



2018-19 MEAT STANDARDS AUSTRALIA ANNUAL OUTCOMES REPORT

Delivering consumer confidence
in eating quality



Contact

Meat Standards Australia
PO Box 2363
Fortitude Valley, Queensland 4006

T: 1800 111 672
W: www.mla.com.au/msa
E: msaenquiries@mla.com.au

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2018-19 HIGHLIGHTS

**A RECORD-BREAKING
3.5 MILLION**

CATTLE WERE MSA GRADED,
REPRESENTING 43% OF THE
NATIONAL ADULT CATTLE
SLAUGHTER

MSA DELIVERED AN ESTIMATED
\$198 million
IN ADDITIONAL FARM
GATE RETURNS TO BEEF
PRODUCERS

COMPLIANCE TO MSA
MINIMUM REQUIREMENTS
FOR BEEF WAS

93.8%

THE NATIONAL AVERAGE
MSA INDEX WAS

57.48

\$0.30/kg

WAS THE AVERAGE
PRICE DIFFERENTIAL
FOR MSA YOUNG
NON-GRAINFED
CATTLE

4.1 million

SHEEP FOLLOWED MSA
PATHWAYS, REPRESENTING
19% OF THE NATIONAL
LAMB SLAUGHTER

**MORE THAN
3,400**

BEEF AND SHEEP
PRODUCERS RECEIVED
FACE-TO-FACE MSA
EDUCATION

**23 NEW
BRANDS**

BECAME LICENSED TO USE
THE MSA TRADEMARK,
TAKING THE TOTAL TO 195

72%

OF SURVEYED
BUTCHERS RATED THEIR
SATISFACTION WITH
MSA BEEF AS 'GOOD TO
EXCELLENT'



Sarah Strachan, MSA Program Manager

PROGRAM MANAGER'S REPORT

In 2018-19 the world-leading eating quality grading program, Meat Standards Australia (MSA) delivered an estimated \$198 million in additional farm gate returns to MSA beef producers, a record high for the program launched in 1998. That's a 30% increase on the \$152 million in additional farm gate returns MSA delivered in 2017-18.

In 2018-19 MSA represented 43% of the national adult cattle slaughter, the same rate as the previous year. However, an additional 350,000 cattle were processed through the MSA program in 2018-19, taking the total to 3.5 million, the highest number of cattle graded in a year since MSA's inception.

More than 3,000 beef and sheep producers attended 47 MSA education days, and 2,800 people undertook training via the MSA e-learning portals. This commitment to education is reflected in outstanding compliance to MSA minimum requirements at 93.8%. With increases in the volume and variation of cattle being presented for MSA grading, producers across the country achieved a national average MSA Index of 57.48.

4.1 million sheep followed MSA pathways in 2018-19, representing 19% of the national lamb slaughter, with 73% of these going on into MSA trademarked brands.

Growth in MSA beef and sheep brands continues, with an additional 23 new brands licensed in 2018-19, lifting the total number of MSA licensed brands to 195.

In export markets, the United States Department of Agriculture (USDA) again approved MSA as a Process Verified Program (PVP) with more brand owners taking up the opportunity in 2018-19 to use the USDA PVP shield on their MSA products in the US.

The EQG cipher, released in 2017, as part of the Beef Language Review has continued to have strong adoption. The MSA licensed processors and operators now using the EQG cipher within parts of their business, represented 48% of MSA graded cattle at June 2019.

MSA beef model 2.0

In 2018-19 MSA received industry approval to implement an upgrade to the MSA beef model. The changes to the model have been endorsed by the MSA Pathways R&D Committee, the MSA Beef Taskforce and the Australian Meat Industry Language and Standards Committee, consisting of leading Australian meat and animals researchers and red meat industry representatives.

There are three main changes to the MSA beef model that will be implemented throughout 2019-20:

- > **Hump height will be used as a direct predictor of eating quality:** while hump height has always been measured as part of MSA, it will now be used as a direct predictor of eating quality, rather than an estimate of tropical breed content. This change means there will be a new MSA vendor declaration form where tropical breed content will be simpler to record. There will also be an option on this new form for owners of cattle that use agistment or custom feeding operations to receive direct carcass feedback.
- > **The number of cut by cook combinations is expanding, including ageing predictions up to 50 days:** the number of combinations will increase from 169 to 275. These offer more flexibility and confidence to broaden product offerings for retail and foodservice, and export markets.
- > **A refreshed myMSA and Opportunity Index:** the new look and feel myMSA portal will be refreshed and easier to use. New features include the Opportunity Index, which helps producers focus on where financial gains can be made and to benchmark carcass attribute performance. It tells producers what their Index would have been if non-compliant carcasses met the MSA minimum requirements. In 2017-18 this lost opportunity across Australia was estimated to be more than \$20 million.

MSA BEEF

Cattle processed through the MSA program in 2018-19 comprised 43% of the total national adult cattle slaughter, the same rate as the previous year. However, 3.5 million cattle were processed through the MSA program in 2018-19, an increase of 350,000 head on the previous year and the highest number of cattle graded in a year since MSA's inception.

By volume, Queensland continues to process the greatest number of MSA graded cattle with 1.6 million head, while, at 82.4%, South Australia had the greatest proportion of its cattle slaughter MSA graded.

An additional 2,692 beef producers became MSA registered in 2018-19. MSA registered beef producers represent 22% of Livestock Production Assurance (LPA) accredited cattle properties, and during 2018-19, 12,101 beef producers consigned cattle to MSA.

