



2023–2024

# ANNUAL OUTCOMES REPORT

Delivering consumer  
confidence in eating quality





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## Meat Standards Australia



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**Meat Standards Australia (MSA)** is the world's leading eating quality grading program for beef and sheepmeat, developed to improve the eating quality and consistency of red meat.

The system is based on more than **1.8 million consumer taste tests** by more than **250,000 consumers from 13 countries** and takes into account the factors that affect eating quality from paddock-to-plate.

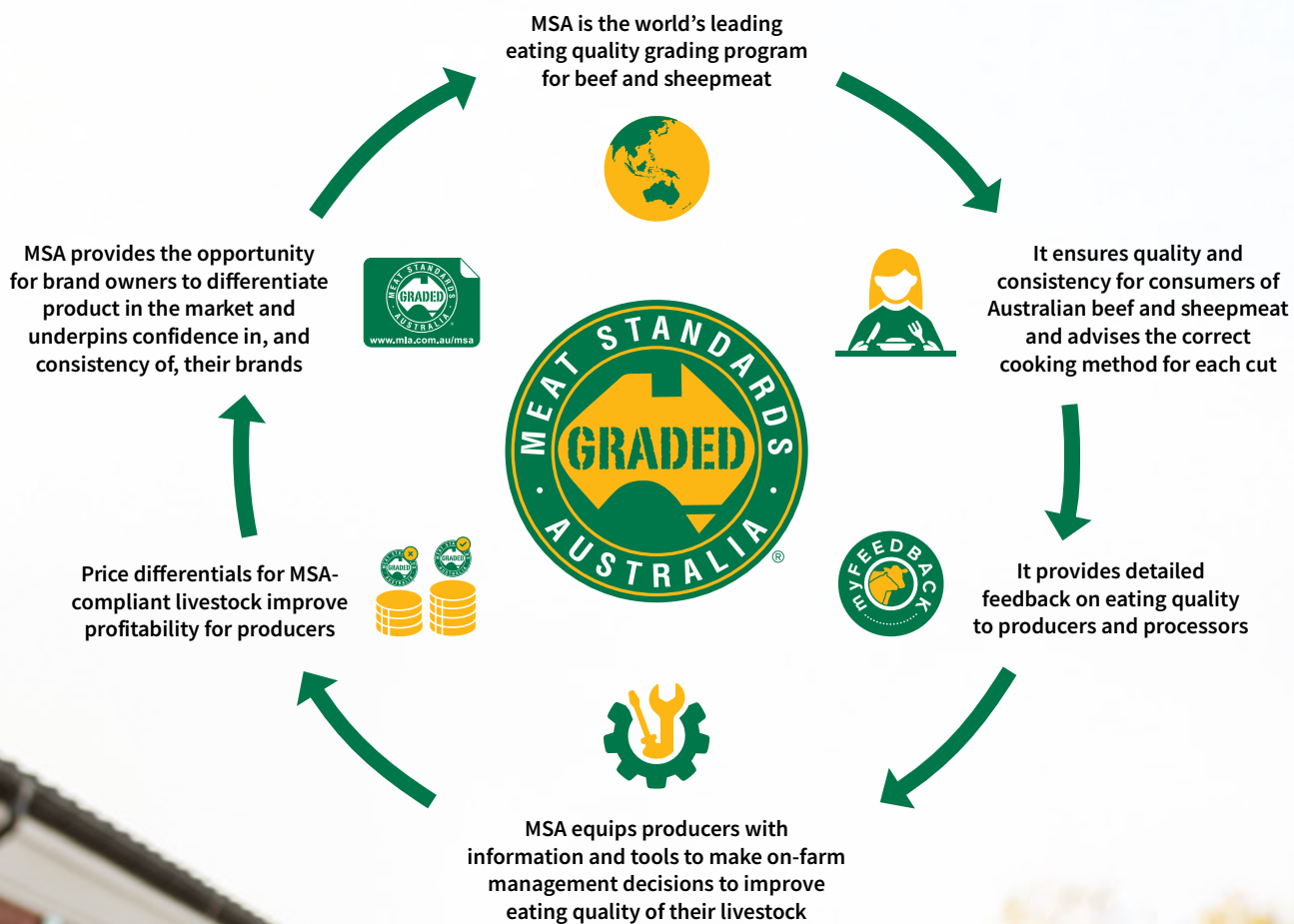
Beginning in 1998, MSA has enabled more than 30 years of research and development through commercial outcomes and involves participation along the entire Australian red meat supply chain.

MSA also includes an adoption program, which seeks to support producers, processors, brand owners and other supply chain stakeholders to adopt eating quality principles to generate considerable value.

The Australian red meat industry has acknowledged that meeting consumers' eating quality expectations is a strong driver of demand. This has been delivered through the MSA program.

MSA can also be linked to other intrinsic purchasing drivers, such as animal welfare and sustainability which are obtained through the use of best management practices that optimise both eating quality and animal welfare.

# The MSA program



# Program manager's report



**David Packer**

**MSA Program Manager**

## Australia's world-leading eating quality grading program, Meat Standards Australia (MSA) has continued its year-on-year growth trajectory and delivery of value to the red meat industry and consumers.

The performance of MSA in 2023–24 is reflected throughout the red meat supply chain.

MSA producers continue to set new records for eating quality, while processors and brand owners embrace the competitive advantage MSA provides. Significant value is captured by differentiating brands according to eating quality and other value drivers in both the domestic and international markets.

In 2023–24, the program delivered a record \$326 million in estimated additional farm gate returns to MSA beef producers, up from the previous record of \$259 million in 2022–23.

MSA-graded cattle continue to represent more than half of the national adult cattle slaughter, at 50.4% in 2023–24.

A record 3.88 million cattle were presented for MSA grading through 42 Australian MSA-licensed beef processors, with more than 3.64 million cattle meeting the minimum requirements to be graded MSA.

Supporting this growth has been the licensing of three new beef processor sites.

Continuous improvement is a key objective of the red meat industry and MSA producers have shifted the dial yet again.

In 2023–24, MSA producers set a new record for the national average MSA Index for MSA compliant carcasses of 58.36 – an increase of 0.84 from the national average MSA Index of 57.52 in 2022–23, and an increase of 1.56 from 10 years ago (2013–14).

This impressive improvement in MSA Index and ultimately, the eating quality of beef, means there are 11% more 5-star tenderloins, 12%

more 4-star cube rolls, and 9% more 4-star striploins than 10 years ago.

In 2023–24, more than 2.37 million sheep followed MSA pathways through 14 MSA-licensed processing facilities across New South Wales, Victoria and Western Australia – an increase of more than 60,000 from 2022–23.

