

About this Update

The 2025 Annual Update has been prepared with reference to the Global Reporting Initiative (GRI) Standards, specifically the applications of GRI principles, general disclosures and material topics, as well as GRI 13: Sector Standard for Agriculture, Aquaculture and Fishing and the topics considered to be material by the Australian beef industry.

Unless otherwise stated, this report presents information for the period of 1 June 2024 to 31 July 2025.

Australian Beef Sustainability Framework

The Australian Beef Sustainability Framework (ABSF) is an initiative of the Australian beef industry to set out the key indicators of performance in sustainability for the beef industry. It enables success to be recognised through evidence-based metrics and empowers the industry to continually improve and demonstrate its values to customers, investors and stakeholders. It shows the industry's intent to be accountable and to accurately tell the story of the Australian beef industry, further underpinning long-term market access.

The ABSF:

- Promotes industry transparency and progress to customers and the community
- Informs industry investment for continuous improvement in areas most important to our stakeholders
- Helps protect and grow access to investment and finance by providing evidence of performance and improvement
- Fosters constructive relationships with stakeholders to work collaboratively on improvement.

The ABSF does not:

- Establish or endorse measurement systems at an individual business level
- Provide an accreditation or certification system
- Endorse prescriptive management practices
- Create additional compliance or reporting burdens for individual businesses.

What is beef sustainability?

Beef sustainability is the production of beef in a manner that is socially, environmentally, and economically responsible. We do this through the care of natural resources, people and the community, the health and welfare of animals, and the drive for continuous improvement.

Australian Beef Sustainability Framework vision

A thriving Australian beef industry that strives to continuously improve the wellbeing of people, animals, and the environment.

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Highlights

69.83 million hectares

The total area of grazing land under forest reach **69.83 million hectores**, the highest on record since monitoring began in 1995.

The European Commission designated Australia as a **low-risk country** under the EU Deforestation Regulation, simplifying due diligence and supporting smoother market access.

Following adjustments to the national cattle population and feedlot emission equations, the beef industry in 2023 had **reduced its net CO2-e by 70.1%** since 2005.

The processing sector has decreased the CO2-e emitted per tonne HSCW by 137kg since 2022, now at **339kg CO2-e** in 2024.

\$109m

Industry continues to alleviate non-tariff trade barriers, with a further **\$109m** reduction over the past financial year.

Australian beef exports to the USA surged by over 30% in the last year, further demonstrating the industry's value in a competitive export market.

Beef production in Australia hit an alltime high of **2.75 million tonnes** for the financial year, surpassing the previous record set in 2015.



Due to increased efficiency, the processing sector reduced its solid waste to landfill by **71.6%** between 2022 and 2024.

Challenges

The lost time injury frequency rate was the highest in five years, with Farm Safety Week focussing on raising awareness of near misses.

New mandatory climate disclosure rules in Australia will impose a significant financial and administrative burden on cattle producers particularly with the upcoming requirement to report scope 3 emissions.



Approximately 3/4 of cattle properties were covered by a documented biosecurity plan in 2024. This is expected to increase with the release of a biosecurity self-assessment tool in LPA.

Inconsistent
global
sustainability
standards based
on foreign
management
systems and
markets highlight
the importance
that Australia's
self-funded beef
sector must lead
in defining fair,

credible metrics.

Persistent skills shortages across the beef supply chain have hindered areas of productivity and innovation.

No national-scale data currently exists for soil carbon levels, limiting the ability to track sequestration progress of beef properties accurately.



In 2024, average beef farm profitability dropped to -\$16,430, driven by drought and low beef prices despite a rebound in cattle prices later in the year.

Despite initial increases, adoption of pain management for invasive animal husbandry practices remains at 31%, with only 5 years remaining for the aim of 100% uptake.

Letter from the Chair – 2025 Annual Update



Welcome to the Australian Beef Sustainability Framework 2025 Annual Update.

This year's report captures the breadth of our industry's work – from animal care and environmental stewardship to people, community, and economic resilience. It shows the progress we have made, and the challenges that lie ahead, in keeping Australian beef the most trusted, sustainable, and resilient in the world.

On best animal care, the whole supply chain is raising the bar. The new Animal Welfare Management Plan was implemented to cover all LPA-accredited properties, giving our customers confidence in how cattle are cared for on farm. Nearly all cattle processed – 98% – go through independently animal welfare accredited facilities, and 72% of feedlot cattle are now housed with shade.

On environmental stewardship, we continue to demonstrate measurable gains. Since 2005, the beef sector has reduced net CO_2 -e by 70.1% (to 2023). Processors cut their emissions intensity by 137 kg per tonne of beef in just two years, down to 339 kg CO_2 -e per tonne in 2024. Grazing land under forest reached a record 69.83 million hectares, underscoring the coexistence of beef production and native vegetation.

On economic resilience, 2024 was tough – drought, low beef prices, and biosecurity pressures drove average farm, profitability into the red at –\$16,430. Yet we showed resilience, with exports to the US lifting by more than 30% and the EU designating Australia "low risk" under deforestation regulations, strengthening our market access.

On people and community, we know safety must improve, with the highest lost-time injury frequency in five years. Industry responded with Farm Safety Week to drive cultural change. At the same time, workforce skills and technology adoption programs are being rolled out across the supply chain.

The ABSF is not a marketing tool. It is our industry's evidence base – showing where we are strong, where we can improve, and how we are responding. We operate in one of the world's most competitive markets, as a self-funded beef sector. That makes our commitment to transparency and continuous improvement even more critical.

Thank you to the Steering Group for your dedication, and to every producer, researcher, lot feeder, processor, live exporter, transporter and supply chain partner who plays their part. It is your effort that ensures Australian beef continues to feed the world – responsibly, sustainably, and proudly.

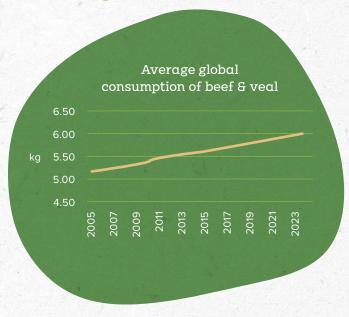
Patrick Hutchinson

Chair, Steering Group

Australian Beef Sustainability Framework

Markets Profile

Over the past 20 years, total global consumption of beef and veal has been steadily increasing at an average annual rate of 0.7%.



While there has been a steady decline in Australia's per capita consumption of red meat over the same period, Australia is the third largest consumer of beef in the world, with per capita consumption in 2024 averaging 22.6kg, compared to the global average of 6kg¹. Ninety-two per cent of Australian households purchased beef in 2024. This represents the largest single market for the Australian beef industry.

In 2024, Australia's top three beef export destinations (in volume terms) were:

- United States of America (US) 394,543 tonnes shipped weight (swt) (29.4% of total exports)
- Japan 247,605t swt (18.4%)
- South Korea 200,546t swt (14.9%)².

Australia's top three live cattle export destinations in 2024 were:

- Indonesia 537,274 head (70.1%)
- Vietnam 122,151 head (15.9%)
- China 52,599 head (6.9%)³.



- ¹Meat & Livestock Australia, State of the Industry Report 2025, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/trends--analysis/soti-report/mla-state-of-the-industry-report-2425.pdf
- ² Department of Agriculture, Forestry and Fisheries, Red Meat Export Statistics 2024, DAFF, Red meat export statistics 2024, https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/meat/statistics/red-meat-stats-2024
- ³ Department of Agriculture, Forestry and Fisheries, All Livestock Exports, https://www.agriculture.gov.au/biosecurity-trade/export/controlled-goods/live-animals/live-animal-export-statistics/livestock-exports-by-market

Market and Regulatory Forces

Mandatory climate-related financial disclosures

Mandatory climate-related financial disclosures, effective from 1 January 2025, are beginning to reshape the Australian beef industry by increasing transparency around climate risks and sustainability practices. Large agribusinesses, including major beef producers and processors, are now and in the near future obliged to report on their exposure to climate-related risks, emissions profiles, and transition strategies⁴. This regulatory shift is prompting beef companies to invest in more advanced data collection, governance frameworks, and sustainability reporting systems, while also upskilling management teams and boards. While the initial compliance burden may be significant—especially for producers unfamiliar with financial disclosure standards it also presents an opportunity to demonstrate climate resilience and attract environmentally conscious investors. Moreover, the disclosures are expected to influence capital allocation, with financiers and insurers increasingly factoring climate risk into their decisions. For the beef industry, which is often scrutinised for its methane emissions and land use, these disclosures could accelerate the adoption of low-emission technologies, helping align the sector with Australia's broader net-zero goals.

Deforestation commitments

The European Union Deforestation Regulation (EUDR) and Science Based Targets initiative (SBTi) deforestation targets have resulted in scrutiny of the Australian beef industry's environmental management. The EU has rated Australia a low-risk nation for deforestation, due to the range of State, Territory and Federal legislation protecting our environment, as well as the data demonstrating a net increase in forest over the last 16 years. Meanwhile, SBTi is pushing major retailers and processors to commit to deforestation-free supply chains by the end of 2025. Together, these initiatives have encouraged the industry to demonstrate its environmental management practices and accelerate efforts toward transparency and

sustainability. Further, Australian producers operate under more than 136 State, Territory, and Federal vegetation management laws, and State Government's prosecute illegal vegetation clearing in Australia.

Biosecurity

Biosecurity incursions in countries near Australia—particularly of diseases like foot-and-mouth (FMD) and lumpy skin disease (LSD) —are heightening vigilance within the Australian beef industry. These concerns are amplified by Australia's proximity to Southeast Asian nations where a range of livestock pests and diseases are more prevalent. The industry is responding by advocating for stricter traceability, enhanced surveillance, and more robust quarantine protocols to safeguard Australia's disease-free status, which is critical to maintaining export market access and consumer confidence.

Greenwashing

The risk of greenwashing is increasingly influencing the Australian beef industry, as sustainability claims come under greater scrutiny from regulators, investors, and consumers. With rising demand for environmentally responsible products, beef producers and retailers are expected to substantiate claims about emissions, land use, and animal welfare. Vague or misleading statements—once common in marketing—now carry reputational and legal risks, especially as global standards tighten and third-party certifications become more prominent. This shift is prompting companies to invest in traceability systems, transparent reporting, and verified sustainability frameworks to maintain market access and consumer trust⁵.

⁴ The Treasury, Mandatory climate-related financial disclosures, https://treasury.gov.au/sites/default/files/2024-01/c2024-466491-policy-state.pdf

⁵ Australian Competition & Consumer Commission, Environmental and sustainability claims, https://www.accc.gov.au/business/advertising-and-promotions/environmental-and-sustainability-claims

Trade Barriers

Australian beef exports are advantaged via a suite of preferential trade agreements. These assist in providing not only more diverse access, but a competitive advantage in some key customer markets.

This access is subject, however, to geopolitical shifts — as exemplified by the recent imposition of a baseline 10% tariff on all Australian imports into the United States. This is contrary to the preferential (tariff free) access bestowed via the Australia-US Free Trade Agreement. Fortunately, with the US currently at a low in beef production and requiring imported beef to meet ongoing consumer demand, exports have continued. Additionally, other countries supplying beef to the US face even higher tariffs — with Australia not being at a distinct competitive disadvantage.

By leveraging trade agreements, Australian exporters are also aiming to capture market share across Asia and the Middle East - where demand as well as competition (with competitors securing new trade preferences) is increasing. The removal or ongoing reduction of tariffs has proved to be hugely beneficial in ensuring Australian beef is not burdened by additional costs.

However, it is not just trade agreements which confer benefits, but also the alleviation of non-tariff barriers (NTBs). Securing processing establishment listings, removing product importation bans and simplifying certification and labelling requirements are examples of an ongoing industry focus to ensure access and product returns are maximised.



Materiality Assessment

The ABSF regularly reviews key topics and areas of focus to ensure that it continues to address the beef industry's most significant impacts, risks and opportunities. Conducting a double materiality assessment—which considers both the financial risks to the industry and the environmental and social impacts it creates—offers a range of strategic benefits for the Australian beef sector.