Figure 3. Proportion of slaughter by state

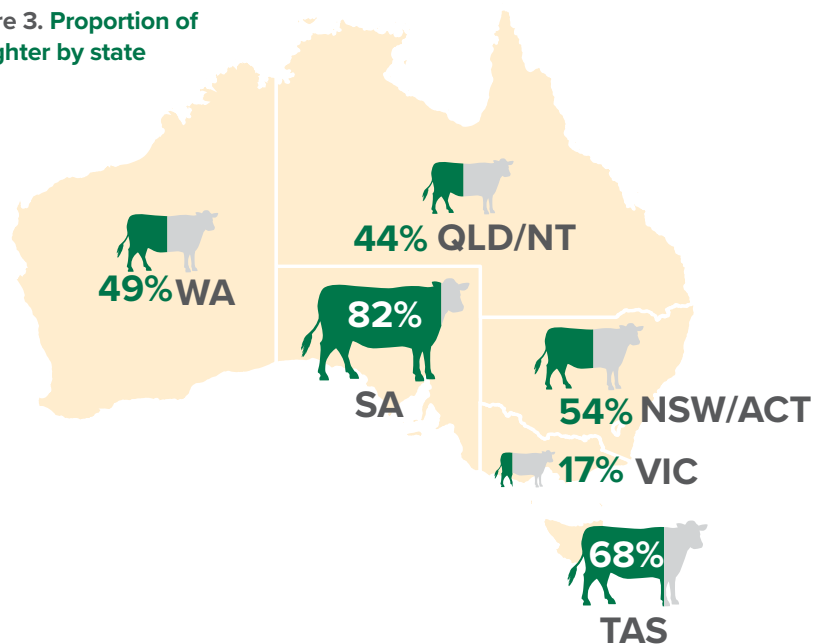


Figure 1. National MSA beef grading numbers

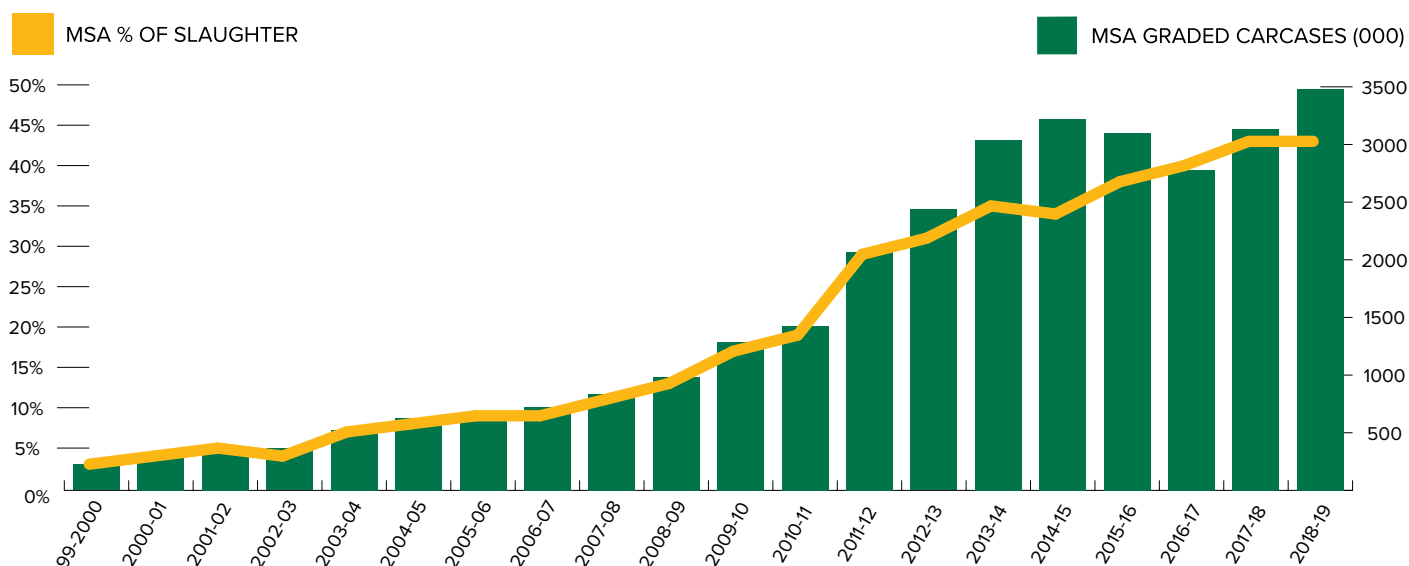
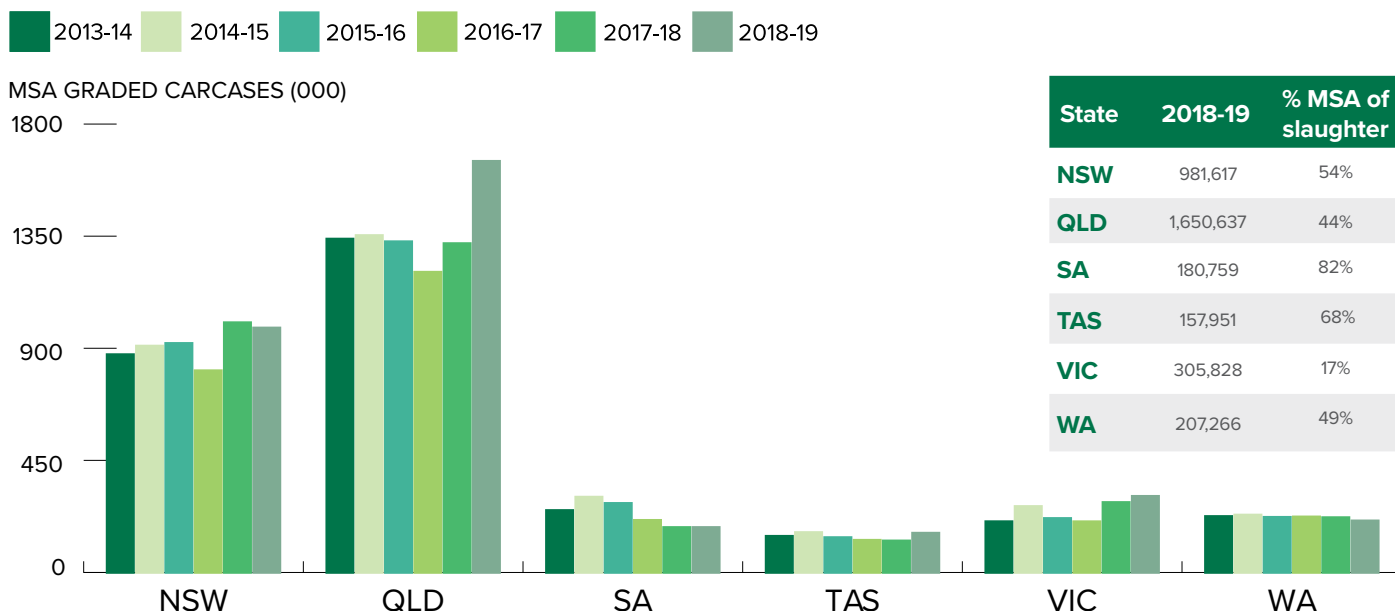