MLA launched the new myFeedback online platform in 2023–24 to assist producers in making data-driven decisions on farm, centred around improving the eating quality and health of livestock, in line with market requirements. By collating animal disease and defect data, alongside carcass and eating quality information, producers can more accurately benchmark their performance.

MSA delivered a range of training workshops and information sessions across Australia and internationally in 2023–24.

Brand owners continue to use the MSA program to underpin the eating quality of their product and differentiate it with consumers. There are now 211 MSA-licensed brands in the market.

Results from the latest research undertaken in 2023–24 involving 302 independent butchers and 50 wholesalers, reflected the strength of MSA in underpinning beef and lamb brands.

Quality and consistency continue to be the key reasons independent butchers and wholesalers stock brands underpinned by MSA.

It was a great achievement for MSA to be given the stamp of approval for another year as a United States Department of Agriculture (USDA) Process Verified Program (PVP).

We have continued to pursue this approval due to the benefits it can offer brand owners in the US market.

**The program delivered a record \$326 million in estimated additional farm gate returns to MSA beef producers in 2023–24.**

MSA producers set a new record for the national average MSA Index for MSA compliant carcasses of 58.36 – an increase of 0.84 from the national average MSA Index of 57.52 in 2022–23.

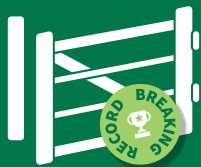
Investment into MSA research and development (R&D) continued in 2023–24, with the aim to make all cattle and sheep eligible for MSA.

The MSA sheepmeat cuts-based model continues to move closer to commercialisation with further benchmarking undertaken in 2023–24 to understand eating quality variation in commercial supply chains and examine brand opportunities, along with brand owners testing products in market.

As 2023–24 has demonstrated, the MSA program continues to play a vital role in achieving the red meat industry's 2030 goal of doubling the value of Australian red meat sales and ensuring continued trust in Australian red meat.



## 2023-24 highlights



MSA delivered  
**\$326M in additional farm gate returns** to MSA beef producers



**4,929** new producers became MSA-registered

**2,503** producers used the myMSA feedback system **8,028 times**



**58.36** national average MSA Index



**3.88M** cattle presented for MSA grading, representing **50.4%** of the national adult cattle slaughter



**2.37M** sheep followed MSA pathways, representing **61%** of total lambs processed in Australia



**13,923** beef producers consigned cattle for MSA



**1,900** beef and sheep producers received MSA education



**94%**

**compliance** to MSA minimum requirements for beef



**195** beef brands **22** sheep brands now MSA-licensed



# Program integrity

**2023–24 saw a change to MSA program integrity with AUS-MEAT now responsible for delivery of this service to industry, aligning with its remit as Australia's meat and livestock industry integrity and standards body.**

AUS-MEAT is a joint venture between by MLA and Australian Meat Processor Corporation (AMPC).

Throughout 2023–24, 150 audits were conducted on MSA licensees including saleyards, processors and independent boning rooms.

A total of 97 MSA Integrity checks were conducted with MSA-licensed processors to support their continued success in aligning to the MSA Standards. To ensure consistency in carcass grading, 272 MSA grader checks were conducted on active MSA graders around Australia, and 52 new MSA graders were trained and accredited.

MSA retained certification to ISO 9001:2015 Standard as part of its internal Quality Management System (QMS) to ensure the reputation and integrity of the MSA program. This is the internationally recognised standard that specifies the requirements an organisation or company must implement and meet for a QMS.

In export markets, the United States Department of Agriculture (USDA) again approved MSA as a Process Verified Program (PVP) with two brand owners utilising the USDA PVP shield on their MSA product into the United States.



**150 MSA audits**  
conducted



Checks undertaken on  
**272 graders**



**97 plant integrity**  
checks completed

# MSA beef

**In 2023–24, a record 3.88 million cattle were presented for MSA grading through 42 licensed Australian beef processor sites (Figure 2), with more than 3.64 million cattle meeting the MSA minimum grading requirements.**

By volume, Queensland processed the greatest number of MSA-graded cattle with 1.8 million head, making up 45% of the total MSA-graded cattle (Figure 3).

Both NSW and Victoria had an increase in numbers graded by more than 100,000 head (Figure 3). Supporting this growth has been the licensing of several new beef processor sites, increasing the number of MSA-licensed processors to 42 in 2023–24 from 39 in 2022–23.

MSA-graded cattle continue to represent more than half of the national adult cattle slaughter, at 50.4% in 2023–24.

Grainfed cattle represented 53% of MSA-graded cattle in 2023–24. The proportion of non-grainfed cattle grew again in 2023–24, representing 47% of MSA-graded cattle – an increase of six percentage points from 2022–23. The increased non-grainfed trend has continued from last year as the herd rebuild continued.

The total proportion of cattle treated with Hormone Growth Promotants (HGP) in 2023–24 reduced by nine percentage points to 29% from 2022–23. Of the grainfed cattle, 57% were HGP-treated, compared to 10% of non-grainfed cattle being HGP-treated.

Victoria had the highest compliance to MSA minimum requirements at 97.1%.

An additional 3,042 beef producers and 1,440 beef and sheep producers became MSA registered in 2023–24, taking the total number of MSA registered beef producers to 44,052. MSA registered beef producers now represent 30% of Livestock Production Assurance (LPA) accredited cattle properties.

A total of 13,923 beef producers consigned cattle for MSA grading, an increase of 2,603 on the total number of beef producers who consigned cattle in 2022–23.

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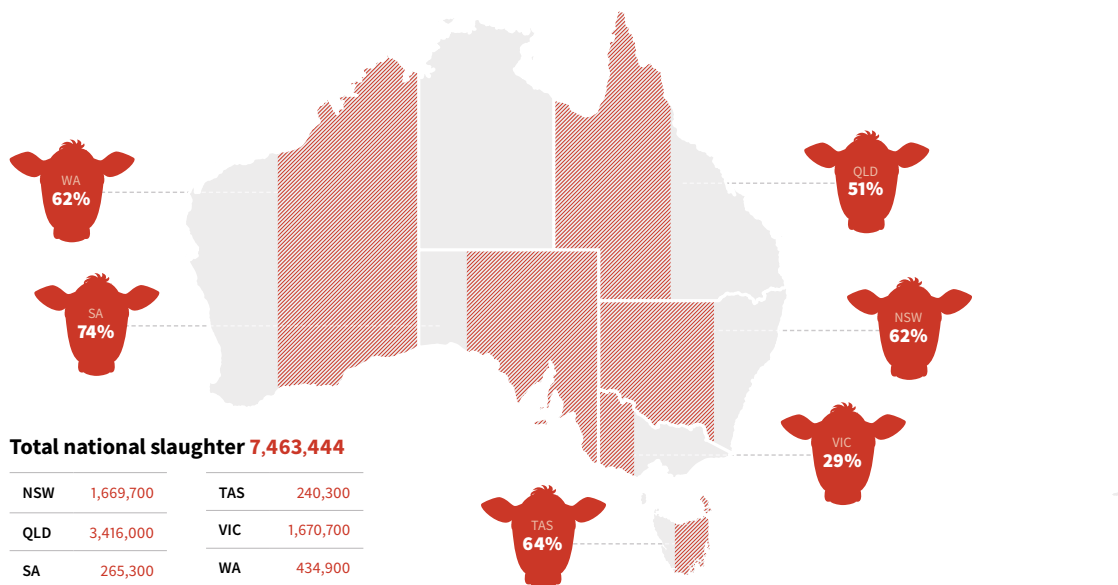
**Grainfed cattle** are defined as those that were lot fed at a registered National Feedlot Accreditation Scheme (NFAS) feedlot and met the Australian grainfed beef minimum standard specifications.



