MEAT STANDARDS AUSTRALIA

GRADED

TM

Delivering consumer confidence in eating quality **for 20 years**

A brief history

Meat Standards Australia (MSA) was released in 1998 by the Australian red meat industry to improve the eating quality consistency of beef and sheepmeat. The system is based on almost 800,000 consumer taste tests by more than 114,000 consumers from 11 countries and takes into account all factors that affect eating quality from paddock to plate.

In the early 1990s the Australian beef industry identified variable eating quality as a major contributor to declining beef consumption and committed research funding to address the problem.

The ability to predict the eating quality of cooked beef prior to consumption was identified as the key.

Consumer testing protocols were developed which led to the implementation of MSA grading standards, defined by consumer score outcomes.

Traditional carcase grading parameters have proved to be of little value in predicting consumer outcomes. Instead a broader combination of factors forms the basis of an interactive model, which accurately predicts consumer scores for almost 200 cut-by-cook method combinations for every carcase graded.

MSA highlights

MSA has conducted consumer sensory testing with more than more than **114,000** consumers on **800,000** samples of meat in **11** countries. This research determines what attributes have an impact on eating quality. Consumer sensory testing validates all developments to the MSA Model.

The MLA Impact Assessment for the period 2010 – 2015 reported a net industry benefit of **$679 million**, a benefit cost ratio (BCR) of **12.5:1** from an investment of **$54 million**, over the five-year period for the Meat Standards Australia (MSA) program.

Over the life of the program **549** people have been trained as MSA graders.

26.5 million cattle have been MSA graded, supplied by over **43,000** MSA registered cattle producers.

MSA has asked **38,000** consumers in **8** countries about their willingness to pay for varying levels of eating quality. Results indicate that compared to a pass or 'good every day quality', consumers were willing to pay:

- Half or **0.5 times** for a fail or 'unsatisfactory quality'
- **1.6 times** for 'better than every day quality'
- **2.1 times** for 'premium quality'

37.2 million sheep have been processed following the MSA pathways, supplied by **27,000** MSA registered sheep producers.

In **2017** consumer testing protocols used by MSA to support eating quality research were adopted as the global standard by the United Nations Economic Commission for Europe.

Total investment by MLA into the MSA beef and sheepmeat program since 1998 is **$167.5 million**, including Government contribution, in areas including business development, integrity programs, marketing and research and development.

18,995 producers have engaged in MSA beef and sheep information sessions or eating quality workshops.

In 2013, the MSA Index for producers was released, creating a new way to benchmark carcase performance. In 2016-17, the average MSA Index was **57.59**.

More than **15,000** retail, food service and wholesaler businesses have been trained in MSA programs.

*Figures as of 1 January 2018

Milestones

1995: Developing a language to describe eating quality variation.

Research continued to test additional measurements for pre-slaughter handling, tropical breed content, electrical stimulation, chilling rates, meat pH, fat coverage, and meat ageing, which formed the basis for the MSA requirements. Roy McDonald, a retired senior USDA grader was brought to Brisbane to train the first graders and establish training, correlation and management structures.

1998: Commercial adoption.

MSA was commercially implemented in 1998 as a voluntary program, with the licensing of two Queensland processors.

Consumer thresholds for 3, 4 and 5 star quality were determined. Initial implementation took the form of a carcase-based, pathways grading system. The original 3-star pathway required:

<25% Bos-indicus, <200 Ossification, Weight for Maturity (WAM) >0.6, pHU <5.70, pH decline window met, >3mm rib fat, >14 days ageing.

These standards allowed striploin, tenderloin and rib eye steaks to be labelled 3 star. No other cuts or cooking methods were approved at this stage.

The program evolved into a cuts-based model in 2000.

2002: International consumer research commences.

Internationally-linked research was first conducted in South Korea in 2002 using cuts from Western Australian cattle and Hanwoo cattle from South Korea. International research has demonstrated how remarkably similar consumer expectations are for eating quality worldwide.

2005: MSA Model expansion.

Based on consumer research, the Model was expanded to include 100% Bos indicus, and HGP-treated cattle and the full range of ossification scores. The consumer thresholds for eating quality (3, 4 and 5 star) were maintained.

2009: One million carcases were MSA graded for the first time in a single financial year.

In 2009-10, 1.3 million carcases were graded, representing 13% of the national cattle slaughter

2013: Introduction of the MSA Index.