Figure 2. MSA graded carcasses by state



MSA BEEF CARCASS COMPLIANCE

In the face of challenging seasonal conditions throughout Australia in 2018-19, MSA compliance rates decreased slightly to 93.8%, down on the previous year's record high of 94.3%.

Figure 4. Reason for non-compliance 2018-19

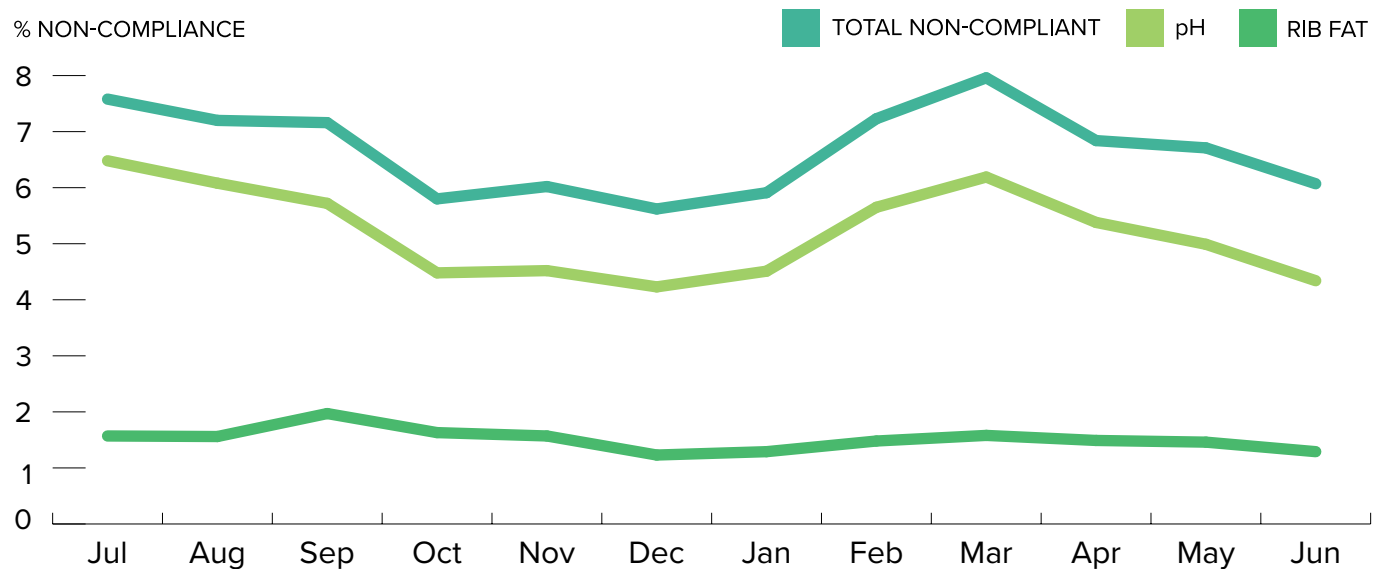
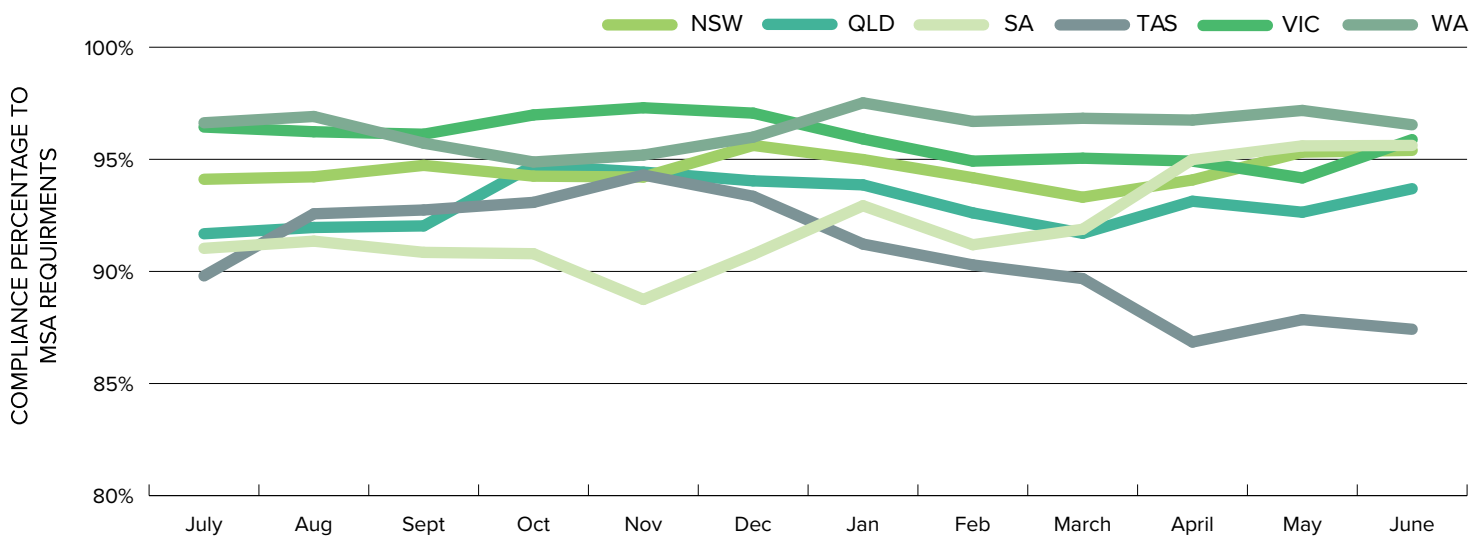