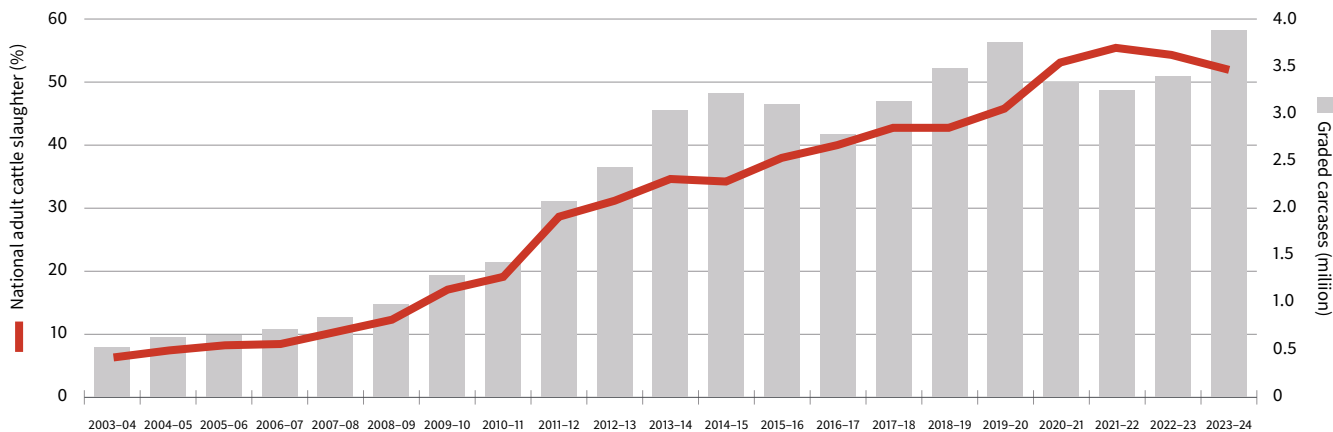
**Non-grainfed** cattle are defined as cattle derived from any production system that did not meet the grainfed specifications.



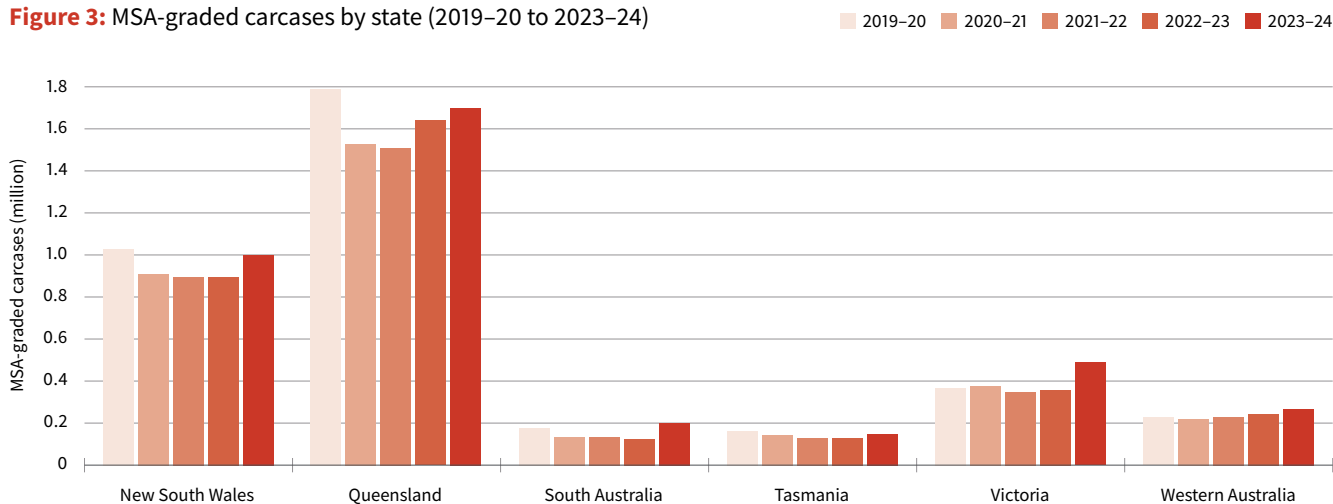
**Figure 1: MSA proportion of slaughter by state (2023–24)**



**Figure 2: National MSA beef grading numbers (2003–04 to 2023–24)**



**Figure 3: MSA-graded carcasses by state (2019–20 to 2023–24)**



## MSA beef carcass compliance

Compliance rates vary throughout the production regions of Australia and are influenced by factors such as seasonal conditions. Furthermore, the variance in compliance rates is greater in non-grainfed cattle, and with an increase in the proportion of non-grainfed cattle in 2023–24, compliance rates were influenced accordingly.

In 2023–24, national compliance to MSA minimum requirements was 94%, down from the record-breaking level of compliance of 95.5% achieved in both 2020–21 and 2021–22, and down from the 95.1% level of the compliance achieved in 2022–23.

Non-compliance was the highest in April 2024 at 6.9%, up from the previous high of 6.1% non-compliance rate in June 2023 (Figure 4).

MSA compliance for non-grainfed cattle was 89.3%, which is a slight decrease from 91.0% in 2022–23.

MSA compliance for grainfed cattle was similar to 2022–23 at 98.2%, an increase of 0.3%.

Non-grainfed cattle represented 47% of MSA graded cattle – an increase of six percentage points from 2022–23.

MSA compliance for non-grainfed cattle was 89.3% in 2023–24 – a decrease of 1.9 percentage points from 2022–23.

Grainfed cattle represented 53% of MSA-graded cattle – a decrease of six percentage points from 2022–23.

MSA compliance for grainfed cattle increased 0.3 percentage points in 2023–24 to 98.2%.