It ensures the ABSF is considering emerging global reporting standards, such as the EU Corporate Sustainability Reporting Directive (CSRD), GRI, and International Financial Reporting Standards (IFRS), helping to maintain market access and regulatory readiness around the globe. It also improves risk management by proactively identifying social and

environmental risks that could have financial or reputational impacts for the industry.

The Steering Group (SG) undertook an updated materiality assessment in 2024-2025, following previous assessments in 2016 and 2020. The material priorities and their scores can be seen in the matrix right.

Results

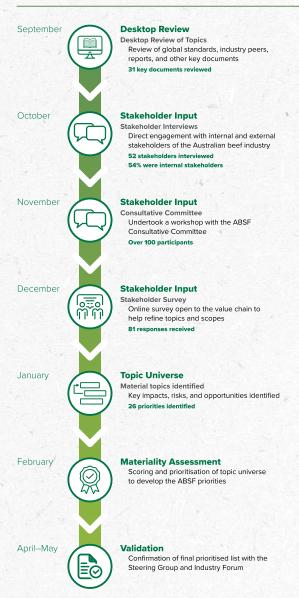
The 2025 ABSF materiality assessment identified a total of 26 sustainability topics. Of these, 13 topics were considered highly material, indicating their critical importance to the industry's sustainability performance, regulatory compliance, and stakeholder expectations. These are:

- Animal health & welfare
- Biosecurity
- Market access
- Climate change resilience
- Greenhouse gas emissions & carbon capture
- Food safety & quality
- Deforestation
- Livestock transport
- Traceability across the value chain
- Animal husbandry & handling
- Work health & safety
- Rural economic & community contribution
- Profitability & productivity

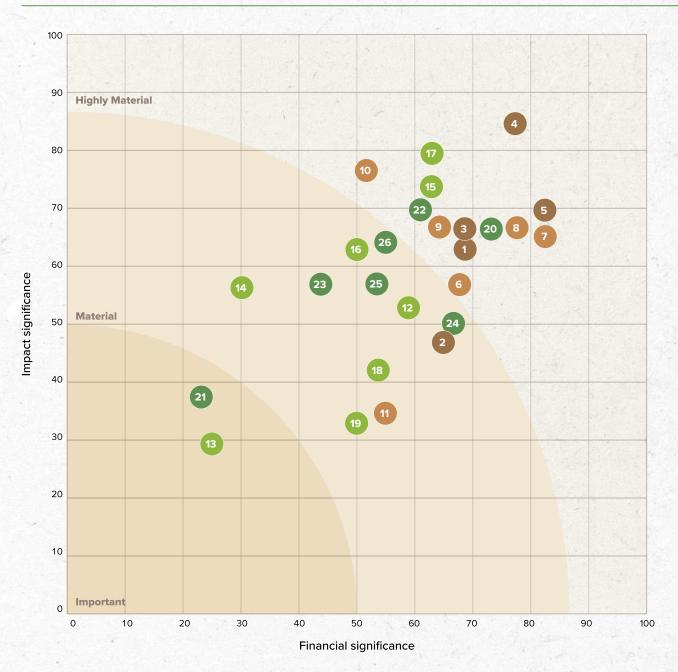
Engagement

The 2025 materiality assessment was shaped by extensive stakeholder engagement, including surveys, interviews, and workshops with over 80 participants across the beef value chain. This process ensured that the topics identified reflect not only industry priorities but also the expectations of customers, investors, regulators, and community groups. The insights gathered were instrumental in validating the relevance and impact of each sustainability topic, reinforcing the ABSF's commitment to inclusivity and transparency.

What we did



Materiality Matrix





Best Animal

- Animal husbandry & handling
- 2. Processing practices
- 3. Livestock transport
- 4. Animal health & welfare
- 5. Biosecurity



Economic Resilience

- 6. Profitability & productivity
- 7. Market access
- 8. Climate resilience
- 9. Traceability across the value chain
- 10. Rural economic and community contribution
- 11. Partnerships & industry collaboration



Environmental Stewardship

- 12. Water
- 13. Waste
- 14. Soil health
- 15. Deforestation
- 16. Biodiversity
- 17. Greenhouse gas emissions and carbon capture
- Feed base production and pasture management
- 19. Feed sourcing



People & Community

- 20. Food safety and quality
- 21. Diversity and inclusion
- 22. Work, health & safety
- 23. Nutrition & food security
- 24. Labour practices
- 25. Antimicrobial stewardship
- 26. Workforce development and capacity building

New Priorities

Three new priorities were identified through the Materiality Assessment. Due to the complexity of establishing new priorities and developing indicators which meaningfully track industry progress, the SG acknowledges the importance of these priorities with a commitment to report against them in future reports.

Feed Sourcing

Relating to how the industry sources animal feed and the associated impacts of feed production on water stress; local and offshore deforestation; use for animal feed versus fuel; and, labour standards. This priority will inform strategies to manage opportunities and risks to feed sourcing and livestock supply presented by climate change.

Partnerships & Industry Collaboration

Focuses on the establishment of collaborative partnerships between businesses, organisations and government entities across the beef value chain and between sectors to share data, streamline research and development and drive innovation

Traceability Across the Value Chain

Improving traceability is a priority for the entire value chain, from sourcing and production to processing and trade. This includes safeguarding environmental, animal and social conditions (including human rights), throughout the value chain, enabling transparency and clear communication of sustainability impacts.

The Australian beef industry has the following assurance and auditing regimes related to traceability, food safety, food quality, and animal welfare:

- Livestock Production Assurance (LPA) on farm assurance
- National Vendor Declaration (NVD)
- National Livestock Identification System (NLIS) identification and traceability
- National Feedlot Accreditation Scheme (NFAS)
- Exporter Supply Chain Assurance System (ESCAS)
- Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS)



The Australian Beef Sustainability Framework

The Australian beef industry is committed to a transparent, sustainable pathway of best practice through the value chain. The ABSF tracks performance of the industry against a series of indicators under four themes: Best Animal Care; Economic Resilience; Environmental Stewardship; and People and the Community. Within these themes the industry has identified 26 priority issues.



Best Animal Care

- Animal Husbandry& Handling
- Biosecurity
- Processing Practices
- Livestock Transport
- Animal Health & Welfare



Environmental Stewardship

- Biodiversity
- Soil Health
- Feed Base Production & Pasture Management
- Balance of Tree & Grass
 Cover
- Greenhouse Gas
 Emissions & Carbon
 Capture
- Water
- Waste
- Feed Sourcing



Economic Resilience

- Climate Resilience
- Profitability & Productivity
- Market Access
- Traceability Across the Value Chain
- Rural Economic & Community Contribution
- Partnerships& IndustryCollaboration



People & Community

- Food Safety & Quality
- Nutrition & Food Security
- Work Health & Safety
- Labour Practices
- Diversity & Inclusion
- Antimicrobial Stewardship
- Workforce Development & Capacity Building

Changes From Previous Update

The balance of tree and grass cover indicators (9.1 - 9.4) have shifted slightly from reporting percentage gains and losses, to extents of different categories. This has been implemented to ensure consistency with reporting standards, responding to emerging market and regulatory forces, and allows for greater interpretation.

Indicator 10.7 has been removed, as accessing beef specific data for GWP* is not possible, and further complicates the industry's ability to report consistent progress in greenhouse gas emissions & carbon capture.

Trends

Each indicator's historical data has been analysed to determine if it is significantly trending between 2017 and the most recently available data. A 75% coefficient of determination has been applied to determine if there is an improvement or decline, or if the data has remained steady.

- = Improvement, or maximum limit reached
- = Steady
- = Decline

N/A = Data is unable to be trended, or is a new indicator



Graphs of historical data are available on the ABSF website.



Best Animal Care

The Australian beef industry is guided by the five domains of animal welfare; nutrition, environment, health, behaviour, and mental state. This ensures the industry can aim to provide all cattle with an environment in which they can thrive.

Care for our livestock throughout the whole supply chain is at the core of what we do. Ensuring the health, welfare and productive performance of our animals is vital to the sustainability of our red meat businesses and the quality of the products we produce. Australia continues to invest significantly in developing world-leading animal health and welfare systems to ensure we deliver on our strong track record, and continually strive to go beyond agreed standards.

Industry's investment in research, development and adoption (RD&A) aims to safeguard the wellbeing of Australia's livestock, while maintaining and improving farm profitability and efficiency. Consideration of animal health, welfare and biosecurity are inextricably linked when defining livestock wellbeing.

In order to achieve greater impact in the form of increased efficiency of animal production, higher profits for producers and an overall increase in on-farm animal welfare and consumer perceptions of welfare, we are building bigger programs of work, and connecting these to community insights and producer adoption pathways. This is contributing to sustainable solutions for red meat production, through continuous review and improvement.

The five key pillars of investment in the MLA Animal Wellbeing Program are:

- 1. The development of safe, effective, long-acting vaccines and therapeutics focused on extending the efficacy and duration of pain relief products.
- 2. The mitigation of the impact of, and need to perform, surgical husbandry procedures transitioning to a polled herd, removing the need for dehorning, and developing a controlled-release implant for cattle that can provide a sustained period of contraception for female cattle to avoid spaying.

- 3. **Livestock transport** development of a livestock transport strategy to manage risks and identify opportunities for improvement across the entire supply chain. The strategy has three pillars: animal welfare; supply chain efficiency; and education and training.
- 4. Mitigation of the impact of Buffalo fly on our northern beef herd a detailed investigation to deliver a selection of potential products and practice options for business case development.
- Livestock biosecurity understanding the evolving biosecurity risks and challenges the red meat industry faces, and the gaps and needs that must be addressed, is critical to informing strategic RD&A investment opportunities.

Industry bodies are strongly committed to optimal standards of animal welfare.

The Australian Lot Feeders Association aims to be a leader in animal welfare, and environmental and production standards, to increase the profitability and sustainability of its members' businesses, and to influence the operating environment to enable feedlots to continually improve, adapt and innovate.

Similarly, the processing sector aims to see Australia globally recognised as a leader in animal welfare, consistently meeting or exceeding the highest standards. Strong science and evidence-based systems are critical to community trust and support, and the industry's reputation as clean, green, and ethical.

In June 2025, the grassfed sector added a new requirement to Australia's on-farm assurance program (LPA), giving producers a clear way to show how they're meeting animal welfare standards on-farm

The change is supported by a new tool – the Animal Welfare Management Plan (AWMP) – which helps verify on-farm practices and reinforces the Australian red meat industry's commitment to animal welfare.

The industry believes management procedures and standards of practice should be consistent with Australian regulations and international best practice, including appropriate action to minimise pain.

| ID | INDICATOR | DATA | TREND |
|-----|--|-------------------|-------|
| 1.1 | Percentage of producers using appropriate pain relief for invasive husbandry practices. | 31% (2023) | • |
| 1.2 | Percentage of cattle receiving appropriate pain relief for invasive husbandry practices. | 40% (2023) | N/A |
| 1.3 | Percentage of national studbook genetically polled. | 41.25% | N/A |

Data Explained

1.1 – 1.2 Source: Meat & Livestock Australia7

The Australian beef industry remains committed to the pursuit of non-invasive replacements for invasive surgical procedures. Until these are available, the industry aspires to 100% use of effective and appropriate pain mitigation for these procedures by 2030. Data from the MLA 2024 Producer Survey showed that 352 respondents from 1,118 producers used pain management for invasive animal husbandry procedures (dehorning, disbudding, castration, and spaying). This represents approximately 40% of the national herd receiving appropriate pain relief when undergoing these procedures.

This survey will be undertaken again in 2026.

1.3 Source: MLA, Aggregated data gathered from breed societies

Polled cattle contain a genetic trait preventing the growth of horns. Horns can cause injury to other cattle and to people, and are often removed by disbudding, dehorning, or tipping. This is not needed for polled animals.

The data collection method for this indicator has changed, therefore should be treated independently and not compared to previous years data. Previously, data was gained from the Australian Registered Cattle Breeders Association. This year, data has been aggregated from six of the largest breed societies (Charolais, Hereford, Brangus, Limousin, Santa Gertrudis, Wagyu) in Australia for the year 2023. Work will continue to ensure all breeds are captured. A further 1.3% were scurred.