Figure 5. MSA Compliance by state 2018-19



Non-grainfed cattle represented **42%** of MSA-graded carcasses

Grainfed cattle represented **58%** of MSA-graded carcasses

MSA compliance for non-grainfed cattle decreased from **91.3%** in 2017-18 to **88.5%** in 2018-19

MSA compliance for grainfed cattle decreased from **98.2%** in 2017-18 to **97.7%** in 2018-19

MSA INDEX

In 2018-19, the national average MSA Index decreased to 57.48, down slightly from 57.78 in 2017-18.

- > The average MSA Index for non-grainfed cattle was 57.86
- > The average MSA Index for grainfed cattle was 56.86.

Using MSA Index percentile bands

Average MSA Index results equivalent to or higher than the figure shown in the Top 25% percentile band (Table 1), means cattle fall into the top 25% of eating quality results for MSA-graded cattle for that group i.e. nationally, non-grainfed or grainfed.

Grainfed cattle are defined as those that meet the AUS-MEAT requirements for grainfed classification. MSA-graded cattle that do not meet this requirement are classified as non-grainfed.

The MSA Index calculator is available to provide predictions on MSA Index scores or calculate the impact of changing carcass attributes on the MSA Index.

Access the MSA Index calculator at:

www.mysa.com.au/msamobile

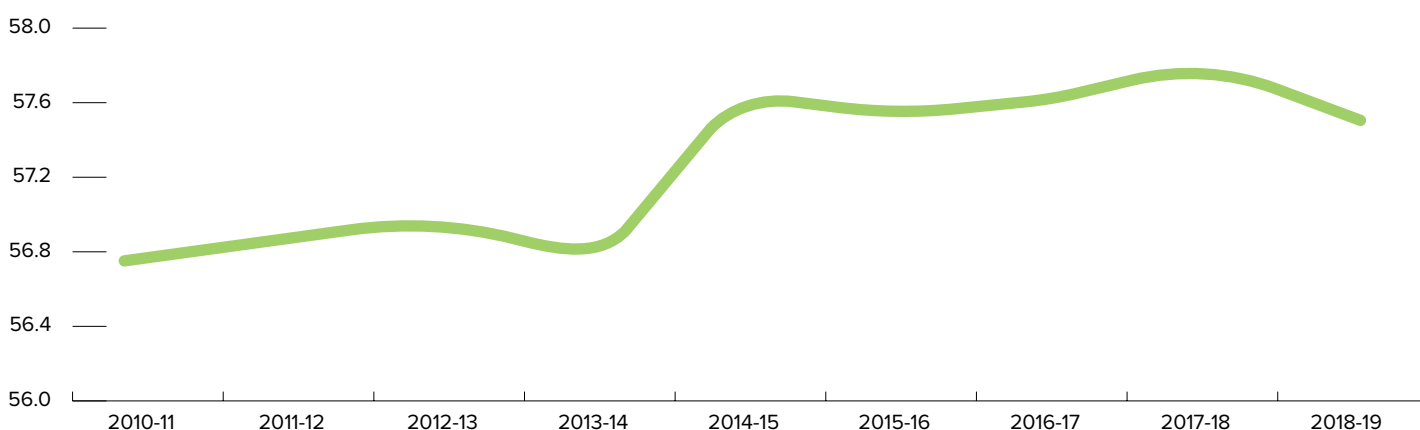
Table 1. MSA Index percentile bands

Percentile band	Avg National Index	Non-grainfed Index	Grain Index
Top 1 %	67.20	65.22	68.11
Top 5%	64.27	63.07	65.86
Top 10%	62.79	62.09	64.25
Top 25%	60.63	60.46	61.22
Middle 50%	57.48	57.86	56.86
Bottom 25%	54.80	55.66	53.21
Bottom 10%	51.50	53.21	49.38
Bottom 5%	49.07	51.18	47.97
Bottom 1%	46.17	46.52	45.95

Table 2. Effects of carcass attributes on the MSA Index

Carcass input	Relative importance of these traits in changing the MSA Index
HGP status	Very high
Milk-fed vealer	Very high
Saleyard	Very high
MSA marbling	High
Hump height (for cattle with greater than 0% Tropical Breed Content)	High
Tropical Breed Content (TBC)	High
Ossification score	High
Rib fat	Medium
Hot Standard Carcass Weight (HSCW)	Low
Sex	Low