Figure 4: National non-compliance 2023–24

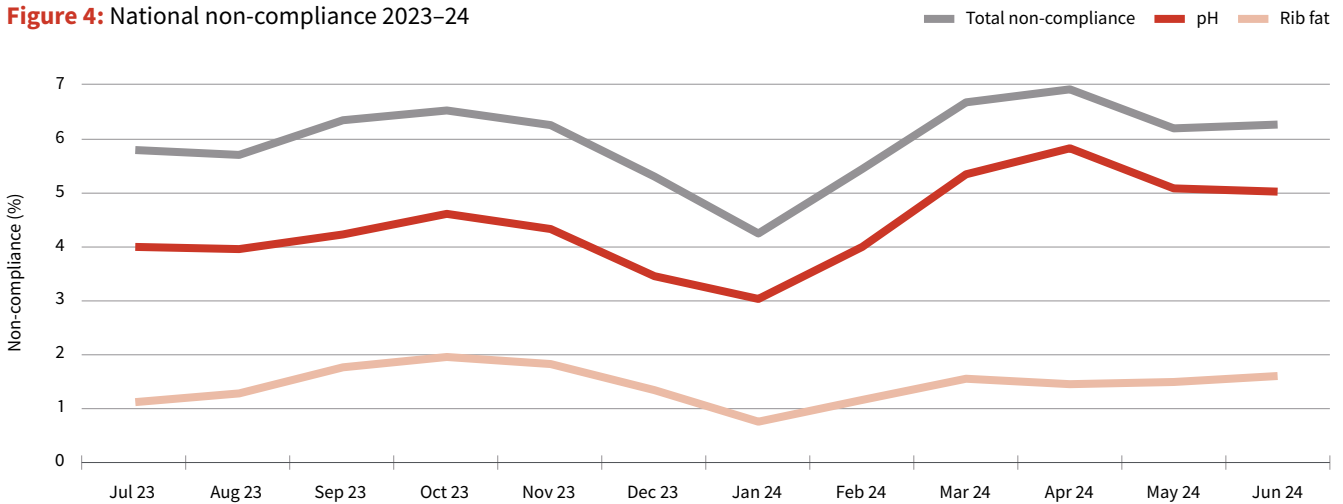
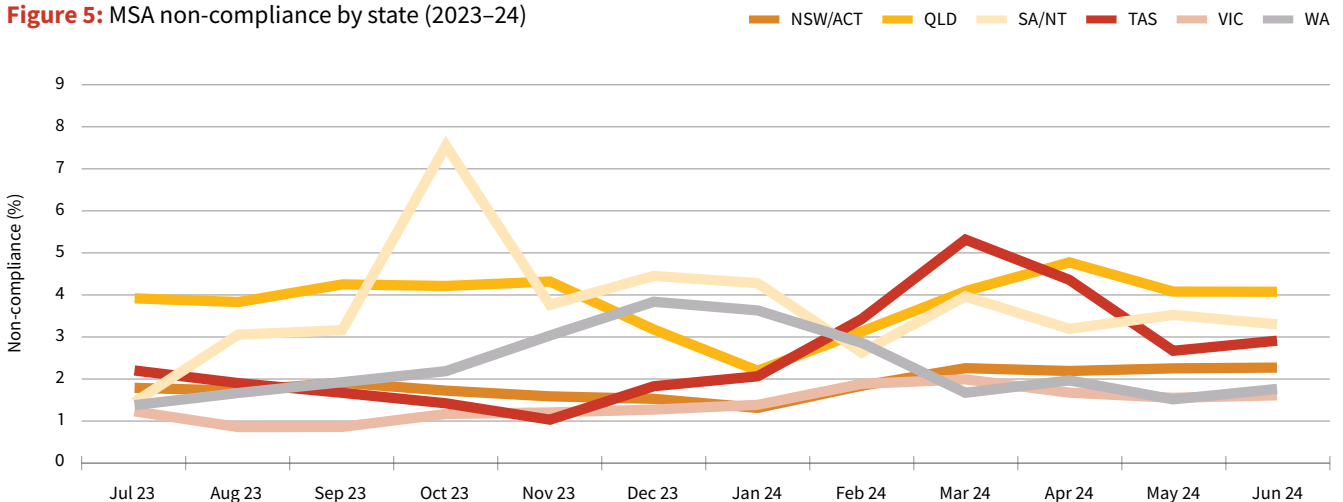


Figure 5: MSA non-compliance by state (2023–24)





MSA compliance for non-grainfed cattle was 89.3% in 2023–24 – a decrease of 1.9 percentage points from 2022–23.

MSA compliance for grainfed cattle increased 0.3 percentage points in 2023–24 to 98.2%.

## MSA Index

In 2023–24, the average national MSA Index reached a new high of 58.36 across the 3.64 million compliant carcasses graded, which was a 0.84 increase on the previous year's result of 57.52.

Compared to 10 years ago in 2013–14, the average national MSA Index is now 1.56 higher (Figure 6).

South Australia achieved the highest average MSA Index by state of 60.64, and Queensland achieved the largest increase in MSA Index by state of 0.9 on the previous year, from 55.24 to 56.14. Both Victoria and NSW achieved a record MSA Index of 60.21 and 60.09, respectively.

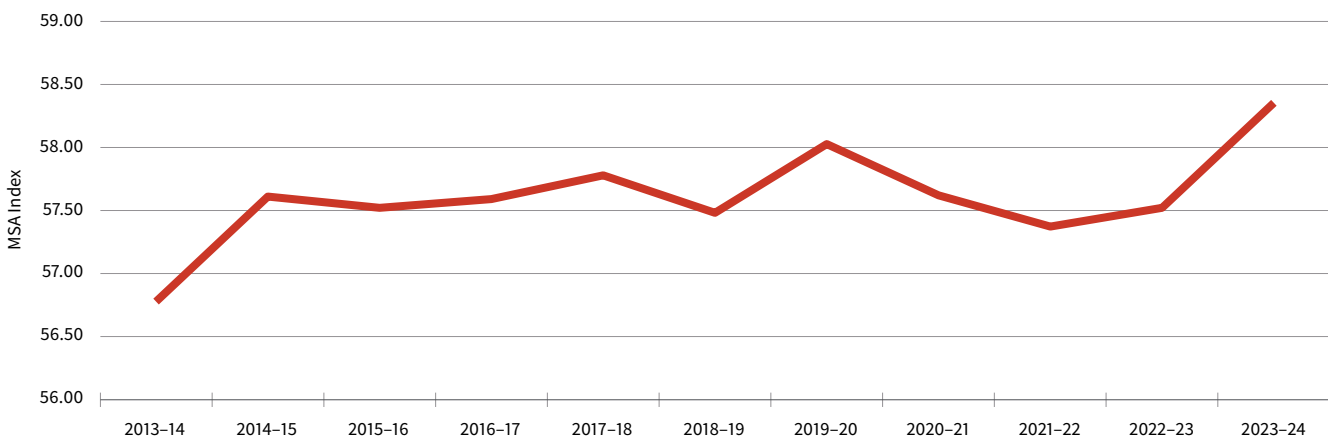
The average MSA Index for both non-grainfed and grainfed cattle is at an all-time high of 58.34 and 58.38 respectively. When compared to 2022–23, that is an increase of 0.44 for non-grainfed cattle and 1.09 for grainfed cattle.