Snapshot of Activities

- Polled cattle breeding: The Australian Agricultural Company (AACo), Australia's largest integrated cattle and beef producer, is implementing a targeted breeding program to produce polled (hornless) cattle. Early results are emerging in the company's Wagyu and Composite herds, with continued progress expected over the medium term.
- Extended pain relief research: Meloxicam, a registered pain relief treatment, currently offers only short-term relief. A recent study by MLA and the University of Queensland explored the use of alkaline compounds to extend its effectiveness by up to one month. These findings are now guiding in-vitro pilot studies on controlled release.





The focus is on managing the risk of infectious diseases, invasive pests and weeds to safeguard the industry, environment, animals and people.

| ID | INDICATOR | DATA | TREND |
|-----|---|---------------------|-------|
| 2.1 | Percentage of Australian cattle properties covered by a documented biosecurity plan | 75.5% (2024) | |

Data Explained

2.1. Source: Integrity Systems Company⁸

Livestock Production Assurance (LPA) accredited producers are not audited every year. Instead, LPA conducts audits of a sample of randomly selected producers annually. Random audits are used to ascertain the conformity rate and trends across the entire population of LPA-accredited producers. Using random audits delivers a more accurate result than targeted audits, which are more likely to find issues and skew the interpretation of the data.

To improve conformity, ISC updated the LPA accreditation process to include a self-assessment, as well as a prompt for producers to complete or provide their biosecurity plan when undertaking accreditation.

After self-assessment was launched in 2024, from 1 September to 31 December, a total of 12,746 cattle producers completed or uploaded their biosecurity plan. ISC is currently updating the accreditation process to mandate the completion of a biosecurity plan for new producers, before accreditation is granted.

To drive conformity to 100%, ISC also has an outside-of-audit process to send reminders and if required, corrective action requests (CARs) to producers with no biosecurity plan on file.

Some 3,095 LPA audits were conducted on LPA-accredited Property Identification Codes with cattle. While 761 biosecurity plan CARs were generated, the overall result equates to 75.5% of producers having a biosecurity plan.

Of these, 2,115 were random audits. Of the randomly audited cohort, 474 CARs were raised (22.4%) due to no documented biosecurity plan being in place. This equates to 77.5% of these having a biosecurity plan in place.

Snapshot of Activities

Skin lesion sampling for LSD surveillance

Northern Australian Biosecurity Surveillance network practitioners are contributing to a project that samples non-LSD-related cattle skin lesions during routine work. This helps build a clearer picture of typical skin conditions in northern Australia and supports evidence that LSD is absent.

Biodegradable FMD vaccine breakthrough

A world first mRNA-based, biodegradable vaccine for FMD has been developed through a \$20 million partnership between MLA, Tiba Biotech, and the NSW Government. Trials in Germany showed vaccinated cattle were protected and did not shed the virus. The vaccine now awaits evaluation by the Australian Pesticides and Veterinary Medicines Authority (APVMA) before approval for use.

Livestock export preparedness

The Livestock Export Strategic Response Group (SRG)—including LiveCorp, Australian Livestock Exporters'
Council, and MLA—has conducted multiple simulation exercises to test industry readiness for exotic animal disease (EAD) outbreaks. The SRG will provide strategic leadership in the event of an outbreak.

Indonesia Biosecurity Support Project

MLA and the Federal Government have launched an 18-month, \$2 million project to strengthen Indonesia's biosecurity response to LSD and FMD. The initiative supports feedlot protection and helps maintain live export market access for Australia.

CSIRO partnership on biosecurity RD&A

MLA and CSIRO are collaborating to identify emerging biosecurity risks and research gaps. The project will guide strategic RD&A investments that deliver short- and medium-term impact.

Snapshot of Activities

- Exercise High Steaks FMD Response Planning In May 2024, the Australian Lot Feeders' Association (ALFA) and Biosecurity Queensland led a workshop with 30 participants from industry and government to simulate a response to a potential FMD outbreak. This forms part of ALFA's broader EAD Biosecurity Project, which includes interactive biosecurity workshops designed to assist lot feeders prepare and respond to an emergency animal disease incursion.
- Supported by the Commonwealth Government, the Northern Territory Government coordinated a biosecurity simulation through the Northern Australian Coordination Network, with participation from the WA and QLD governments, industry bodies and Legune Station. The three-day exercise tested government and on-farm emergency animal disease response systems, while strengthening understanding of biosecurity protocols, emergency coordination, and the value of government—
- Government & Industry Cost Sharing Deed During 2024-25, amendments were made to the Emergency Animal Disease Response Arrangements (EADRA) to recategorise some animal disease status as well as review existing definitions and processes. EADRA is signed by 24 organisations, including industry bodies and state governments who collaborate to guide a response in the event of an emergency animal disease incursion.
- Biosecurity self-assessment and accreditation changes In September 2024, LPA introduced a biosecurity self-assessment tool required at accreditation and reaccreditation. The accreditation cycle was shortened from three to two years, keeping biosecurity top of mind. This change also allows integration with other assurance programs and supports enhanced declarations via eNVD.





Ensuring the humane processing of animals at processing facilities is consistent with Australian regulations and standards, and international best practice.

| ID | INDICATOR | DATA | TREND |
|-----|---|--------------------------|-------|
| 3.1 | Percentage of cattle processed through an establishment accredited under the Australian Livestock Processing Industry Animal Welfare Certification System (AAWCS) | 98.09 % (2024-25) | |
| 3.2 | Percentage of exported cattle processed through an Exporter Supply Chain Assurance System (ESCAS) accredited establishment | 100% (2024) | • |

Data Explained

3.1. Source: MLA, Aggregated slaughter numbers from AAWCS-accredited processing establishments

AAWCS is an independently audited certification program used by Australian livestock processors to demonstrate compliance with industry best practice animal welfare standards, from the receival of livestock to the point of humane processing. Australia's 50 AAWCS-accredited processing facilities accounted for 7,123,522 of the 7,262,399 cattle processed in FY2025. This represents 98.09% of the total cattle slaughter.

In FY2024, it was 98.04%.

3.2. Source: Department of Agriculture, Fisheries and Forestry⁹

Australian companies which export livestock internationally under feeder and slaughter protocols are required to have an Exporter Supply Chain Assurance System (ESCAS) in place. This covers animal welfare, control and traceability through the supply chain, and independent auditing. The Department of Agriculture, Fisheries and Forestry (DAFF) consignments and non-compliance data were used to develop this indicator. There were no investigations involving cattle throughout 2024.

Snapshot of Activities

Virtual reality training

The Livestock Export RD&E Program developed a virtual reality tool to train workers in humane stunning practices. Successfully trialled in Indonesia and Vietnam, it is now actively used in training programs across Indonesia.

Al-enabled welfare monitoring

AMPC is collaborating with Impetus Animal Welfare to evaluate continuous monitoring technologies that utilise video, sensors, sound, and other data sources to strengthen animal welfare oversight in processing plants. Trials are assessing how ongoing monitoring and Algenerated insights can deliver a more comprehensive view of welfare performance and inform practical adaptations to processes and training to enhance animal welfare outcomes on-plant.

Updated animal welfare standards for processing

The Australian Meat Industry Council (AMIC) has released updated standards for the AAWCS, developed in collaboration with RSPCA, AUS-MEAT, Australian Meat Processor Corporation (AMPC), DAFF, and an independent animal welfare expert. These now include mandatory video surveillance for accredited facilities. Compliance will be required from 1 January 2026.



Promoting handling procedures in transport is aimed at ensuring alignment with Australia's regulations and standards and with international best practice on animal health and welfare.

| ID | INDICATOR | DATA | TREND |
|-----|---|---------------------|-------|
| 4.1 | Total mortality rate of cattle exported on sea voyages | 0.06% (2024) | • |
| 4.2 | Total mortality rate of cattle on domestic road transport | N/A | N/A |

Data Explained

4.1. Source: Department of Agriculture, Fisheries and Forestry¹⁰

Every six months, the Federal Minister must table in Parliament a report from the Department that includes livestock mortalities on every sea voyage. In accordance with the requirements of the *Export Control Act 2020*, the report relates only to information provided to the Secretary or a delegate during the reporting period, whether or not the voyages occurred during the reporting period. This data indicates there were 464 cattle mortalities from 767,708 head exported in 2024 (0.06%).

4.2. Source: TBC

Millions of cattle are transported domestically annually. Safe, efficient, and humane livestock transport improves welfare outcomes for livestock, boosts profits for the supply chain, and facilitates industry sustainability. Through an Australian Government Sustainability Reporting Uplift Grant, the industry has begun collecting data on livestock transported domestically by road.

Snapshot of Activities

Accredited stockperson training review

All livestock export voyages from Australia must include a LiveCorp Accredited Stockperson to ensure animal care and compliance with the Australian Standards for the Export of Livestock (ASEL). In 2025, the training program was reviewed to ensure it equips new stockpersons with the skills needed to manage livestock health and meet updated reporting requirements.

Al for livestock monitoring

Artificial intelligence (AI) originally used in the European pig industry has been adapted to recognise Brahman cattle, count animals in laneways, and estimate individual weights. Funded by the Livestock Export RD&E Program, this proof-of-concept could be used help monitor animal performance during export voyages.

Rubber matting trials

Rubber matting has been trialled in pre-export quarantine yards, on export ships, and in Indonesian ports and trucks. Funded by the Livestock Export RD&E Program, the matting has successfully reduced slips and falls, improving animal welfare.

Real-Time Welfare Data Interpretation

A multi-disciplinary team is developing a system to interpret welfare data collected on export vessels. The goal is to provide actionable insights for real-time decision making to improve animal welfare. The project builds on previous research and is expected to be completed in 2026.

Livestock Transport Hub launch

MLA has launched the Livestock Transport Hub, a central resource for producers and transporters on best practices for humane and safe livestock transport. Improved transport practices enhance animal welfare, increase supply chain profitability, and support industry sustainability.

Driving industry improvements from cattle transport data

In 2024, MLA formed the Livestock Transport Sustainability Taskforce comprised of representatives from across the red meat supply chain to work together to address challenges and identify opportunities to continually improve domestic livestock transport.

The taskforce will guide the domestic livestock transport industry's focus on three pillars: animal welfare, supply chain efficiency, and education and training. It will provide input into a 10-year strategy for domestic livestock transport sustainability, identifying and evaluating practical animal welfare indicators to track and report sheep and cattle welfare throughout the road transport chain.

MLA Project Manager Animal Welfare and coordinator of the taskforce Sharon Dundon (pictured below) said annual tracking of animal movements, animal welfare status, and overall performance would increase transparency and highlight areas for continuous improvement.

"Across the country, trucks are transporting livestock daily. It's crucial for the entire industry to proactively collaborate, ensuring we do right by our animals and our industry," Ms Dundon said.

Data on animal movements and welfare metrics is a key deliverable for the ABSF, with the most appropriate data collection mechanisms being discussed with the taskforce and tested through piloting.

"It is critical that we understand the frequency and types of injuries that compromise animal welfare during livestock transport to be able to develop measures to reduce these risks." she said.

"At this stage we are starting with five years of export licensed abattoir data and animal welfare incident reports, however we are aiming to move to a reporting system that gives a broader perspective across domestic transport."

Of more than 38 million cattle transported to export-registered abattoirs from January 2019 to November 2024, there were 4,234 animals implicated in welfare incidents reported to state and territory animal welfare authorities by export-registered abattoirs¹¹.

"Whilst those 4,234 animals involved have been carefully analysed, it is important to note that equates to 0.011 percent of all cattle transported to export abattoirs over those five years."

The most frequently reported incidents were animals mishandled, ingrown horns, and animals unable to bear weight on all four legs.

"This tells us that a number of these animals may not have been 'fit to load' as per the MLA fit to load guidelines, and likely not suitable for transport. MLA has developed resources like the MLA Transport Hub, that provides tailored practical livestock preparation guidelines to assist in ensuring the safe transport of livestock," Ms Dundon said.