Figure 6. MSA Index over time



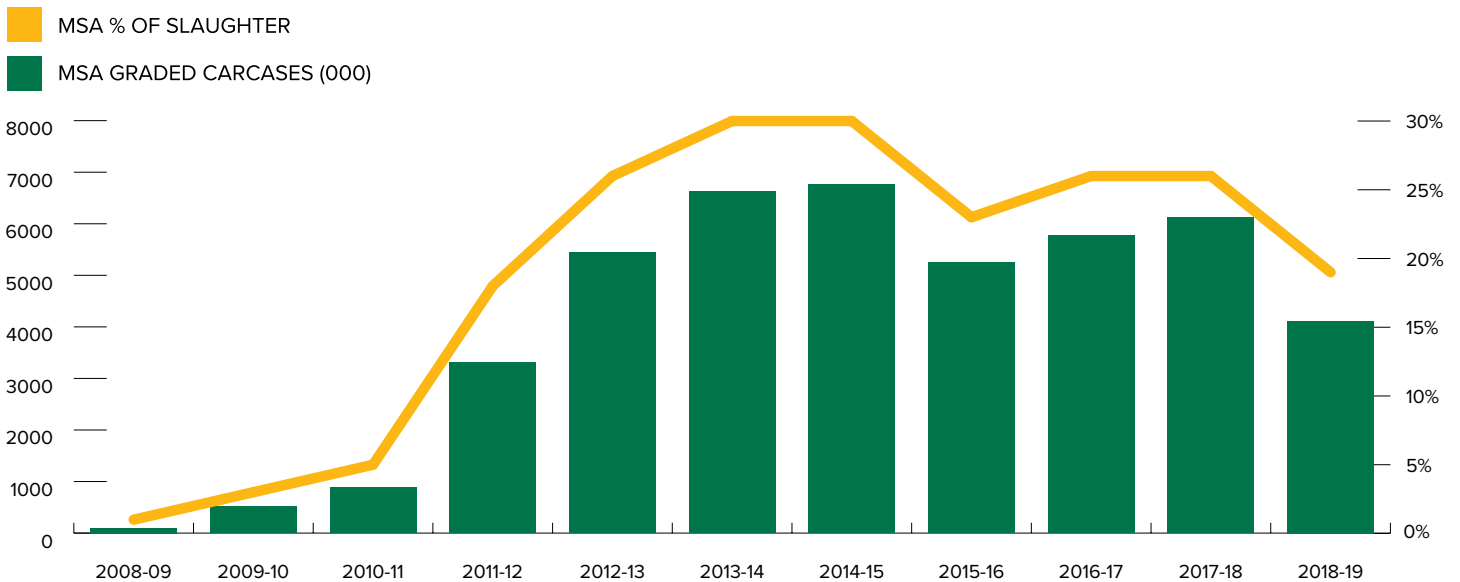
MSA SHEEPMEAT

In 2018-19 4.1 million sheep followed MSA pathways, representing 19% of the national lamb slaughter, with 73.5% of these going on into 18 MSA trademarked brands.

17 MSA-licensed processors utilised MSA pathways in 2018-19, noting two MSA processors closed during the year.

By volume Victoria processed the greatest number of MSA lambs at 2.1 million head, while South Australia had the greatest proportion of the state lamb slaughter following MSA pathways at 42%.

Figure 7. National MSA sheepmeat volume 2008-19



State	2018-19	% MSA of slaughter
NSW	206,250	4%
WA	752,538	29%
SA	1,037,007	42%
VIC	2,109,787	18%
TAS	9,220	2%
QLD	0	0%

96% of all lambs presented for MSA met the program's minimum requirements

73.5% of MSA-compliant lambs were subsequently trademarked to support **18** MSA lamb brands