The increase in MSA Index was across all feed types, sex, and HGP categories, and can be attributed to a general improvement in carcass traits, including a decrease in ossification and an increase in MSA marbling. This was the case for all states but was particularly noticeable in Queensland grainfed cattle.

Another driver of the increase in MSA Index was a reduction in HGP use, where HGP-treated cattle accounted for 29% of all MSA-graded cattle in 2023–24, down from 38% in 2022–23. The decrease in HGP use was primarily observed in grainfed cattle from Victoria and NSW.



Figure 6: MSA Index average (2013–14 to 2023–24)



### Using the MSA Index percentile bands

MSA Index percentile bands provide producers with an indication of where their average MSA Index sits in comparison to the performance of others, ranking national data from the top 1% to the bottom 1%.

For example, if the average MSA Index results are equivalent to or higher than 61.80 (Table 1), then cattle fall into the top 25% for national MSA Index for MSA-graded cattle.

Table 1: MSA Index percentile bands

Percentile	National Index	Non-grainfed Index	Grainfed Index
Top 1%	68.25	66.27	68.69
Top 5%	65.95	64.02	66.84
Top 10%	64.37	62.95	65.42
Top 25%	61.80	61.27	62.55
Top 50% (median)	58.98	59.36	58.31
Bottom 25%	55.19	56.25	54.63
Bottom 10%	51.58	52.16	51.21
Bottom 5%	49.03	48.99	49.05
Bottom 1%	45.78	44.30	46.70

Table 2: The impact of carcass attributes on the MSA Index

Carcass input	Relative importance of trait influencing MSA Index
HGP status	Very high
Milk-fed vealer	Very high
Saleyard	Very high
MSA marbling	High
Hump height	High
Ossification score	High
Rib fat	Medium
Hot standard carcass weight (HSCW)	Low
Sex	Low



## Carcase feedback

### myFeedback – one system, more data, better insights

myFeedback is a new industry-based tool which brings together MSA, carcass data, and disease and defect data from multiple sources including myMSA, allowing for aggregated benchmarking by supply chain, region, state/territory or national.

The system provides industry-first combined reporting on the impact of disease incidence in comparison to carcass quality traits. Through these tools, the platform enables producers to make data-driven decisions on-farm, centred around improving the animal health and quality of livestock, in line with market requirements.

By collating animal disease and defect data, alongside carcass and eating quality information, producers can more accurately benchmark their performance.

Benefits of myFeedback:

- ability to compare carcass performance to a regional, state/territory or national level
- identify compliance of livestock to processor grid specifications
- access 'solutions to feedback' for information to help improve future compliance and animal health
- identify opportunities for increased profitability.

During the transition to myFeedback, MSA data will still be accessible through myMSA from MSA-licensed plants. It continues to be a valuable source for industry to access MSA grading and carcass data, with 2,503 producers accessing the system more than 8,000 times in 2023–24.

Producers can register for a myFeedback account via myMLA, and then link all LPA-registered property identification codes (PICs) to a single login. Additional data sharing options are available, with the ability for producers to choose to share information with associates such as livestock advisors, veterinarians, employees and livestock agents.



For more information visit: [myfeedback.com.au](https://myfeedback.com.au)

Support and training to understand carcass feedback and identify opportunities is available by contacting the MSA team: [msaenquiries@mla.com.au](mailto:msaenquiries@mla.com.au)

# MSA sheepmeat

## All sheep following MSA pathways have met strict criteria to optimise eating quality to meet consumer expectations.

In 2023–24, more than 2.37 million lambs, or 10% of total lamb slaughter, followed MSA pathways through 14 MSA-licensed processing facilities across NSW, Victoria, South Australia and Western Australia. This is a modest increase from the 2.3 million sheep that followed MSA pathways in 2022–23.

Of the total lambs processed in Australia, 61% were processed through MSA-licensed processing plants that follow processes to improve eating quality (Figure 7).

In addition, 447 sheep producers and 1,440 beef/sheep producers became MSA registered in 2023–24, taking the total number of MSA registered sheep producers to 27,358, which represents 35% of LPA-accredited sheep properties.

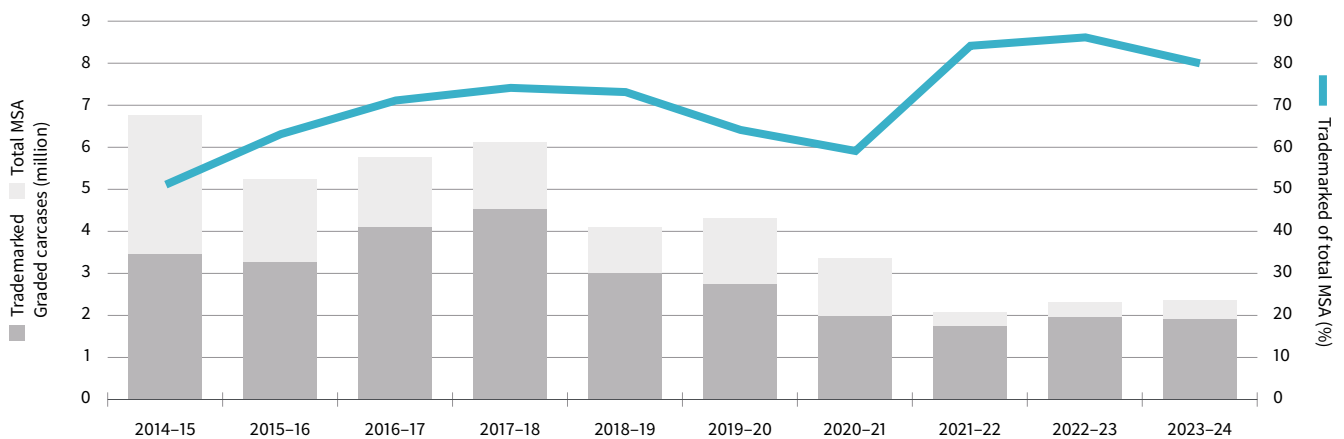
By volume, Victoria processed the greatest number of lambs through MSA pathways at 1 million head.