Ensuring the welfare of livestock along the value chain and the maintenance of high welfare standards is focused on the application of the five domains: Nutrition; Environment; Health; Behaviour; and Mental State.

| ID | INDICATOR | DATA | TREND |
|-----|--|----------------------|-------|
| 5.1 | Percentage producer awareness of the Australian Animal Welfare Standards for Cattle | 100% (2024) | • |
| 5.2 | Percentage compliance with National Feedlot Accreditation Scheme Animal Welfare Requirements | 90.04% (2024) | |
| 5.3 | Percentage of feedlot capacity with access to shade | 72% (2024) | • |
| 5.4 | Percentage of producers vaccinating for clostridial diseases | 76% (2023) | • |
| 5.5 | Percentage of producers undertaking low stress stock handling training | 18.1% (2023) | • |

Data Explained

5.1. Source: Integrity Systems Company¹²

All LPA-accredited producers complete training in Australian Animal Welfare Standards (AAWS) as part of accreditation.

On 23 June 2025, LPA implemented a new requirement that all producers complete an Animal Welfare Management Plan to document how their own farm practices meet the AAWS. This plan can be completed at any time, or as part of accreditation or re-accreditation. The tool developed to generate the plans presents each applicable Standard, then requires producers to provide information about how they meet that Standard.

Some 3,095 LPA audits were conducted on LPA-accredited PICs with cattle. Currently, there are 144,500 accredited LPA PICs that have cattle listed as a species, which give a 2% audit sample size overall for cattle producing PICs.

5.2. Source: NFAS Audits¹³

This is an increase from the previous year's data of 83.29%, when numerous new animal welfare requirements had been implemented in 2022.

In 2024, 9.9% of non-conformances related to procedures or items that require documented evidence or supporting documentation. Audit findings indicate that the physical animal welfare requirements are being met.

5.3. Source: ALFA Survey

To maximise cattle wellbeing, meet welfare standards, increase productivity, and meet community expectations, ALFA is committed to encouraging the adoption of shade in feedlots over time.

To support this, ALFA launched the ALFA Shade Initiative in November 2020, asking all Australian feedlots to make the pledge to provide cattle under their care with access to shade by 2026. Since launching, shade adoption has increased to 1.2 million cattle under shade (72% of capacity), up from 810,000 in 2020.

¹² Integrity Systems Company, Livestock Production Assurance Audits

¹³ National Feedlot Accreditation Scheme, Feedlot Auditing

Data Explained

5.4. Source: Meat & Livestock Australia¹⁴

When used correctly as part of a property health plan, vaccines can help prevent common endemic livestock diseases, leading to improved animal health, welfare, and productivity. Vaccines may also be used as part of industry biosecurity programs to limit the spread of, or help eradicate, emergency animal diseases. This data from 2023 represents 618 producers who vaccinate against clostridial diseases (not including botulism) out of 813 survey respondents. This survey will be undertaken again in 2026.

5.5. Source: Meat & Livestock Australia 15

Low stress handling is important to farming enterprises, helping to improve health and wellbeing for livestock, occupational health and safety for the producer, and meat quality for the consumer. This data comes from the 2023 producer survey, where 409 respondents stated that they learned animal husbandry practices from formal courses, including 155 who attended low stress livestock handling courses or workshops. This survey will be undertaken again in 2026.

Snapshot of Activities

Environmental best practice manual

ALFA and MLA developed a manual for feedlot cattle staging facilities focused on preventing environmental impacts, particularly the movement of sediment, nutrients, salts, and pathogens into groundwater and surface water.

Feedlot Animal Welfare Benchmarking Framework

A new benchmarking framework was created using expert input, global welfare metrics, and Australian standards. After a seven-month pilot across eight feedlots, further trials are underway to refine the framework for broader adoption. This will help the industry measure, promote, and defend its animal welfare credentials.

Controlled-release contraceptive implant

MLA is developing a long-acting implant to provide up to 12 months of contraception in female cattle. The goal is to submit a full registration dossier to the APVMA upon successful completion (due for competition in 2030).

Buffalo fly control research

MLA is conducting a detailed study to assess the impact of buffalo flies and identify high-impact treatment options for future investment. The aim is to improve animal health and on-farm management practices.

Animal welfare biomarkers

MLA, the University of Queensland, and the University of Western Australia have identified biomarkers linked to brain function and welfare in red meat species. These findings pave the way for scientifically validated, real-time welfare assessments, positioning Australia as a global leader in welfare transparency.

Feedlot automation

Feedlots are adopting bunk management automation, with ute-mounted scanners monitoring feed levels for 250,000 cattle daily. Software is under development with customisable algorithms, alongside trials of automated disease and welfare detection systems.

Covered housing and odour management

ALFA is leading a multi-year study at Charles Sturt University to evaluate cattle management under covered housing to model odour emissions.

Autogenous vaccine trials

MLA, Apiam Animal Health and the University of Adelaide are trialling custom vaccines for bacterial pneumonia, fevers, and bronchopneumonia in feedlot cattle.

¹⁴ Meat & Livestock Australia, National Beef Producer Survey of Sustainability Practices, https://www.mla.com.au/contentassets/cf7551403eb94996a3b4109987f25562/e.ssf.0001-final-report-beef.pdf

¹⁵ Meat & Livestock Australia, National Beef Producer Survey of Sustainability Practices, https://www.mla.com.au/contentassets/cf7551403eb94996a3b4109987f25562/e.ssf.0001-final-report-beef.pdf



The Australian beef industry is committed to demonstrating its net positive contribution to nature, while contributing to Australia's net-zero ambitions, in alignment with the Australian Government's 2050 commitments.

Safeguarding the health of our environment is of critical importance to the Australian red meat and livestock sector. The Australian livestock production industry operates mostly on landscapes unsuitable for other forms of food production. Ruminant livestock grazing converts pastures into high-quality and nutrient-dense protein, delivering dual benefits of food production and natural resource management.

The industry's focus on environmental management allows it to build community trust and confidence in its product, as customers and consumers increasingly align purchases with their values. This focus also creates domestic and international trading advantages, ensuring the ongoing profitability, productivity and sustainability of our industry.

MLA is committed to supporting production systems that improve land management, reduce emissions and support biodiversity across Australia's vast grazing landscapes. It promotes integrated land management practices that achieve positive economic and ecological outcomes. A systems-based approach will help producers to assess soil health, match pasture species to environments, and optimise carrying capacity. Efforts will also target reproductive performance in the north and pasture utilisation in the south to boost overall herd and flock productivity.

MLA will launch a National Feedbase Program to deliver research, tools and resources that improve feed efficiency and pasture use across diverse production systems. MLA has identified that the optimal use of the feedbase is a key factor that differentiates the profitability of the top 20% of businesses and the remaining 80% of the industry. To address this issue, an MLA adoption initiative will support practice change programs to drive adoption of efficient pasture utilisation and deliver a national benefit.

The red meat industry has updated its goal from carbon neutral by 2030 (CN30) to 'contributing to Australia's net zero ambitions', which moves the industry into alignment with the Australian Government's 2050 commitments. The industry's programs and investments to drive emissions intensity reduction remains unchanged and intend to contribute to Australia's net zero ambitions while advancing profitability, productivity and sustainability. A focus of industry investment will be to accelerate investment in practical, science-based solutions such as tools and calculators, that help producers to lower emissions and improve productivity. It also includes projects focused on land management strategies to build climate resilience. The benefits of these investments will be measured through both overall emissions reduction and





Biodiversity





The beef industry aims to ensure the conservation and enhancement of plant and animal species, genetic diversity, and natural ecosystems. This goal encompasses the capacity of farmers to contribute to biodiversity enrichment and the protection of remnant native vegetation at scale, and recognises opportunities for biodiversity enrichment that promote productivity and animal wellbeing.

| ID | INDICATOR | DATA | TREND |
|-----|---|--------|-------|
| 6.1 | Percentage of cattle-producing land managed for biodiversity outcomes through | 55.07% | |
| | active management | (2023) | |

Data Explained

6.1. Source: Meat & Livestock Australia¹⁶

This figure represents the area of land where on-farm management activities directly contribute to positive environmental and biodiversity outcomes. The measured activities align with the sustainability recommendations from government agencies, regional NRM organisations, and other land management groups. These results include both environmental management and active grazing management, such as fencing, weed and pest control, paddock spelling, and water access management.

Close to 160 million hectares of over 290 million hectares surveyed were managed for biodiversity outcomes. The most common practices were weed control (88% of respondents), control of pest animals (65%), and destocking or spelling pastured areas (55%). This survey will be undertaken again in 2026.



Balancing business with biodiversity

In nature, everything is about balance. In Central Queensland, brigalow forests thrive on highly productive land – land that has been developed for beef production. PhD student Brodie Crouch is investigating how local beef production can flourish while simultaneously rebuilding, maintaining and growing local biodiversity.

Throughout his research, Brodie has visited beef operations throughout the brigalow region, surveying on-farm biodiversity levels. When managed correctly, these fertile soils provide an opportunity to support both beef production and the recovery of threatened species.

"I'm looking at management strategies producers can use on their properties to enhance biodiversity outcomes without taking a toll on their production," Brodie said.

According to Brodie, there are two key reasons to protect biodiversity. The first is its intrinsic value – species that have evolved over millions of years should be preserved for generations to come.

"The second is the value proposition of what biodiversity means for business and sustainable production," he said.

"Often biodiversity underpins resilience in the grazing system. The relationships between all the different organisms help to maintain the ecosystem where cattle are grazing."

Measuring impact

Now in the second year of his three-and-a-half-year project, Brodie is monitoring cattle behaviour and performance in different environments. His research focuses on tree cover on farms and how cattle can perform in biodiversity-friendly operations.

"The main impact we're investigating is the effect of brigalow shade lines and tree strips on cattle productivity.

"Heat stress has become a big factor for a lot of Queensland producers so we're looking at how shade lines and shelter belts affect grazing behaviour in the paddock, especially regarding pasture utilisation and landscape preference."

Using GPS collars, Brodie is tracking cattle movement and comparing behaviours in paddocks with minimal tree cover against those where more than 30% of the forest has been retained as shelter belts.

"We're aiming to weigh up these benefits of brigalow tree cover against some of the costs."

Creating mutual benefits

Through his research, Brodie hopes to identify practical strategies that allow producers to retain as much regrowth as possible while simultaneously improving business outcomes.

"Ideally, these management strategies will be actionable for producers within the brigalow region, allowing them to look at their paddocks and find strategic ways to retain regrowth to enhance biodiversity and production outcomes," he said.

Recognising that not all species within a livestock enterprise are beneficial or require protection, Brodie's surveys focus on identifying the presence of threatened or declining species that depend on brigalow forests.

"The producers I'm working with have loved having the data collected of all the birds on their properties. People have really shown an interest and want to engage with it.

"There really are wonderful examples of brigalow-dependent biodiversity existing alongside beef production"

For Brodie, the research is about more than keeping the region productive.

"Research is showing that reductions in yield in one region risks exporting environmental impacts elsewhere. Whilst reductions in yield may be necessary in some cases to protect our most threatened biodiversity, we want to minimise the risk that lost productivity can create elsewhere."

"Beyond improvements to farm business profitability, this is another reason we are looking at strategies to enhance biodiversity alongside production."





The focus on soil health includes responsible fertiliser and chemical use, soil nutrients, water retention, carbon storage, and topsoil quality.

| ID | INDICATOR | DATA | TREND |
|-----|---|--|--|
| 7.1 | Percentage of cattle producers adopting practices to improve soil water retention | 81% (2023) | • |
| 7.2 | Levels of soil carbon | No national-scale industry is contin accurately report | data currently exists. The uing to investigate methods to this indicator |

Data Explained

7.1. Source: Meat & Livestock Australia¹⁷

The ABSF has utilised the MLA 2023 producer survey to fill the current gap on understanding the percentage of cattle producers adopting practices to improve soil water retention, such as increasing organic matter and keeping the soil covered, implementing wind breaks to reduce evaporation from topsoil greater grazing rotation, management of stocking rates, stubble management, or undertaking conservation tillage practices. This data represents 659 of 813 respondents who stated that they implement practices to improve soil water retention.

This survey will be undertaken again in 2026.