Figure 8. MSA trademarked lambs 2013-19

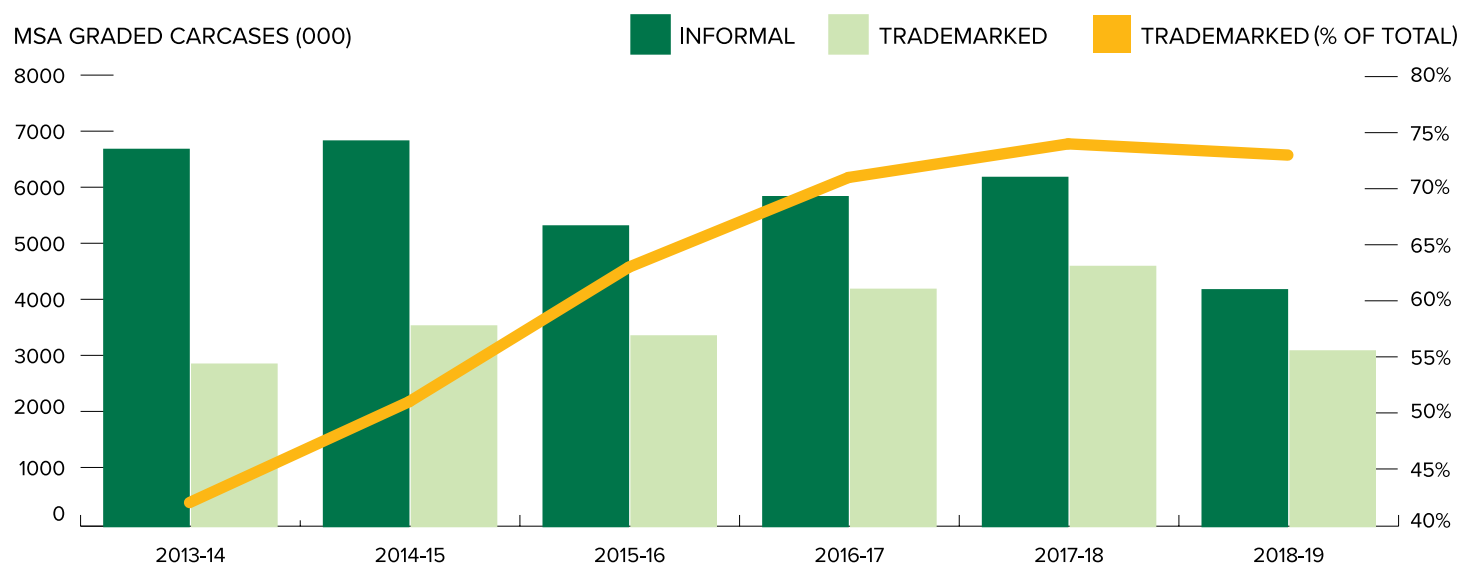
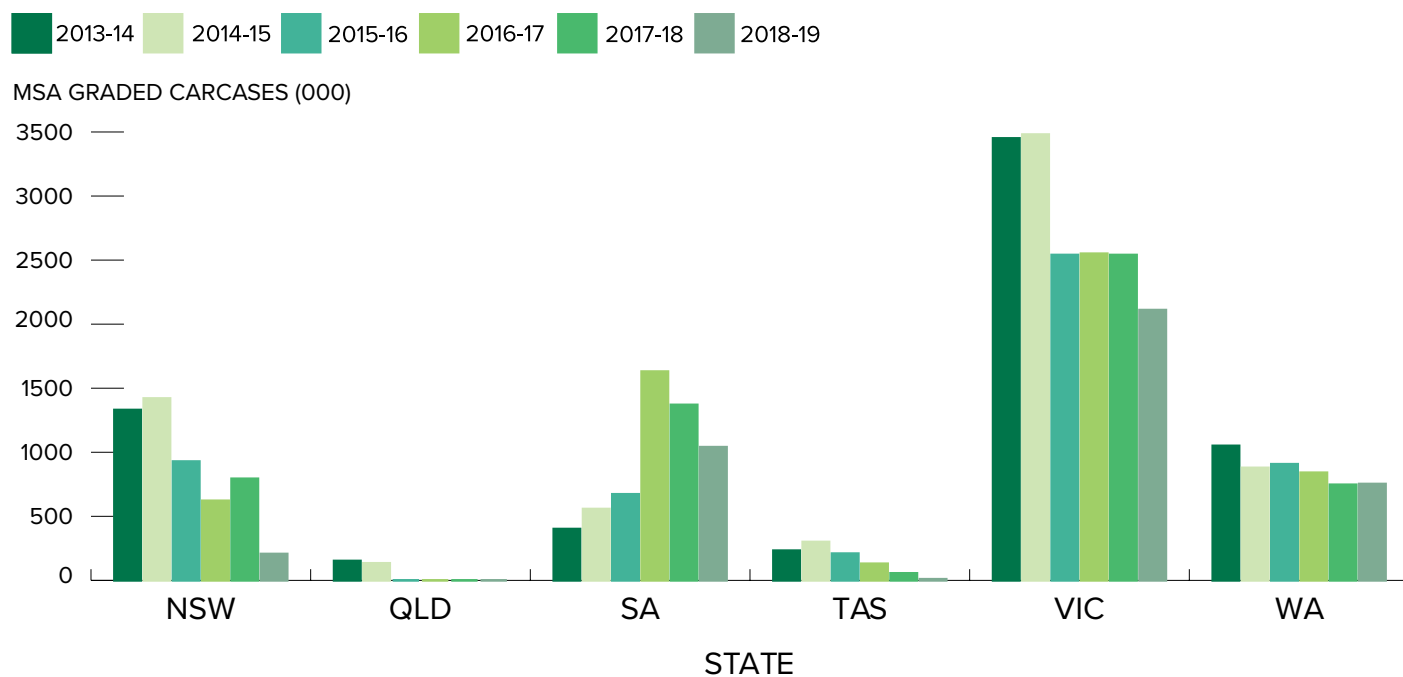


Figure 9. MSA sheepmeat numbers by state 2013-19



SUPPLY CHAIN IMPACT – EDUCATION

More than 3,000 beef and sheepmeat producers received in person MSA education at 47 producer workshops or information sessions.

In the retail and foodservice sector, more than 250 end users (wholesalers, retailers and foodservice operators) participated in MSA training in 2018-19. 58% of this training was conducted online, which is an increase of 15% on the previous year.

33 Independent boning rooms received site visits that included MSA training sessions with 78 operatives. An additional 14 red meat masterclasses were held with catering providers, providing eating quality education to 439 people.

myMSA

myMSA is an online portal where producers can easily access feedback tools, including MSA Index performance, customised reports and benchmarking, as well as order MSA vendor declarations and complete refresher training.

- > 4,300 producers utilised the myMSA feedback system 16,140 times.

Refresh using our online learning tools at www.mla.com.au/msa



21 supply chain participants engaged in the week-long MSA meat science course

250 end users (wholesalers, retailers and foodservice operators) participated in MSA training, with **58%** of this training conducted online

36 new MSA graders were trained and accredited

3,135 beef and/or sheepmeat producers received face-to-face MSA education

through **47** workshops or information sessions

More than **3,400** cattle and sheep producers became registered to supply livestock

through the MSA program this year, of which **77%** registered online.