Western Australia had the greatest increase in lambs through MSA pathways for the second consecutive year with an additional 77,720 head or 15% increase.

A total of 99.3% of all lambs presented for MSA met the program's minimum requirements – an increase of 2.3 percentage points compared to 2022–23.

By volume, Victoria processed the greatest number of lambs through MSA pathways at 1 million head.

Figure 7: National MSA lamb numbers 2014–15 to 2023–24 including proportion trademarked MSA







## Demonstrating the value of MSA sheepmeat cuts-based model

The MSA sheepmeat cuts-based model continues to move closer to commercialisation with further benchmarking undertaken in 2023–24 to understand eating quality variation in commercial supply chains and examine brand opportunities.

The model (Figure 8) uses three measurements on each carcass: hot standard carcass weight (HSCW), lean meat yield percentage (LMY%) and intramuscular fat percentage (IMF%), as well as other processing inputs such as electrical stimulation and ageing, both paramount for consistent eating quality.

Australian processors are increasingly investing in Objective Carcass Measurement (OCM) technologies and on-plant IT systems that support the MSA sheepmeat cuts-based model.

A number of processors have now been able to trial higher eating quality lamb in both domestic and international markets. Their aim is to understand consumer sentiment and willingness to pay for eating quality consistency, providing opportunity for branding of Australian sheepmeat underpinned by eating quality grading. Commercialisation of the MSA sheepmeat model will enable processors to provide individual carcass feedback to producers to help them identify potential improvements in genetics and management. Genetic tools such as Australian Sheep Breeding Values (ASBVs)

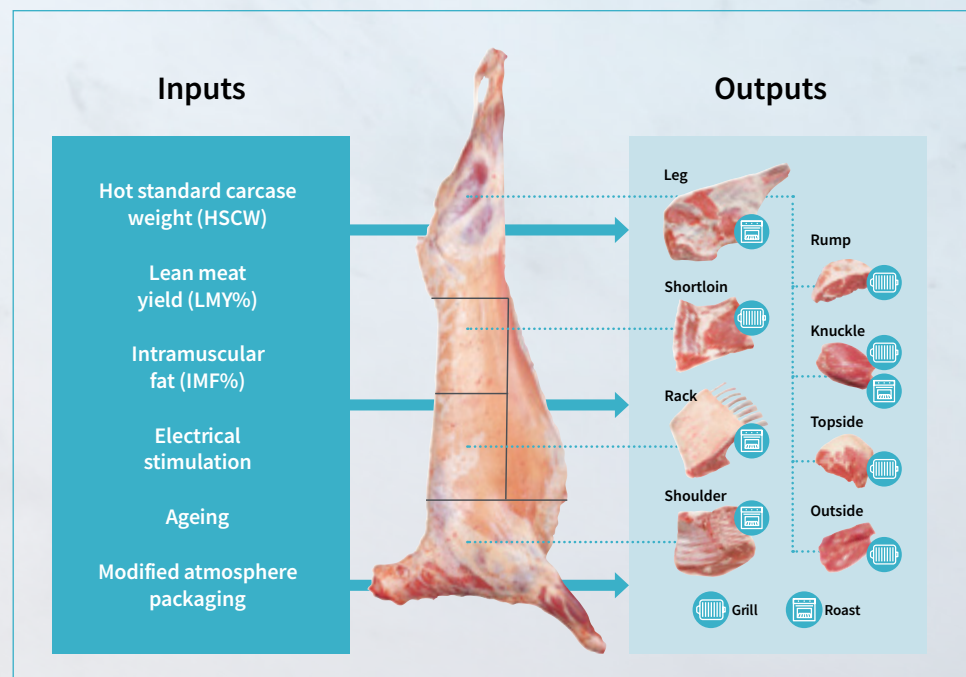
and Indexes are available for producers to utilise to improve eating quality in their flock.

Sheep Genetics uses eating quality data, including MSA consumer sensory data, as inputs into the three main analyses of Terminal, Maternal and Merino ASBVs and Indexes.

For more information on ASBVs or Indexes, visit the Sheep Genetics website: [sheepgenetics.org.au](https://sheepgenetics.org.au)

A number of sheep carcass competitions have now included eating quality through the MSA sheepmeat cuts-based model, including the 2024 LambEx carcass competition. Doing so allows participants and observers to understand current eating quality performance in balance with other value drivers such as feedlot performance or carcass weight – providing insights into opportunities for improvements.

Figure 8: The MSA sheepmeat cuts-based model



# Supply chain impact

The MSA program delivers benefits to stakeholders throughout the supply chain from producers through to end users.

As such, a number of initiatives were held throughout 2023–24 with producers, lot feeders, processors, livestock agents, advisors, industry service providers and students.

## Farm gate returns increase for beef producers

In 2023–24, the MSA program delivered a record \$326 million in estimated additional farm gate returns to MSA beef producers, a significant increase on the previous record of \$259 million delivered in 2022–23.

This is a result of the year-on-year growth of the program and the increasingly sophisticated use of the MSA program by processors and brand owners which allows them to capture more value and share it along the supply chain. This is in combination with producers continuing to improve their MSA eating quality performance as shown by the improvements in the MSA Index, and compliance rates to the MSA and brand owner specifications.

The average HSCW of MSA-graded cattle in 2023–24 was 327kg, a decrease from the 2022–23 average of 334kg.

For non-grainfed cattle, the average HSCW in 2023–24 was 300kg, down from 307kg in 2022–23.

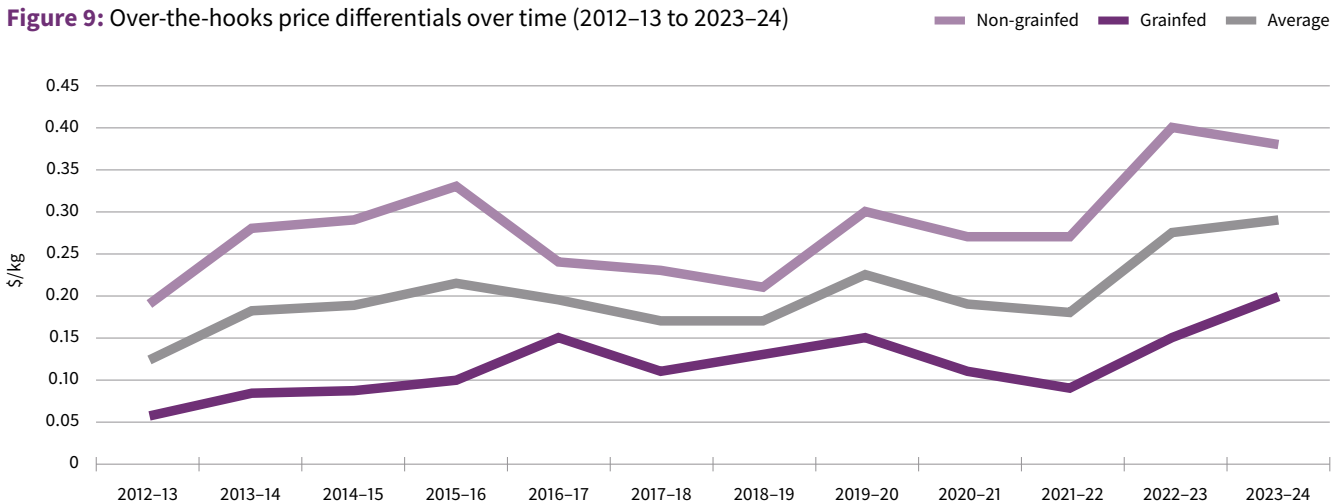
For grainfed cattle, the average HSCW was 350kg, down from 353kg in 2022–23.