7.2. Source: Under Development

Soils are the world's second-largest reservoirs of carbon. Plants and grasses remove carbon dioxide from the atmosphere and store it in the soil. Technologies and methodologies to measure carbon sequestration are a relatively recent concept, and trials are underway to verify scientifically sound methods which allow the industry to calculate the amount of carbon stored through farming practices on site and at a national scale. Initial modelling of organic carbon levels in the top 30cm of soil shows high variation across Australia, and typically less soil organic carbon is found in western regions of Australia¹⁸. There are a myriad of factors that influence the accumulation of soil organic carbon across landscapes; including physical soil profile characteristics, climatic factors, biological factors, and land management practices.

Snapshot of Activities

MLA has launched two multi-year projects to update technical manuals that guide producers toward best practice nutrient management for sulphur, potassium, boron, and phosphorus. These projects aim to help producers achieve a balanced and optimal approach to soil health and productivity.

Key activities include:

- Field and lab trials to address knowledge gaps.
- Soil surveys involving over 120 producers to assess the extent of nutrient imbalances.

- Producer engagement through workshops and field days.
- Extensive communication campaigns to educate producers and advisors on improved nutrient management practices.

Australia's soils contribute about \$63 billion each year to the economy through agricultural production¹⁹, and approximately \$930 billion per year across all functions and services.²⁰

- ¹⁷ Meat & Livestock Australia, National Beef Producer Survey of Sustainability Practices, https://www.mla.com.au/contentassets/cf7551403eb94996a3b4109987f25562/e.ssf.0001-final-report-beef.pdf
- ¹⁸ Gray, J, Bishop, T & Wilson, B, 2016, Factors Controlling Soil Organic Carbon Stocks with Depth in Eastern Australia, Soil Science Society of America, Vol. 79, No. 6
- ¹⁹ Soil Science Australia, SOS Value and Services of Australia's Soils, https://www.soilscienceaustralia.org.au/about/save-our-soils/sos-value-of-australias-soils
- 20 McBratney, A, Morgan, C & Jarret, L, 2017, The Value of Soil's Contributions to Ecosystem Services, Global Soil Security, Progress in Soil Science.





The industry's focus is to develop and utilise high-quality forage, ground cover and pasture resources, optimise plant health and productivity, mitigate the impact of weeds and pests, and sustain or enhance the natural capital essential for long-term livestock production.

| ID | INDICATOR | DATA | TREND |
|-----|---|--------|-------|
| 8.1 | Percentage of natural resource management regions achieving healthy groundcover | 59.3% | |
| | thresholds | (2024) | |

Data Explained

8.1. Source: Meat & Livestock Australia²¹

This calculation is based on 32 of the 54 NRM regions achieving a regionally appropriate healthy groundcover threshold for the late dry season (September as per available imagery). For rangeland regions in semi-arid parts of Australia, the threshold is 50% groundcover. This increases to 70% for coastal and tropical regions and 80% for high-rainfall regions. This data is for September 2024, where winter rainfall had been below to well-below average for Victoria, southern

South Australia, southern and western New South Wales, areas in the south of the Northern Territory, and south-western Queensland, and in an inland area in the southwest and the southeast coast of Western Australia. Longer-term serious to severe rainfall deficiencies persisted in areas of southwest and northwest Western Australia, across agricultural regions of South Australia, southwest Victoria and much of Tasmania²².

Further information on healthy groundcover thresholds is available from Leys et al. $(2020)^{23}$.

Snapshot of Activities

Crops for Cattle

Supported by Cooperative Research Centre for Developing Northern Australia (CRCNA) and the Northern Territory Department of Agriculture and Fisheries (NTDAF), this project is being conducted across eight commercial properties and two research stations in the NT. It aims to integrate northern cropping with cattle production, sourcing most feed locally through crops and feed mills, to mitigate dry season pasture decline.

Pasture 365

Led by Agriculture Victoria, this research explores speciesdiverse forage mixes that can provide year-round feed. By combining grasses, legumes, herbs, brassicas, and cereals, the project seeks to eliminate the summer-autumn feed gap and boost productivity across livestock sectors.

Saltbush Producer Guide

MLA has developed a guide for using saltbush—perennial shrubs from the chenopod family—as a reliable, palatable feed source all year round, especially in marginal environments. These plants are well adapted to Australian conditions and support sustainable grazing.

²¹ Meat & Livestock Australia, Balance of Tree and Grass Cover Dashboard https://www.sustainableaustralianbeef.com.au/resources/botgc-dashboard, CIBO Labs.

²² Bureau of Meteorology, Drought – Rainfall deficiencies and water availability, http://www.bom.gov.au/climate/drought/archive/20240905.archive.shtml

²³ Leys, J, Howarth, J, Guerschman, J, Bala, B & Stewart, J, 2020, Setting Targets for National Landcare Program Monitoring and Reporting Vegetation Cover for Australia







Improving the impact of the beef industry's land management practices on forests, including recognition of existing or rigorous regulations, and promotion of reforestation, as measured by national forest and woodland indicators.

| ID | INDICATOR | DATA | TREND |
|-----|---|-----------------------------|-------|
| 9.1 | Extent of primary forest on cattle grazing properties | 52,573,000 ha (2022) | • |
| 9.2 | Extent of secondary forest on cattle grazing properties | 17,256,000 ha (2022) | • |
| 9.3 | Extent of primary woodland on cattle grazing properties | 18,445,000 ha (2022) | • |
| 9.4 | Extent of secondary woodland on cattle grazing properties | 27,049,000 ha (2022) | • |

Data Explained

9.1 – 9.5 Source: Meat & Livestock Australia²⁴

Satellite imagery analysis has provided updated indicators of forest and woodland extent across cattle grazing properties in 2022. Compared to 2021, the data reveals a notable net increase of approximately 750,000 hectares in woody vegetation (forests and woodlands) on grazing lands nationwide. In Queensland alone, the net forest area expanded by over one million hectares.

At the national level, the total area of cattle grazing land meeting the Australian forest classification reached 69.83 million hectares—the highest recorded since monitoring commenced in 1995.

Further, there is evidence that the area of land under grazing is reducing. In Queensland alone, there has been a net decline of grazing land of 4% since 1999²⁵.

The improvement trend for primary forest is achieved through primary woodlands increasing their canopy cover percentage to be captured as a forest. This is likely to also explain some of the losses associated with the declining trend in primary woodland. A forest or woodland is only considered secondary after it has been completely disturbed, resulting in a canopy cover of less than 5%.

In terms of forest loss, approximately 923,000 hectares of primary and secondary forest were lost across national cattle grazing lands between 2021 and 2022. This represents a decline in forest loss compared to the previous year. While there is currently no national mechanism to determine the specific causes of forest loss, some instances have been attributed to fire encroachment from adjacent land, including public land.

The grazing industry continues to demonstrate a commitment to responsible land stewardship, recognising the importance of balancing natural capital management with food production. A deeper understanding of the impacts of natural disasters and climatic events on vegetation cover is essential to accurately interpret changes in land condition. It is also important to acknowledge that some recorded forest loss may reflect strategic removal of regrowth—particularly weedy or overly dense vegetation—to enhance ecosystem health and promote biodiversity.

²⁴ Meat & Livestock Australia, Balance of Tree and Grass Cover Dashboard, https://www.sustainableaustralianbeef.com.au/resources/botgc-dashboard,

²⁵ Department of Enviroment, Tourism, Science and Innovation, Chance in Available Soil and Land Resources, https://www.stateoftheenvironment.detsi.qld.gov.au/liveability/rural/change-available-soil-land-resources

Cattle Australia's Land Management Commitment

Cattle Australia developed a national framework to international reporting requirements for land management practices in Australian grass-fed beef production systems. Released in September 2024, this strategy defines land management practices tailored to Australia's unique environment. It includes four key recommendations to guide practical implementation across the industry.

The Land Management Commitment recommends:

- Australian government to manage an accurate and up-todate (updated annually) national dataset to demonstrate through satellite mapping, agricultural land use, nature and biodiversity.
- Ensure equivalency with international standards that support producers operating within the Australian context in maintaining access to both domestic and international markets and ensure technical barriers to trade are compliant with World Trade Organization rules.
- Industry and Government tools must be accessible to enable producers to demonstrate the benefits of the co-existence of beef production and biodiversity outcomes.
- Empower strategic agricultural growth through sustainable development plans that detail strategies to ensure food security, regional economies and communities and local ecosystems are not compromised.

Victorian Trees on Farms Program

This new statewide initiative supports landowners in planting trees for timber production, carbon abatement, livestock shelter, and biodiversity enhancement. Replacing the Victorian Carbon Farming Pilot and Gippsland Farm Forestry Program, it provides funding and guidance to ensure long-term success and sustainability.

- Australia classified as low risk under EUDR In May 2025, the European Commission designated Australia as a low-risk country under the EUDR. This is the lowest risk of deforestation and is based off analysis of changes in forest since 2015, meaning:
 - Only 1% of importers sourcing exclusively from Australia will face annual checks (compared to 3% for standard risk and 9% for high risk).
 - Australian goods will benefit from a simplified due diligence process, supporting smoother market access.

In September 2025, The European Commission announced it would look to delay the implementation of the EUDR a further 12 months, to 30 December 2026.

Geolocation sharing for EUDR compliance

In December 2024, LPA launched a geolocation sharing tool for producers and feedlots to support compliance with the EUDR. This tool helps maintain access to EU markets for beef, leather, and hides.



Definitions

Forest - Woody vegetation with >20% canopy cover reaching 2m high with a minimum area of 0.2ha.

Woodland - Woody vegetation with 5-20% canopy cover.

Groundcover - Non-woody vegetation, such as a grassland.

Primary - Refers to forest or woodland present in 1988.

Regrowth/Secondary - Refers to forest or woodland recurring on an area of land that has been previously disturbed.



Greenhouse Gas Emissions & Carbon Capture









The focus is on portraying an accurate overall greenhouse gas emissions profile associated with beef production, including the generation, mitigation, and sequestration of emissions. On farm, this includes rumination, energy consumption, vegetation management, feed sourcing, sequestration and soil carbon. For the value chain it also includes reducing energy consumption by adopting more efficient technologies, practices and processes, while incorporating renewable energy generation to further reduce emissions.

| ID | INDICATOR | DATA | TREND |
|------|---|----------------------|-------|
| 10.1 | Percentage total CO ₂ e reduced by beef industry from a 2005 baseline (GWP100) | 70.1% (2023) | • |
| 10.2 | Net Mt of CO ₂ e emitted by the beef industry (GWP100) | 38.4Mt (2023) | • |
| 10.3 | Kg CO ₂ e emitted per kg liveweight when raising beef (GWP100) | 12.1kg (2024) | • |
| 10.4 | Kg CO₂e emitted per tonne HSCW when processing beef (GWP100) | 339kg (2024) | |
| 10.5 | Percentage processing energy demand met by biogas | 10.3% (2024) | . • |
| 10.6 | Carbon sequestered in on-farm vegetation (Mt CO ₂ e) | 14.2Mt (2023) | • |
| 10.7 | Percentage of producers who generate and/or use renewable energy | 58% (2023) | N/A |

Data Explained

10.1. Source: Meat & Livestock Australia²⁶

The industry continues to monitor its net emissions reduction from beef and land use-related emissions. A baseline year of 2005 has been chosen as it aligns with the Paris Agreement. This metric is calculated through the GWP100 metric, a standardised practice recognised by the Intergovernmental Panel on Climate Change (IPCC).

The most important changes in the 2023 report relate to the national cattle population data and the equations used to calculate emissions from feedlot cattle.

These changes have been implemented on historical data to 2005, with the updated figures now representing a net decrease in 2023 of 70.1% of CO2e since the baseline year.

10.2. Source: Meat & Livestock Australia²⁷

The 2023 National Inventory uses revised cattle population data from the Australian Bureau of Statistics (ABS). The larger cattle population compared to previous years means that emissions associated with beef cattle grazing pasture have increased.

While emissions from agricultural activities increased from 2022, sequestration from land use, land use change and forestry (LULUCF) decreased over the year. Beef production accounted for 8.48% of national emissions in 2023.