More than **2,800** people undertook training

via the MSA producer and end e-learning portals

251 sheep and beef processors operatives completed MSA training

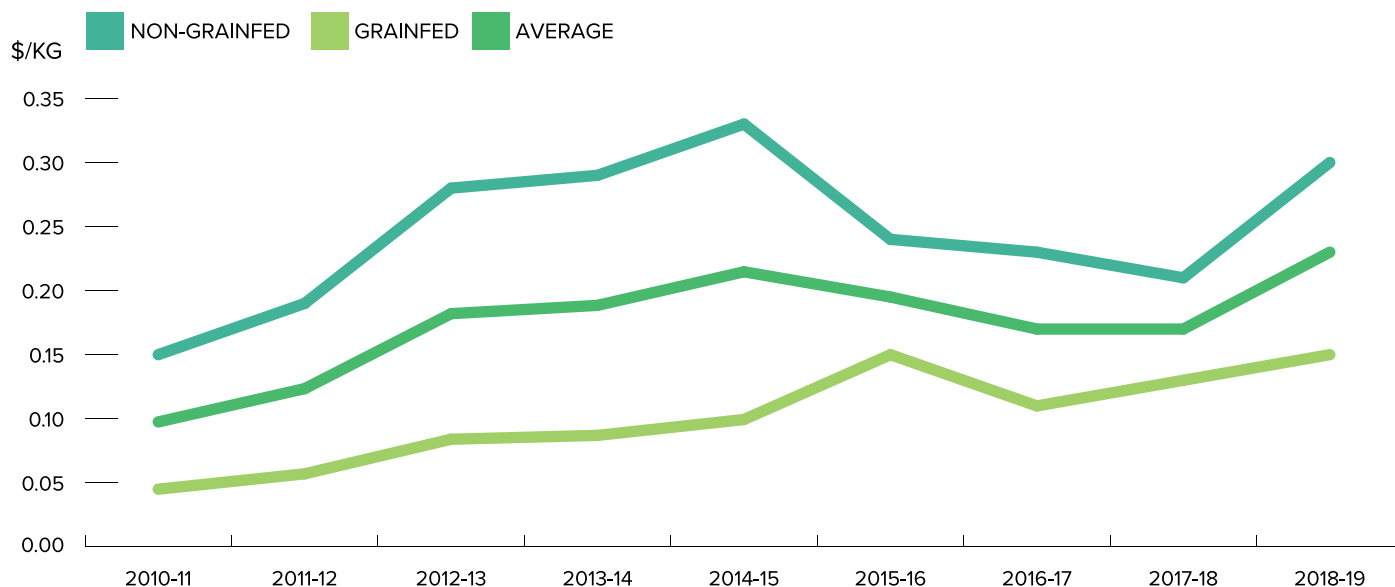
to understand the impact of processing on beef or sheepmeat eating quality

SUPPLY CHAIN IMPACT – PRODUCERS

The National Livestock Reporting Service (NLRS) reported over-the-hooks cattle price indicators for MSA cattle as higher on average than non-MSA cattle in 2018-19.

Based on the average carcass weight of MSA cattle in 2018-19, MSA beef producers potentially received an estimated \$84 per head in additional returns for young, non-grainfed cattle and \$48 per head for cattle that met grainfed specifications.

Figure 10. Over-the-hooks price differentials



The average price differential for accredited grainfed cattle was **\$0.15/kg**

The average price differential for MSA young cattle (excluding accredited grainfed cattle) across all weight ranges was **\$0.30/kg**

SUPPLY CHAIN IMPACT – END USERS

The average price differential for MSA beef compared to equivalent non-MSA cuts at independent butcher stores was \$0.94/kg.

MSA tenderloins averaged the highest price differential at \$2.80/kg followed by cube rolls at \$2.41/kg.

The average price differential for MSA lamb compared to the equivalent non-MSA cuts was \$0.87/kg with lamb cutlets averaging the highest price differential at \$2.67/kg.

23 new brands became licensed to use the MSA trademark, taking the total to **195**

The average retail price for lamb cutlets was **\$2.67/KG**

The average retail price for lamb leg cutlets was **\$0.10/KG**

In export markets, the United States Department of Agriculture (USDA) again approved MSA as a Process Verified Program (PVP) with more brand owners taking up the opportunity in 2018-19 to use the USDA PVP shield on their MSA products in the US.

As of 30 June 2019 **1,352** end users representing **3,656** outlets, are licensed to promote and sell MSA products

72% of surveyed butchers rated their satisfaction with MSA beef as 'good to excellent'

71% of surveyed butchers are aware of MSA lamb

Figure 11. Average retail price differentials by cut 2018-19 – MSA beef

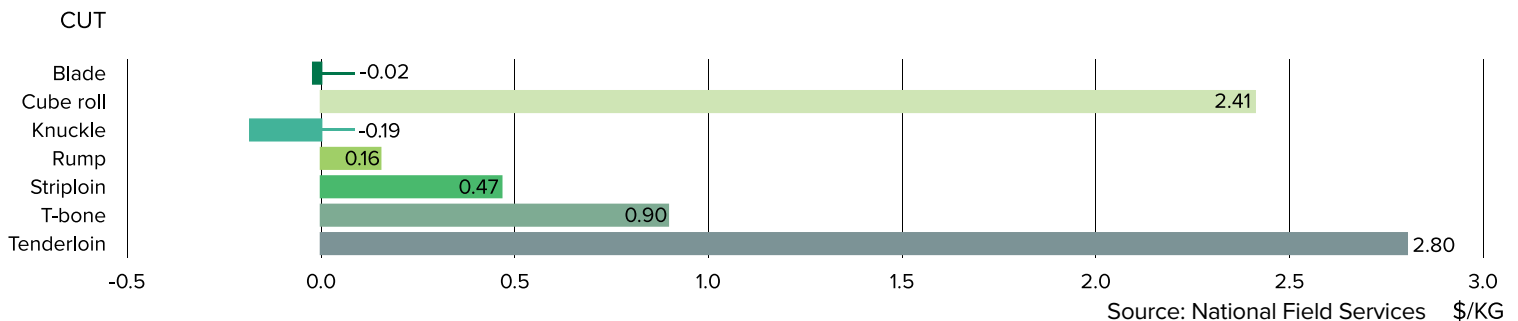
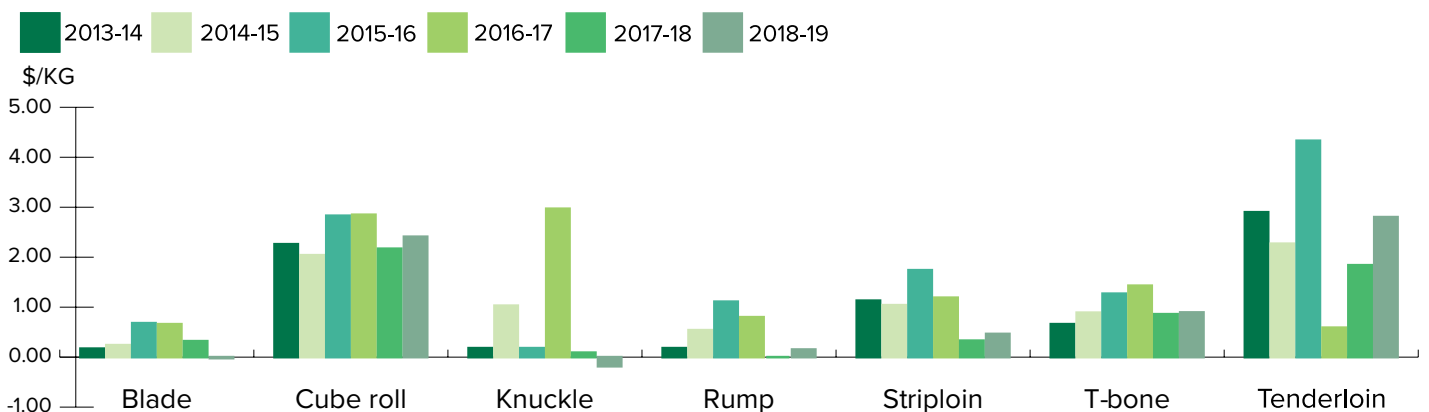