The average price differential for MSA non-grainfed cattle across all weight ranges was \$0.38/kg, down from \$0.40/kg in 2022–23 (**Figure 9**).

The average price differential for MSA cattle that met grainfed standards was \$0.20/kg, up from \$0.15/kg in 2022–23 (**Figure 9**).

Based on average HSCW of MSA cattle and price differentials in 2023–24, MSA beef producers potentially received an estimated \$114 per head in additional returns for non-grainfed cattle and \$70 per head for grainfed cattle.

**Figure 9:** Over-the-hooks price differentials over time (2012–13 to 2023–24)



## Education

More than 1,900 beef and sheepmeat producers participated in 26 workshops or information sessions throughout Australia in 2023–24. This included a range of MLA supported events, supply-chain workshops, webinars, and other producer-focused activities.

There has been keen interest in MSA education and training, including for the new myFeedback platform, with 175 livestock advisors and agents participating in seven workshops throughout the year. As a result of these awareness activities, MSA worked with two of these companies to incorporate carcass performance data and the myFeedback platform into their producer workshops with 65 participants.

Activities were conducted with 10 feedlots to raise awareness of factors affecting MSA compliance and glycogen management, as well as how to utilise the myFeedback platform to identify trends to improve carcass performance.

Supply chain end users, including retailers and food service providers, participated in 11 business development workshops and masterclasses, with 270 participants – including 66 international chefs.

Wholesalers and retailers participated in the new ‘End user’ online training, with 25 people completing the course in 2023–24.

MSA education sessions were also held with eight independent boning rooms across Australia, comprising 61 participants. A particular focus of these workshops was on increasing awareness among staff of brand segregation and expansion of alternative cut utilisation through the MSA program.

The well-known five-day MSA Meat Science course was held twice during the year, with 34 participants.

This course explains the scientific factors affecting the eating quality of beef and sheepmeat all the way from production through to the consumer. Participants include MSA processors, producers, lot feeders, livestock agents, traders, industry consultants as well as anyone wanting to gain a more thorough understanding of the factors that impact eating quality.

For more information about the MSA Meat Science course, visit the AUS-MEAT website: [ausmeat.com.au](https://ausmeat.com.au)

MSA beef producers potentially received an estimated

**\$114 per head**  
non-grainfed cattle



**\$70 per head**  
grainfed cattle

**in additional returns**

**4,929** 

**livestock producers**

became registered to supply through the MSA program



**3 workers**

completed independent boning room training



**52 new**  
**MSA graders**

were trained and accredited

**34 people**

completed the MSA Meat Science course



**198 operatives**

across **22 processors** completed on-site MSA

training on the impact of processing

**on beef eating quality**

**17 operatives**

across three processors completed on-site MSA

training on the impact of processing

**on sheepmeat eating quality**



MSA's reputation for quality product has consistently improved among independent butchers since 2020, with eight in 10 butchers rating MSA's quality as excellent or very good.



## End users

Quality and consistency continue to be the key reasons independent butchers and wholesalers stock MSA product. MLA has been undertaking research with Australian independent butchers and wholesalers for over a decade to understand their perceptions of and satisfaction with MSA-graded meat.

Results from the latest research undertaken in 2023–24 involving 302 independent butchers and 50 wholesalers, reflected the strength of MSA in underpinning beef and lamb brands.

The survey found the proportion of independent butchers and wholesalers selling MSA-graded products has remained steady over time. Interestingly, the proportion of advocates of MSA-graded product (where 50% of their product offerings are MSA) has increased to 50%, up 9% from 2022–23.

MSA's reputation for quality product has consistently improved among independent butchers since 2020, with eight in 10 butchers rating MSA's quality as excellent or very good.

High quality is the main reason why butchers and wholesalers stock a particular brand. MSA meat quality is considered significantly better than non-MSA meat, and quality perceptions of MSA meat are also improving over time.

MSA beef continues to command a premium, particularly at wholesale where the gap between MSA and non-MSA beef has slightly increased in the past 12 months.

80% of surveyed butchers rated their satisfaction with MSA-graded meat as 'very good to excellent', which is an increase of 14% compared to four years ago.

62% of butchers are advocates, where more than half of their product offerings are MSA – an increase from 48% four years ago.

For lamb at wholesale, there was a higher price differential for MSA lamb in 2023–24 compared to non-MSA lamb.

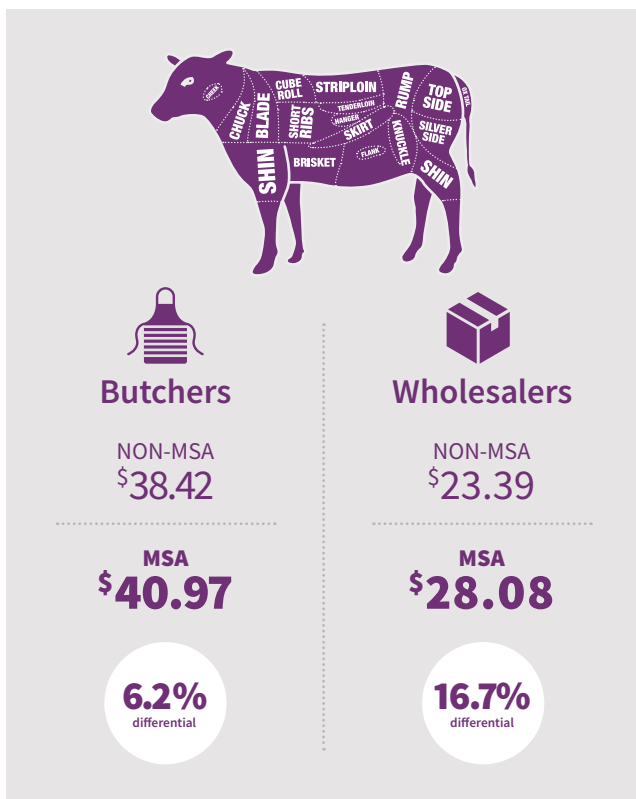
Beef cube rolls continued to demonstrate the largest differential between MSA and non-MSA meat, followed by knuckle and striploin.