The MSA Index is a single number and standard national measure of the predicted eating quality of a carcase. This provides meaningful producer feedback to benchmark performance and reflects the impact of on-farm impacts on eating quality.

2015: Inaugural 2015 Eating Quality Audit report.

For the first time in Australian history, the baseline was set for the eating quality of beef. The 2015 Australian Beef Eating Quality Audit used grading results from more than 3.2 million cattle from the 2014-15 financial year to identify the key drivers of beef eating quality, using the MSA Index as the measure of eating quality outcomes. The average MSA index was 57.61.

2017: MSA consumer sensory protocols endorsed as global standard.

The United Nations Economic Commission of Europe (UNECE) endorsed the MSA consumer sensory protocols as the global standard. MSA has conducted consumer sensory testing with more than more than 114,000 consumers on 800,000 samples of meat in 11 countries. This research determines what attributes have an impact on eating quality. Consumer sensory testing validates all developments to the MSA Model and the process has not changed in 20 years.

2018: MSA celebrates 20 years of commercial operation.

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1993: Turning a concept into an R&D program.

The Australian beef industry embarked on the largest consumer focussed eating quality research project in the world to address issues around highly variable and unpredictable beef eating quality. With Meat Research Corporation (MRC) and Commonwealth support, the first consumer tests were conducted in Melbourne, Sydney and Brisbane. Carcases were graded on existing AUS-MEAT descriptors. The Australian Lot Feeders Association (ALFA) established the Australian Meat Standards (AMS) company to implement a grading system that would support grainfed brands. Following initial research, and taking a whole-of-industry approach, AMS managed the research for MRC.

1996: National Eating Quality Assurance Scheme approved.

An industry steering committee was formed and a pilot Eating Quality Standards (EQS) scheme was launched in Brisbane the following year. Prior to its commercial launch EQS was changed to Meat Standards Australia. The consumer sensory research database was created to hold MSA research data.

2000: Sheepmeat Eating Quality (SMEQ) research program commences.

Research revealed that 20% of lamb loins in the current market failed consumer expectations. So the SMEQ program commenced to identify the critical control points of the sheepmeat supply chain impacting on eating quality.

2003: Industry takes ownership.

Company-employed MSA graders were introduced. Processor auditing, grading, and training services became cost-recovery. All existing MSA-licensed processors continued to use the program as fee-for-service as the volume of cattle MSA graded continues to grow.

2007: MSA Sheepmeat program released commercially.

MSA sheepmeat utilises a pathways approach to optimise eating quality using a pass/fail consumer threshold for four cooking methods. With best practice on-farm management coupled with optimal processing, specifically the management of electrical stimulation and chilling, the variation in sheepmeat eating quality could be reduced.

2011: Large processors and retailers adopt MSA.

The 2011-12 financial year saw a 45% jump in the volume of MSA-graded cattle. By this time all major retailers, and more large processors had adopted MSA.

2015: Aspirational future strategy.

In 2015 the Peak Industry Councils, through the MSA Taskforce, mutually agreed on the future of the program to develop a plan to the year 2020. The plan featured a shift in focus to support brandowners to communicate and drive MSA growth in domestic and export markets while increasing responsibility for its integrity. The strategy also outlined plans to conduct research that would enable all Australian cattle to be eligible for MSA grading with fitness for purpose described for all cuts. And objective measurement technologies were earmarked for further research to enhance the MSA program both on and off-farm.

2016: Inaugural Producer Excellence in Eating Quality Awards.

The MSA Excellence in Eating Quality Awards and Forums raised awareness of MSA best management practice by recognising those producers in each state who consistently deliver superior eating quality beef for the benefit of consumers and the profitability of the industry.

2017: Australian Beef Language enhanced to include an Eating Quality Graded cipher.

For the first time, the Australian Beef Language was enhanced to include an alternative cipher based on MSA grading. This creates an opportunity for brandowners to market product according to consumer eating quality outcomes as an alternative to dentition-based ciphers.

40% of adult cattle slaughter and 23% of national lamb slaughter were presented for MSA grading in 2016-17 through 54 licensed processors. More than 46,000 producers were registered to supply livestock to the MSA program and more than 150 brands were underpinned by MSA. This delivered an estimated $130 million in additional farm gate returns.

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