (MWNZ), Real Cold MilMech, Ag Research (NZ) investment in electrical stimulation over the evaluation period is estimated at \$14.5 million in nominal terms.

Benefits of electrical stimulation

The total benefits of electrical stimulation, in terms of improved eating quality for beef and sheepmeat, are impossible to quantify because there is insufficient information to calculate adoption across the entire sheepmeat and beef production base.

The widespread adoption of electrical stimulation by meat processors has supported improved eating quality outcomes including tenderness and meat colour and is fundamental to the MSA program. MLA has facilitated installation of electrical stimulation equipment at 40 Australian plants – 16 in beef operations and 24 in sheepmeat operations.

Electrical stimulation in processing plants must be checked on a regular basis to ensure optimal meat quality outcomes. AUS-MEAT Limited is responsible for conducting independent audits against the MSA standards.

Supply chain response to higher demand

LONG DISTANCE TRANSPORT

Significant numbers of cattle across the northern and western pastoral regions could be eligible for MSA accreditation, but are excluded under the original requirement for 'day after dispatch' processing. Recent trials have found that cattle transported for between 36 hours and 48 hours can still be eligible for MSA grading but experience a higher than average non-compliance rate.

MSA INDEX

MLA recently released the MSA index, a tool designed to allow producers and lot feeders to benchmark the eating quality potential of the cattle they produce. The tool supports effective decision making on the value of investments in genetics and on-farm management practices.

MSA OPTIMISATION TOOL

The new MSA optimisation tool enables processors to potentially harvest more MSA four and five-star cuts and reduces ageing requirements. The tool's adoption is supported by enhanced descriptions of beef quality - MSA three, four and five star through MSA branded supply chains to help inform consumer decisions.



Evolution of program and lessons learned

Lessons learned

- MSA Sheepmeat is in the early stages of adoption but will make a significant contribution to consistent lamb eating quality as large domestic end-users place greater importance on process control
- 2 The foodservice sector is an important channel for increasing future MSA penetration in the domestic market. Recent market research findings recommend refocusing efforts on trade and foodservice customers

> AUS-MEAT Limited now conducts independent audits

- against the relevant MSA standards. Non-conformance is managed through the provision of training and updated resources to ensure compliance
- 4 MSA adoption is also driven by retail outlets and other market players who want to differentiate themselves by guaranteeing eating quality, not only by pull-through from end consumers
- 5 Education and the provision of point-of-sale materials have encouraged more retailers to adopt the MSA program and motivated licensed retailers to increase the proportion of MSA in their offer, boosting retail activity
- 6 Education to promote understanding of the MSA program has increased consumer demand. Recent media campaigns have raised consumer awareness of the MSA-graded symbol, which has been refreshed to enhance consumer understanding of MSA

Fast financial facts¹

- Red meat industry 13-year investment: \$319-\$396 million*
- Direct benefits to the red meat industry: \$1,455 million**
- Benefit-cost ratio: 3.7-4.5:1
- Internal rate of return: 74.1–78.6%

¹CIE 2012, *Red meat eating quality - Recent program performance* ^{*}Costs include all investments by Cooperative Research Centres (CRCs) and processor investments in process improvements to achieve MSA compliance. Benefits have been calculated for beef only as there is no routine data collection for MSA lamb premiums.

**Present value of benefits between 1999–00 and 2019–20 using a real discount rate of 7 per cent in 2008–09 year terms.

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2012-13 impact summary

- More than 2.4 million beef carcases and 5.4 million lamb carcases were MSA graded
- About 30,400 producers and 51 processors are MSA accredited
- The MSA quality system underpins 82 brands
- More than 2,400 end user outlets are MSA licensed
- Beef retail premiums across all graded primals and cuts were on average \$1.48 per kilogram higher than the equivalent non-MSA product
- There is no routine data collection for MSA lamb premiums, however for processors MSA adoption costs must at least equal the benefits
- The value that retailers derive from their improved red meat offer, which boosts sales storewide, is difficult to measure

Figure 4: MSA timeline 1996-2014: percentage of eligible carcases MSA graded*

) 10 2	20	30	40	50	60	70	80	90	10
	BE	EF	LAMB						
Development phase		Date	Signific	ant eve	nts				
Research and development		1993	Beef CRC I						
		1996	Industry steering committee approves the National Eating Quality Assurance Scheme						
	4	1998	MSA cut x cook model formally established based on consumer survey of 420,000 samples						
		1999	MSA Beef pilot in Brisbane, Sheep Meat Eating Quality (SMEQ) Program						
Extension		2000	Beef CRC II						
		2001	First retail price premiums observed for beef						
		2002	ISO certification; Sheep CRC I						
		2003	Training and certification of company graders						
		2004	Integration of SMEQ into MSA; LVES and MVES electrical stimulation available						
		2005	MSA cut x cook model updated based on new consumer test data						
		2006	Beef CRC III; AUS-MEAT audit MSA licensees						
Growth		2007	Sheep CRC II						
		2008	Support for private company brands underpinned by MSA						
		2009	MSA cut x cook model updated to incorporate additional combinations and other enhancements						
		2010	Major national retailers adopt MSA brand						
		2012	EQ index developed and tested with industry						
Fine tuning and transition to maturity		2013	Eating quality index and custom optimisation implemented						
		2014	Sheep CRC extension						
10 2	20	30	40	50	60	70	80	90	1

* It is argued that total slaughter is not the best suited benchmark for assessing MSA adoption. This is because a significant number of the total slaughter volume would hardly ever be eligible for MSA grading.