Most butchers increasingly stock MSA brands, and out of the top 15 brands stocked, 10 of these brands were underpinned by MSA grading.

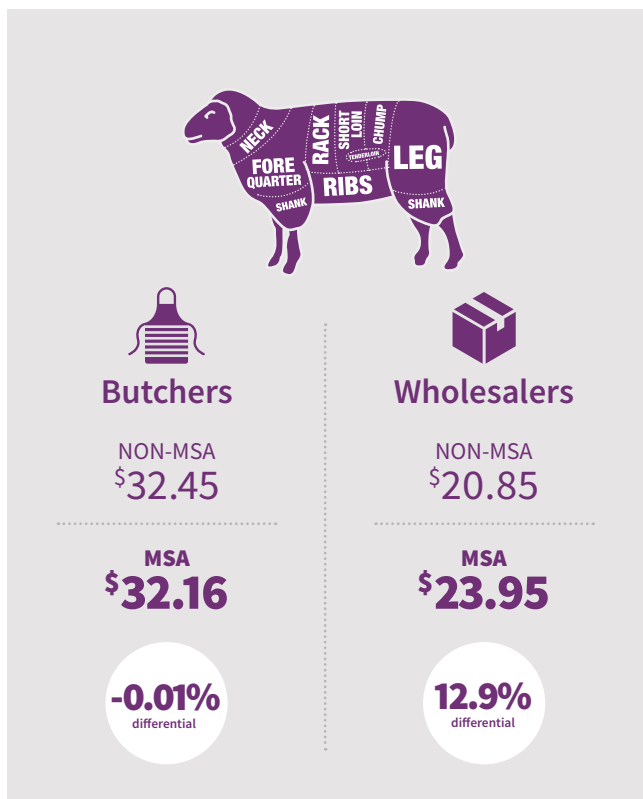
As of 30 June 2024, 1,146 end users, representing 3,450 outlets, were licensed to promote MSA products at point of sale.

MSA initiatives with major food service supply companies have focused on alternative cut utilisation and education to assist with centre of plate costs, and successful growth of their MSA brands. There are now 211 MSA-licensed brands in the market.

**Figure 10:** Average retail price differentials 2023–24 – MSA beef



**Figure 11:** Average retail price differentials 2023–24 – MSA lamb



## International markets

International demand for MSA educational workshops alongside Australian exporters and their supply chains continued to grow in 2023–24.

MSA worked with eight large supply chains in international markets, delivering online and in-person workshops to 372 participants in locations including Japan, Korea and across South-East Asia. These activities aim to support Australian brand owners to differentiate their product in global markets and build confidence and education around the MSA program.

In the last 15 years, the percentage of MSA-graded cattle has grown from under 20% of the national slaughter, to over 50%. This has created much more MSA-graded product in the domestic and international market, delivered by more than 200 beef and sheepmeat brands.

As a result of this growth, importers, wholesalers, and distributors in overseas markets are increasingly viewing MSA as a point of differentiation for Australian red meat brands.

Importers, wholesalers and distributors in Asian markets have been particularly interested in promoting Australian beef to their end customers, including retailers and food service, particularly with the increased demand for Australian beef amid a forecast reduced global supply.

This includes education around eating quality and the MSA grading system, how MSA compares to the USDA grading system, as well as the development of tools and resources to support brand owners in market.

**In the last 15 years, the percentage of MSA-graded cattle has grown from under 20% of the national slaughter, to over 50%.**



# Research and development

**Investments into eating quality research and development (R&D) aligned with the program goal of making all cattle and sheepmeat eligible for MSA. In 2023–24 they also focused on testing the eating quality impact of new feed additives used for methane mitigation.**

In 2023–24, MSA R&D continued to collaborate with research partners on the following key research projects.

## MSA saleyard pathways

### Cattle

The current MSA saleyard pathway requires that cattle being sold through a saleyard need to be processed within 36 hours of property dispatch. This requirement has been a limitation in the consignment of MSA cattle through the saleyard pathway due to the timeframe being too restrictive in commercial practice.

The objective of the additional research on the saleyard pathway was to determine if extended timeframes and re-feeding impacted eating quality, thereby to provide potential opportunities to increase the number of cattle eligible for MSA grading. The project compared four saleyard protocols to direct consignment, including 48 hours without re-feeding, and 72 hours, seven days, and 14 days with re-feeding post-sale.

The research provides evidence that the MSA saleyard pathway could be increased up to 48 hours while maintaining all other existing pathway requirements. Further research is required on longer timeframes and re-feeding cattle via saleyards. The adjustments to this pathway will be implemented in late 2024.

### Sheep

Currently the MSA sheepmeat cuts-based model only includes direct consignment of sheep. A project to establish the eating quality impact of saleyard consigned sheep has been ongoing since early 2023. This included two replicates – one in NSW and the second in WA. Each replicate consisted of three treatment groups including direct consignment, saleyard, and saleyard plus five days of re-feeding prior to slaughter.

All consumer sensory testing has been completed for replicate 1, while replicate 2 is due to be completed in late 2024. The final report for this project is expected to be delivered in early 2025.

**The research provides evidence that the MSA saleyard pathway for cattle could be increased up to 48 hours while maintaining all other existing pathway requirements.**



## Impact of *Asparagopsis* oil on eating quality

Solutions to decrease methane emissions of beef cattle are important to align with the Australian red meat industry's target to be carbon neutral by 2030 (CN30), as outlined in the *Red Meat 2030* strategic plan.

Previous experiments have evaluated the effect of supplementing cattle with freeze-dried *Asparagopsis* on enteric methane emissions, however, extensive eating quality research was not conducted. The active component responsible for reducing methane output is bromoform which has now been formulated into an oil suspension by a number of commercial companies to increase shelf life.

It is important that new products and additives planned to be used in livestock feeding are tested to ensure there is no effect on eating quality.

MLA undertook two separate projects to investigate the impact of *Asparagopsis* oil on eating quality in 2023–24, both for long-fed cattle (280 days on feed), and mid-fed cattle (150 days on feed).

The results of the research conducted on mid-fed and long-fed cattle fed *Asparagopsis* oil showed a minimal, non-significant impact on eating quality. As a result, no changes to the MSA model and Standards are required when cattle are fed rations containing oil-based *Asparagopsis*.



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**MLA's *MSA Annual Outcomes Report 2023-24*  
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