²⁶ Meat & Livestock Australia, Red meat greenhouse gas emissions update 2023, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/2023-red-meat-emissions-report-official.pdf

²⁷ Meat & Livestock Australia, Red meat greenhouse gas emissions update 2023, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/2023-red-meat-emissions-report-official.pdf

Data Explained

10.3. Source: Australian Meat Processor Corporation²⁸

This data came from the Life Cycle Analysis (LCA) averaged across 2022-2024 and represents a 7.6% decrease from the previous LCA across five years to 2020. The reduction in emissions was primarily associated with decreased enteric methane emissions, which declined in absolute terms from 14.7 kg CO2e kg LW-1 to 10.4 kg CO2e kg LW-1. The proportion of methane in the emission profile declined from 90% of total impacts in 1985 to 83% in 2024, partly in response to better herd efficiency reducing methane contributions, and partly because the intensity of production increased, resulting in larger contributions from carbon dioxide associated with energy use and purchased inputs.

When beef from dairy herds is accounted for, this further decreases to 11.9kg.

10.4. Source: Australian Meat Processor Corporation²⁹

Like all manufacturing facilities, meat processing plants use energy to operate, primarily from electricity, natural gas, coal, and diesel. This indicator tracks performance in reducing the intensity of Greenhouse Gas (GHG) emissions associated with processing. Improvements in GHG emissions intensity also contribute to reducing the carbon footprint of red meat products, although the contribution of red meat processing is small in relation to the full product life cycle. This indicates a reduction of 137kg since 2022, likely due to the processing plants operating closer to capacity and maximising efficiencies.

10.5. Source: Australian Meat Processor Corporation³⁰

Methane and other gases can be captured during wastewater treatment at processing facilities to create biogas, which is used in the facility. The results reflect a broadly steady or downward trend over time and need to be viewed in the context of overall lower levels of wastewater generation, and increasing levels of wastewater treatment as a source of biogas for use within a site. Few sites discharged treated wastewater directly to the aquatic environment. Importantly, where this was the case, discharge of nitrogen and phosphorus was lower than in all previous surveys.

10.6. Source: Meat & Livestock Australia³¹

The biggest change in attribution of emissions to the red meat sector in this report is the allocation of LULUCF emissions to the grazing sector. In previous reports, it was assumed that all grasslands were used for grazing by livestock and that approximately 68% of 'other native forests' (forest land excluding plantations, harvested forests and protected areas) were available for grazing. The first assumption overestimates the area of grasslands used for livestock production and the accuracy of the second assumption is also low. This year, the National Inventory directly reported LULUCF emissions from cropping, grazing, aquaculture, forestry, conservation and other land uses in the National Inventory by Economic Sector data tables. This provides a more accurate estimate of emissions from the LULUCF sector attributable to livestock production.

10.8. Source: Meat & Livestock Australia³²

This data comes from a survey commissioned by MLA where: 50% of the respondents stated they used renewable energy generated themselves; 14% used renewable energy from an energy retailer; and, 42% didn't generate or buy any renewable energy. This survey will be undertaken again in 2026.

²⁸ Australian Meat Processor Corporation, Sustainability Reporting Uplift Project Final Report, https://ampc.aueast01.umbraco.io/media/z3ibdmri/ampc-awi-sustainability-uplift-report.pdf

²⁹ Australian Meat Processor Corporation, Environmental Performance Review 2024, https://www.ampc.com.au/media/2ahfcu5m/ampc-final-report-epr2024-final.pdf

³⁰ Australian Meat Processor Corporation, Environmental Performance Review 2024, https://www.ampc.com.au/media/2ahfcu5m/ampc-final-report-epr2024-final.pdf

³¹ Meat & Livestock Australia, Red meat greenhouse gas emissions update 2023, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/2023-red-meat-emissions-report-official.pdf

³² Meat & Livestock Australia, National Beef Producer Survey of Sustainability Practices, https://www.mla.com.au/contentassets/cf7551403eb94996a3b4109987f25562/e.ssf.0001-final-report-beef.pdf

Snapshot of Activities

Revised feedlot emissions estimates

Following research by the University of New England (funded by MLA on behalf of ALFA), the Australian Government has adopted a new, locally developed equation to calculate enteric methane emissions from grainfed cattle. As a result, the National Greenhouse Gas Inventory Report 2023 revised feedlot emissions down by an average of 56% over the past five years, and 57% in 2021–22.

Biogas from wastewater

AMPC is co-funding research to help processors capture emissions from wastewater and boost biogas production. Trials are testing 54 organic waste types, including agri-industrial waste, grain waste, and sorghum residues, to identify optimal combinations for renewable energy generation.

Pasture-based methane reduction

Extensive research has explored pasture and forage mixes to reduce methane emissions from grazing systems. However, due to inconsistent results and regional variability, no validated solution is yet available. MLA will publish a comprehensive review in late 2025 to identify promising options for reducing net emissions and emissions intensity.

Bovaer pellet trial

A world-first trial evaluated Bovaer in pasture-fed cattle supplemented with grain-based pellets. Cattle receiving Bovaer gained weight 6.6% faster, reaching 200 kg 28 days sooner than those on conventional pellets, highlighting the potential for reducing emissions and boosting productivity.

Mapping the microbiome

MLA has collaborated with Brisbane start-up Bovotica, which makes probiotics to help cattle put on weight and reduce the production of methane. The research has produced a probiotic that when blended into feed, harnesses microbes that naturally occur in a cow's stomach to reduce methane and boost weight gain or milk production.

- Methane Emissions Reduction in Livestock (MERiL) Stage 1 and 2 projects of the federally funded MERiL program were presented in late 2024, with stage 3 to be completed in 2027. Results included:
 - Feed additives bromoform from Asparagopsis and 3-nitrooxypropanol showed methane abatement of 66-98% in cattle. Results depended on dose, and frequency of intake.
 - The feed additives Polygain, Agolin and probiotics reduced methane emissions by 34%, 15% and 10%, respectively.
 - The use of feed additives indicated no concerns to animal or human health. Researchers found no residues or only trace amounts of residues of the additives in animal products.



Split Gas Accounting

Split gas accounting is a method used to separate and report different types of greenhouse gases based on their origin and characteristics. In the context of methane emissions, it distinguishes between biogenic methane and thermogenic methane.

- **Biogenic methane** is produced naturally by living organisms, such as cattle. It comes from the digestive process (enteric fermentation) and manure management.
- Thermogenic methane is released from fossil fuel extraction and use, such as coal mining and gas production.

This distinction is important because biogenic methane behaves differently in the atmosphere. While it is a potent greenhouse gas, it breaks down within about 12 years, unlike carbon dioxide which can persist for centuries. This means its warming effect is more short-term, and it can be part of a natural cycle if managed sustainably.

Impact on the Australian Beef Industry

The industry remains committed to reduced emissions, and ongoing efforts into improving herd efficiency and reducing methane emissions from cattle will have a bigger effect in the short term than reducing the same amount in carbon dioxide. Australia's beef industry is a major source of biogenic methane. Under traditional greenhouse gas accounting, all methane is treated the same, which may unfairly penalise livestock producers. Split gas accounting offers a more nuanced approach that could benefit the industry by:

- 1. Recognising the short-lived nature of biogenic methane, potentially reducing the perceived climate impact of cattle.
- 2. Encouraging more accurate emissions reporting, which can support better policy and investment decisions.
- Improving access to carbon markets, where producers may be rewarded for reducing emissions or improving land management.

However, it also brings challenges. Producers will need to understand and adapt to new reporting frameworks, and there may be increased scrutiny on methane reduction strategies.

In summary, split gas accounting could reshape how emissions are measured and managed in the beef industry, offering both opportunities and responsibilities for producers in Australia.

Example Split Gas Accounting for the Australian Beef Industry 2023.

| GREENHOUSE GAS | ABSOLUTE VOLUME (MT) |
|------------------------------------|----------------------|
| CO ₂ - Carbon Dioxide | 0.47 |
| CH ₄ - Biogenic Methane | 1.57 |
| N ₂ O - Nitrous Oxide | 0.01 |

| GREENHOUSE GAS | CARBON DIOXIDE EQUIVALENT (GWP100 - CO2E MT (AR6)) | | |
|----------------------------------|--|--|--|
| CO ₂ - Carbon Dioxide | 0.47 | | |
| CH4 - Biogenic Methane | 41.0 | | |
| N ₂ O - Nitrous Oxide | 3.73 | | |









Managing and conserving water resources throughout the beef supply chain can be enhanced by water use efficiency in feed production, livestock processing, and pasture management. This includes reducing wastage, implementing recycling systems, and adhering to water standards and regulations to minimise environmental impact.

| ID | INDICATOR | DATA | TREND |
|------|--|---------------------|-------|
| 11.1 | Litres of water used per kilogram of liveweight for raising cattle | 400L (2024) | • |
| 11.2 | Kilolitres of water used per tonne HSCW when processing beef | 7.5kL (2024) | • |

Data Explained

11.1. Source: Australian Meat Processor Corporation³³

Total freshwater consumption showed a 71% reduction in 2024 compared with the 1985 baseline and reported a value of 400L/kg LW¹. Over the 44 years, the dominant trends were the decline in losses associated with drinking water supply and the substantial decline in pasture irrigation, which was partly countered by an increase in irrigation requirements for feedlot ration production. In the most recent period, declines were observed in irrigation water for pasture production and drinking water relative to beef production, the latter of which declined in response to improved herd efficiency. Losses associated with irrigation water supply were also found to decline compared to the previous analysis period, but losses from on-farm drinking water supply were estimated to have increased.

11.2. Source: Australian Meat Processor Corporation³⁴

The 2024 water use intensity of 7.5kL/t Hot standard carcase weight (HSCW) is a 9.6% decrease from the 2022 figure of 8.3kL/t HSCW. This number has decreased likely due to the higher throughput of processing cattle, leading to increased efficiency. For water intake, town water was the most important source (77%), followed by local groundwater (bore water) at 15%, and direct withdrawal from surface water (8%). 16% of water intake is then recycled for further use, being 4% higher than recycled water in 2022.

Snapshot of Activities

Knife steriliser efficiency

Traditional knife sterilisers in processing facilities overflow at rates of 3-7 litres per minute, even when used infrequently. To address this, the industry trialled Individual Knife Sanitisation Units, which significantly reduced water and energy use. Completed in late 2024, the trial showed up to 90% savings in energy, water, and emissions, compared to continuous flow systems, while still meeting hygiene standards under AS4696.

³³ Australian Meat Processor Corporation, Sustainability Reporting Uplift Project Final Report, https://ampc.aueast01.umbraco.io/media/z3ibdmri/ampc-awi-sustainability-uplift-report.pdf

³⁴ Australian Meat Processor Corporation, Environmental Performance Review 2024, https://www.ampc.com.au/media/2ahfcu5m/ampc-final-report-epr2024-final.pdf







The focus is on solid and liquid waste streams from across the value chain. This includes waste generated across the production processes.

| ID | INDICATOR | DATA | TREND |
|------|---|--------|-------|
| 12.1 | I2.1 Kg solid waste to landfill per tonne HSCW when processing beef | | |
| | | (2024) | |

Data Explained

12.1. Source: Australian Meat Processor Corporation³⁵

This represents a 71.6% decrease from 2022, likely due to the higher throughput of processing cattle leading to increased efficiency.

This indicator tracks performance in reducing solid waste production and landfill burden. By reducing waste sent to landfill, red meat processors can limit demand for new materials, the environmental impacts associated with

solid waste disposal, and contribute to a circular economy. Most waste generated by red meat processors is organic, comprised mainly of paunch solids, manure and yard wastes, as well as sludge and pond crusts from wastewater treatment plants. Organic waste is almost entirely processed into other beneficial products, such as compost. In rare cases, often related to scale and location and where rendering is not possible, organic waste can also include non-commercial animal parts.

Snapshot of Activities

Meat Recovery for Food Relief

End Food Waste CRC, RMIT University, and Foodbank partnered to identify barriers and opportunities for increasing red meat donations to food relief. With 36% of Australians facing moderate to severe food insecurity, and many reducing intake of fresh produce and protein, the project aims to improve access to rescued meat.

Northern Rivers Circular Economy Hub

MLA and Southern Cross University are conducting a feasibility study for a regional circular economy hub. Insights from Research and Development Corporations were gathered through a roundtable needs analysis to support a cross-sector business model.

Red meat packaging stewardship

MLA continues to lead the Packaging Stewardship Forum, engaging with manufacturers, waste partners, and stakeholders to stay ahead of evolving packaging legislation and sustainability trends. This ensures the industry can proactively address potential market access risks.