Figure 12. Average MSA beef retail price differentials over time



RESEARCH & DEVELOPMENT

Moving towards MSA's goal of achieving grading eligibility for all cattle, MSA completed and initiated a large program of work based on research priorities, which were identified and endorsed by the MSA Taskforce and Pathways Committees for both beef and sheep.

These initiatives include:

- > Investigations into the impacts of rail transport on compliance to MSA requirements and eating quality
- > Creating an MSA veal pathway
- > Investigations into creating a targeted approach to raising dairy animals for beef production
- > Understanding the impacts and outcomes from reconditioning older cast for age cows
- > Investigations in understanding the effect on eating quality, of purpose feeding young entire males as an alternative to castration
- > Estimation of the age/maturity of beef and sheep in the live animal using visible-near-infrared spectroscopy
- > Completed additional Australian and international consumer research into low and slow cooked brisket and rib cuts to further value-add secondary cuts in the carcase.

During 2018-19 the MSA Beef Pathways Committees and the MSA Beef Taskforce endorsed an update to the MSA beef model, encompassing research conducted over the past seven years.

Sheepmeat eating quality research included significant expansion to the cut matrix for the MSA Mark II Sheepmeat Model. Research into understanding the effects of packaging and of lamb turn-off (new versus old season lambs) on eating quality, was also conducted.

PROGRAM INTEGRITY



During 2018-19 more than 700 audits were conducted on MSA licensees from saleyards and processors through to retailers, wholesalers, supermarkets and foodservice outlets.

- > 4% of end user outlets audited received corrective action requests (CARs)
- > 3% of saleyards audited received CARs
- > 4% of processors audited received major CARs.

Table 3. Audits conducted 2018-19

Audits	
Processor	117
Saleyard	37
Wholesaler	168
Supermarket	119
Retailer	164
Foodservice	113
Total	718

Additionally MSA conducted 88 site visits with MSA-licensed processors to support their continued success in utilising the MSA Standards. MSA also visited 256 active MSA graders around Australia to conduct onsite grading checks.

MSA retained certification to ISO 9001:2015 Standards and the USDA Process Verified Program.

PRODUCING EXCELLENCE IN EATING QUALITY

Advantages in the EQG cipher



Ian McCamley
‘Memooloo’ and ‘Ganadero’, Rolleston QLD

Enterprise: 7,000 head of cattle across their PCAS and MSA accredited properties. Weaner steers are grown out to a live weight of about 600kg before selling into the premium priced grassfed market.

A major turning point: Introduced in August 2017, the EQG cipher relates exclusively to the eating quality of meat, bypassing dentition requirements.

“The science shows us that the number of permanent incisors has no relevance to eating quality,” he said.

“There is unnecessary animal and human stress caused by mouthing large cattle for no good reason, and producers often send cattle in before they reach their optimum finish and full eating quality potential, just in case they cut too many teeth. Everyone loses, including the consumer.”

Focus on the consumer: “As producers, we’re not quite there yet, but I feel the change is coming. I’m optimistic that soon we’ll start to see price grids coming back to the producer that include the EQG cipher and don’t reference dentition.

“At the end of the day we’re not producing just any commodity, like gravel, or coal or rubber. We’re producing food for people to eat. The more we learn at our end to make that a better experience, the better.”

Small changes deliver big pay off



Will Hanson
‘Narcombie’, Colac VIC

Enterprise: 3,500 self-replacing composite ewes. Lambs are grown out to 45kg live weight and ewes are retained for breeding.

Feeding the right animal the right nutrition at the right time is Will Hanson’s formula to turning off top quality MSA produce.

“There’s a lot of variation in the lamb industry, but if more producers followed by MSA pathways and recommendations, that would tighten things right up. A little bit of extra effort on-farm makes a big difference to the end product,” Will said.

Changing tack: To optimise eating quality the MSA program required lambs to reach a minimum of 18kg carcasses with a fat score of two.

By developing pastures and switching from set stocking to rotational grazing, the Hansons have optimised their utilisation of available pasture.

“Before lamb marking we’ll combine four mobs into one and rotate between four paddocks, before we divide them up again towards weaning,” he said.

Finding the right feed mix: Good nutrition and finishing are critical for producing lambs with superior eating quality.

To ensure adequate nutrition, the flock is predominantly grassfed, but are supplemented at certain times of the year to maintain growth rates.

“At joining time we feed lupins and a cereal mix, and we yard wean our lambs between 12 and 14 weeks, and feed them oats and vetch hay,” he said.



MSA – taking the guesswork out of buying red meat.

MLA

ABN: 39 081 678 364

PO Box 1961
North Sydney, NSW 2059

Tel: +61 2 9463 9333

Fax: +61 2 9463 9393

www.mla.com.au

MSA

PO Box 2363
Fortitude Valley BC QLD 4006

Tel: 1800 111 672

Fax: 1800 999 672

Email: msaenquiries@mla.com.au

www.mla.com.au/msa