Feedlot manure recycling

Feedlots are actively capturing and recycling manure, turning it into a valuable resource to improve soil health and support crop and pasture production. Further research found the most promising technologies to be co-composting and pelletising of manure to formulate a hybrid fertiliser.

Collagen extraction technology

Technological solutions are being explored to extract collagen from beef hides and sheep skins, adding value to processing by-products.

Drying technologies for meat by-products

Freeze drying, spray drying, and drum drying are being trialled to valorise red meat inputs such as blood, offal, organs, and glands.

Blood Valorisation Report

MLA has completed a report identifying opportunities to add value to beef and sheep blood for use in human and pet food products.

Economic Resilience

The industry is committed an economically viable and resilient supply chain, and aims to double the value of beef products and services from 2020 levels by 2030, to ensure ongoing profitability.

A deep understanding of the supply chain is critical to ensuring the value chain can respond to the changing needs and wants of its customers and beef consumers. This understanding will grant Australia a competitive advantage by ensuring consistent high-value, high-quality products. Continued engagement with stakeholders provides the opportunity to increase transparency along the entire supply chain and build recognition of the industry's ethical and purpose-driven practices, as well as innovate product development and delivery.

Access to open and diverse international markets is also imperative for the continued growth and profitability of the Australian red meat and livestock industry. The Australian industry's sustainability depends on finding profitable markets for all products, from the highest-value animals and cuts to the large range of co-products, to maximise returns. However, a challenge is the high level of regulation in many markets in the form of non-tariff trade barriers and evolving global trade rules and norms. As an industry that exports 70% of our production, it is imperative to take a leadership role through fostering, developing and maintaining positive relationships with international customers and governments to identify new opportunities for market diversification.





Climate Resilience





This priority addresses climate change impacts, risks, and opportunities to ensure long-term economic sustainability and compliance with disclosure requirements. This includes preparing for, and responding to, extreme weather events such as droughts, floods and fires, which are increasing in both frequency and severity due to climate change. It also involves building resilience to both physical and transitional climate-related risks.

| ID | INDICATOR | DATA | TREND |
|------|---|----------------------|-------|
| 13.1 | Climate-adjusted average annual growth rate in Total Factor Productivity compared to the base year of 100 (1988/89) | 105 (2023-24) | |

Data Explained

13.1. Source: Department of Agriculture, Fisheries and Forestry³⁶

The Australian Bureau of Agricultural and Resource Economics and Sciences estimates Total Factor Productivity (TFP) of Australian farms to measure the efficiency of the industry over time. While this is important data (see Productivity), annual TFP numbers are heavily impacted by seasonal variability. Looking forward, the predicted impacts of climate change, including lower rainfall in southern Australia and more severe droughts and floods, will obscure

underlying trends in farm performance. Climate-adjusted productivity aims to account for these climate change effects. It models the effect of climate conditions (such as rainfall and temperature) on TFP, and then calculates climate-adjusted productivity with the effects of climate removed. Increases in climate-adjusted productivity show the industry is increasing productivity despite the impacts of climate; that is, it is adapting and showing resilience to climate change. A climate-adjusted TFP of 105 indicates a 5% increase in production for the 2023-24 FY when compared to 1988-89. The TFP for 2022-23 FY was 106.

Snapshot of Activities

AMPC Sustainability Helpline

The AMPC Helpline is expanding support to help red meat processors navigate Australia's Sustainability Reporting Standards, particularly around climate-related financial disclosures to the Australian Securities and Investments Commission. It also offers Traffic Light Assessments to help processors identify and apply publicly available datasets for evaluating climate risks and opportunities.

Carbon EDGE Workshops

Launched in 2023, Carbon EDGE is a two-day workshop helping producers understand carbon in agricultural systems and develop action plans for emissions reduction and carbon storage. So far, 19 workshops have reached 208 producers and 80 advisors, influencing over 4.9 million hectares, 300,000 cattle, 126,000 sheep, and 70,000 goats. Participants rated the workshop 9/10 for business value, with 95% intending to make changes based on what they learned.

Northern Australia Climate Program (NACP)

NACP has developed a new climate training course under the Profitable Grazing Systems (PGS) initiative. The course helps producers interpret climate forecasts and apply them to herd and pasture management. New tools released in 2024–25 include:

- Green Date
- Heat Load Index
- Livestock Chill Index
- Cattle Comfort Index
- Drought Outlook
- Flash Drought Monitor

Victorian drought support

The Victorian Government is providing support to farmers affected by drought. Assistance includes advice for:

- Feed budgeting
- Water infrastructure improvements
- Stock containment strategies
- Integrated training on winter feed, whole farm planning, resilience building, and drought recovery strategies

³⁶ Department of Agriculture, Fisheries and Forestry, Australian Farm Productivity – Broadacre and Dairy Estimates, https://www.agriculture.gov.au/abares/research-topics/productivity/agricultural-productivity-estimates









This priority is about ensuring the efficiency and economic viability of the beef industry, encompassing farm and processor output value, cost of production, and genetic advancements to enhance herd quality and reproduction. It also includes the industry's rate of return and its impact on operator livelihoods across the beef value chain.

| ID | INDICATOR | DATA | TREND |
|------|---|--|-------|
| 14.1 | Total Factor Productivity - compared to the base year of 100 (1977/78) | 136 (2023-2024) | • |
| 14.2 | Cost of beef produced on Australian farms (HSCW) - c/kg AUD | 477c/kg (2023-2024) | • |
| 14.3 | Farm business profit at full equity (expressed as rate of return) » Including capital appreciation | 8.6% - All Producers 11.1% - Top 25% Producers (2019-2024) | |
| 14.4 | Farm business profit at full equity (expressed as rate of return) » Excluding capital appreciation | 1.0% - All Producers 4.3% - Top 25% Producers (2019-2024) | • |

Data Explained

14.1. Source: Department of Agriculture, Fisheries and Forestry³⁷

Productivity measures how much output is produced for a given set of inputs. In the context of beef cattle, 'output' is the value of all the final consumer products produced from a beef carcase, including meat and offal, hides and leather, rendered products like tallow and gelatin, right through to sophisticated medicines and pharmaceuticals. Inputs include everything used to produce beef cattle - land, capital, labour, feed, supplements, veterinary drugs and chemicals - and research into better genetics and reproductive material. It captures the whole supply chain, including transport services, as livestock need to be moved between properties to realise their final value. TFP growth means the whole supply chain is producing more valuable carcases for a given set of inputs, or is producing the same value carcases, using less inputs. This enables the whole supply chain to benefit, including consumers. Finding buyers willing to pay higher prices for particular products is key to improving productivity. Productivity growth is generally measured over the long term as these measures can produce some counterintuitive results in the short term. In times of severe drought, herds being liquidated can result in TFP growth, and likewise, during a herd rebuilding phase with the return of abundant pastures, TFP growth can fall.

14.2. Source: Department of Agriculture, Fisheries and Forestry³⁸

Containing the cost of producing beef relative to key competitors is an important factor in remaining internationally competitive and economically sustainable. As finished cattle prices in each country are volatile, depending on seasons, international demand, and exchange rates, the trend is more important than annual data.

Data for earlier years have been restated to reflect a downward trend over the previous three years, but greater volatility over five years.

- 2022-23: 533 c/kg
- 2021-22: 599 c/kg
- 2020-21: 537 c/kg
- 2019-20: 516 c/kg

³⁷ Department of Agriculture, Fisheries and Forestry, Australian Farm Productivity – Broadacre and Dairy Estimates, https://www.agriculture.gov.au/abares/research-topics/productivity/agricultural-productivity-estimates

³⁸ Department of Agriculture, Fisheries and Forestry, Financial performance of broadacre farms, https://www.agriculture.gov.au/abares/research-topics/surveys/financial-performance-broadacre-farms

Data Explained

14.3 – 14.4. Source: Department of Agriculture, Fisheries and Forestry³⁹

This is a five-year rolling average ending FY2023-24. This indicator shows both rate of return including capital appreciation (land value appreciation) and excluding capital appreciation. This rate of return represents the ability of the business to generate a return on all capital used by the business, including that which is borrowed or leased.

This is measured by weighted average farm business profit at full equity divided by opening capital. The inclusion of net capital appreciation (other than that caused by changes in land values) is important, as cattle farms can be foregoing profit today by investing in herd build up. To overcome the impact of normal year-to-year volatility, this indicator is calculated as a five-year rolling average.

Snapshot of Activities

Beef farm profitability decline

In FY2024, average beef farm profitability dropped from \$113,740 in 2023 to -\$16,430, meaning the average farm made a loss. This was due to a number of factors, including drought conditions in southern Australia and a sudden correction in beef prices. As of August 2025, cattle prices have rebounded, supported by strong global demand and a beef shortage in the US, which has its smallest herd in 70 years.

New Feeder Heifer Indicator

In June 2025, MLA launched the National Feeder Heifer Indicator, providing stakeholders with valuable insights into the price and supply of heifers entering feedlots—an area previously lacking data coverage.

Record beef production efficiency

Australia produced a record 2.57mt of beef in 2024, from 1m fewer cattle than in 2014. This reflects improved production efficiency and significant investment in processing capacity.

Feedlot capacity milestone

In 2025, Australia's feedlot capacity reached a record 1.6 million head, highlighting continued growth and investment in the grain-fed sector.

Short-Duration Lairage Research

Research shows that limiting lairage time to under 4 hours can increase hot carcase weight by 6.2–7.4 kg compared to longer lairage periods. This practice was applied to 21.8% of grain-fed cattle (596,178 head).

MLA Productivity Projects

MLA has launched several initiatives to boost productivity:

- HerdFlow: A platform to help producers reconcile herds and track productivity and emissions.
- Mooternal: A collaboration with Central Queensland University and NTDAF to study maternal investment and improve calf survival and reproductive efficiency in northern herds.
- NB2 Phase 2: Peer learning groups in Queensland and northern WA focused on improving business and herd performance.
- NB2 Pilot Expansion: A pilot group is demonstrating how peer learning can support business planning and measurable progress.
- Beef Beginnings: Cost-benefit evaluation of different early life practices for southern beef systems' productivity and profitability.







This priority is about increasing market access and addressing barriers to trade through proactive industry investment to address international export regulations, including both tariff and non-tariff trade barriers.

| ID | INDICATOR | DATA | | | | |
|------|--|---|---|--|--|--|
| 15.1 | Total reduction (from 2020) of non-tariff trade barriers on red meat | \$644m (2024-25) | • | | | |
| 15.2 | Percentage value share of Australian beef exports covered by one or more preferential trade agreements | 91% beef / 97% live cattle (2024-25) | • | | | |

Data Explained

15.1. Source: NTB Database plus MLA Calculations

Non-tariff barriers (NTBs) such as the use of import restrictions, accreditation of export establishments, labelling, or unnecessary sanitary rules can impose significant delays and additional costs on Australian beef exports. Alleviation of NTBs is therefore critical in improving international competitiveness.

The harmonisation of extensions to shelf life for chilled beef (from 70 days to 120 days) across several Middle East destinations is an example of recent benefits of removing an NTB impact.

The indicator aligns with the revised Red Meat 2030 success factor of reducing the impact of NTBs. In 2023-24 the cumulative reduction totalled \$535m (with this data incorporating some sheepmeat access gains).

15.2 Source: Department of Foreign Affairs and Trade, and Department of Agriculture, Fisheries and Forestry⁴⁰

Preferential or free trade agreements (FTAs) provide access to a market beyond what has been granted multilaterally via the World Trade Organization. FTAs have significantly reduced the tariff and quota barriers Australia faces in numerous beef export markets. The percentage of preferential coverage fluctuates according to export destination volume/value in any particular year.

Australia has recently concluded negotiations with the United Arab Emirates, with entry into force of the agreement pending. Once effective, the overall percentage of beef and live cattle covered by an FTA will further increase, albiet only marginally in this case (reflecting the value dominance of other markets, such as Indonesia in the case of live cattle).

The indicator aligns with the revised Red Meat 2030 success factor of having the majority of exports covered by a preferential trade agreement.

This data shows the impact an increased focus on Indonesia for live cattle in 2024-25 has had on the industry. Indonesia, as an FTA partner, represented 70% of the value in 2024-25 vs only 51% in 2023-24.

Snapshot of Activities

US tariff on Australian beef

The recent imposition of a 10% tariff on Australian beef entering the US is contrary to the 0% tariff afforded to Australia via the Australia-US free trade agreement. Whilst Australia now faces the so called 'baseline tariff', beef exported to the US by other suppliers such as Brazil and New Zealand incur even higher tariffs - placing them at a competitive disadvantage. This detrimental change in access is a reflection of a more turbulent and uncertain global trading environment. Whilst a key pillar of the beef industry's market access program will be continuing the quest for further trade reform (thereby contributing to industry resilience / competitiveness), defending and in some cases restoring, hard won gains will receive heightened ongoing focus.

New market access protocols

Australia has signed new live export protocols for:

- Breeder cattle to Ecuador and Taiwan
- Slaughter and feeder cattle to Morocco

Shipments to Mexico and Turkey have resumed for the first time since 2016 and 2017. The removal of a temporary

Bluetongue disease zone around the NSW/Victorian border has reopened exports to China. Livestock Export Program (LEP) teams are also supporting workshops and delegations between Laos and Vietnam to explore cattle export opportunities to Laos.

LEP Expo Jakarta

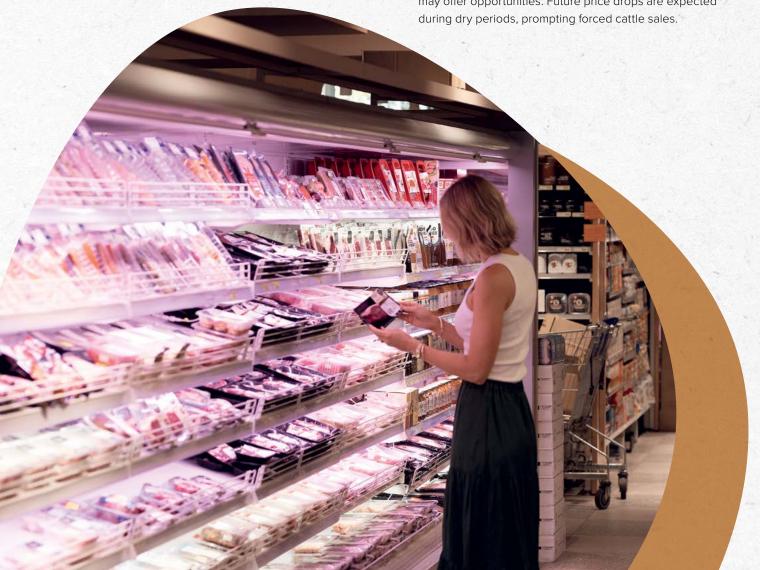
In May 2025, LiveCorp and MLA hosted the LEP Expo in Jakarta, attracting around 500 delegates over two days. The event strengthened ties between the Australian and Indonesian cattle industries and showcased Australia's commitment to collaborative trade relationships.

Australia the Sustainable Protein Supplier

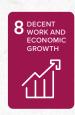
At the World Expo 2025, hosted in Osaka, Japan,
Australian beef was recognised as the only 'sustainable
protein supplier'. This was achieved by meeting the Code
of Sustainable Procurement, including expectations
of environmental responsibility, social responsibility,
economic sustainability, and transparency and compliance.

Volatile cattle prices

Australian cattle prices have become more volatile since 2000, with movements increasing from \$1/kg to \$5/kg. Rabobank links this to global market access, information flow, and seasonal factors. Volatility affects planning, but may offer opportunities. Future price drops are expected during dry periods, prompting forced cattle sales.







This priority captures the beef industry's economic and social impact in rural and regional Australia, including job creation, investment in local infrastructure and essential services, and contributions to Australian communities, including engagements with First Nations peoples.

| ID | INDICATOR | DATA | TREND |
|------|---|---------------------------|-------|
| 16.1 | Total people employed directly or indirectly in the beef industry | 379,340 (2023-24) | • |
| 16.2 | Beef farming, feedlot, and processing contribution to Gross Domestic Product | \$10.88b (2023-24) | • |
| 16.3 | Getting involved in the community index of Australian beef grazier | 3.42 (2024) | |

Data Explained

16.1. Source: Meat & Livestock Australia⁴¹

A total of 121,916 people were directly employed in the beef industry, in addition to a further 257,424 people in businesses servicing the red meat and livestock industry.

The majority (85%) of meat and livestock industry employees live in rural and regional areas, assisting with decentralisation and not contributing to infrastructure pressure in capital cities. Just over 60% of meat processing employment and 95% of all beef cattle, sheep and feedlot production employment are located outside capital cities.

16.2 Source: Meat & Livestock Australia 42

Industry value-add is the overall value of goods and services produced by businesses in an industry and is also known

as contribution to gross domestic product (GDP). This is a substantial decline from the previous financial year, driven by a dramatic decline in the domestic cattle market despite prices recovering at the start of 2024.

16.3. Source: University of Canberra⁴³

The extent of a person's involvement in local community activities is a mean score for taking part in community events, from (1) never or almost never, to (7) all the time. The score of 3.42 for beef graziers relates to how frequently respondents attend community events such as farmers markets, community festivals, meetings or social events of local clubs and groups, and are involved in sporting teams.

Snapshot of Activities

Australian feedlots are vital to the fabric of rural and regional Australia by creating jobs, supporting families, and contributing to local economies and the environment. The ALFA Community Heroes award recognises and rewards those feedlots that are actively nourishing their local communities and environment by going above and beyond to support their community, that 'give-back' and better the environment around them.

In 2024, Mort & Co were recognised for their outstanding mental health initiative, and also the fundraising efforts for the Florey Institute of Neuroscience and Mental Health.

⁴¹ Meat & Livestock Australia, State of the Industry Report 2025, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/trends-analysis/soti-report/mla-state-of-the-industry-report-2425.pdf

⁴² Meat & Livestock Australia, State of the Industry Report 2025, https://www.mla.com.au/globalassets/mla-corporate/prices--markets/documents/trends--analysis/soti-report/mla-state-of-the-industry-report-2425.pdf

⁴³ University of Canberra, Regional Wellbeing Survey, https://www.regionalwellbeing.org.au/the-data-tables

People & Community

The beef industry is committed to being trusted, attractive to a diverse workforce, be a source of pride for Australians, and continue to make a positive contribution to the food security of Australian and international communities.

Key to this is being positioned as an employer of choice. Attracting, retaining and growing a professional and skilled workforce will increase the profitability and sustainability of the sector's businesses

From farm to market, good people are essential to Australia's red meat industry. Investing in our people to grow their skills through education and training will create career pathways. This will enable people to advance themselves and the industry, while incorporating new technologies that will change the nature of their work. In order to attract future staff and retain current workers, the industry must provide a platform where participation is a source of pride and belonging. Providing a safe and healthy workplace for all our people across the supply chain, from those on our farms to those in our processing plants and in international markets, is a key priority.

ALFA is aiming to provide the Australian cattle feedlot sector,

safety. Australia's Workplace Health and Safety legislation sets strict standards. These obligations include managing risks, training staff, maintaining equipment and preparing for emergencies.

For livestock producers, compliance is especially challenging. The work often involves handling livestock using heavy

industry through education, leadership training and workplace

MLA is also committed to developing the people in the

For livestock producers, compliance is especially challenging. The work often involves handling livestock, using heavy machinery, and working in remote, hazardous conditions with limited access to medical assistance. Overcoming these risks requires innovation and a strong commitment to safety. These initiatives will help future-proof the red meat industry by strengthening leadership, fostering inclusion and creating a culture that supports safety and long-term success.





Food Quality & Safety





This priority considers all aspects of food safety, quality, product integrity, and traceability consistent with standards.

| ID | INDICATOR | DATA | TREND |
|------|---|-------------------------|-------|
| 17.1 | National Average MSA Index | 58.81 (2024-25) | |
| 17.2 | Overall compliance with the National Residue Survey and Australian and International Standards for Cattle | 99.98% (2023-24) | • |

Data Explained

17.1. Source: Meat & Livestock Australia44

Meat Standards Australia (MSA) was developed by the Australian red meat industry to improve the eating quality consistency of beef. To date, the system is based on almost 1.8 million untrained consumer taste tests by more than 250,000 consumers from 13 countries and considers factors that affect eating quality from the paddock to plate. The MSA index is a single number (between 30 and 80) and the standard national measure of the predicted eating quality and potential merit of a beef carcase. It is a consistent benchmark which can be used across all processors and geographic regions, and over time. It reflects the impact on eating quality of management, environmental, and genetic differences between cattle at the point of slaughter. Compliance rates vary throughout the production regions of Australia according to seasonal conditions. To be compliant for MSA grading, carcases must have a minimum of 3mm rib fat, adequate fat coverage, a maximum pH of 5.70 and other requirements. In 2024-25, overall compliance with MSA minimum requirements was 94.8% nationally, slightly up from 2023-24 when compliance reached 94%.

17.2. Source: Department of Agriculture, Fisheries and Forestry⁴⁵

The National Residue Survey (NRS) has been testing tissue samples from Australian cattle for a range of pesticides, veterinary medicines, and environmental contaminants since the early 1960s. The program ensures beef exports satisfy Australian certification and importing country requirements, supports industry quality assurance initiatives, and enables domestic meat processing facilities to satisfy state and territory government regulatory authority licensing requirements. The 5,337 samples collected for cattle products achieved a 99.98% compliance rate.

Snapshot of Activities

MSA research updates

MSA continues to expand eligibility for cattle through research into transport and feed practices. Key outcomes include:

- Extended saleyard pathway: The allowable time from farm dispatch to slaughter for an animal going through an MSA licenced saleyard has increased from 36 to 48 hours with no impact on eating quality, provided all other standards are met.
- Feed additive impact: Trials on Asparagopsis oil, used to reduce methane emissions, showed no significant effect on eating quality for mid- and long-fed cattle. As a result, no changes to the MSA model or standards are required.

⁴⁴ Meat & Livestock Australia, MSA Annual Outcomes Report 2024-25, https://www.mla.com.au/msa-outcomes-report

⁴⁵ Department of Agriculture, Fisheries and Forestry, National Residue Survey 2023-24 Annual Summary, https://www.agriculture.gov.au/sites/default/files/documents/nrs-summary-english.pdf



Nutrition & Food Security



This priority is about ensuring the industry provides access to safe, sufficient, and nutritious food, with beef serving as a high-quality protein source that supports balanced, healthy diets.

| Nutrition Information* | per 150g serve* |
|--------------------------|-----------------|
| Good Source [^] | |
| Protein | 34.3g |
| Iron | 3.1mg |
| Zinc | 6.7mg |
| Vitamin B12 | 1.4µg |
| Source^ | |
| Omega-3 fatty acids | 48.2mg |
| Riboflavin (B2) | 0.29mg |
| Niacin (B3) | 7.5mg |
| Pantothenic acid (B5) | 0.54mg |
| Vitamin B6 | 0.21mg |
| Magnesium | 38mg |
| Phosphorus | 328mg |
| Selenium | 16µg |

 $^{^{\}ast}$ Average nutrition information per 150g serve raw weight of four major beef cuts.

Data Explained

Lean beef is a nutrition powerhouse. A 150g serving (raw weight) of Australian beef contains 12 essential nutrients recommended for good health. It is an excellent source of bioavailable iron and zinc, with red meat having more iron and zinc than poultry and fish. Predominantly grass fed, Australian beef is a source of Omega-3. Australian beef with low levels of marbling and trimmed of fat has less than 3% fat, around 1% saturated fat and is naturally low in sodium. Beef provides a significant amount of protein, with a 150g serving containing approximately 34g.

[^] Foods that are a 'good source of protein' have more than 10g per serve; 'good sources' of essential nutrients have 25% or more and 'sources', 10% or more of the recommended daily intake (RDI) as defined for labeling purposes in the Australian Food Standards (1.2.7).

Snapshot of Activities

Healthy Meals website updates

Following a social return on investment analysis, MLA updated its Healthy Meals website to better promote sustainable eating. A new 'Red Meat Guide' for healthcare professionals explains red meat's nutritional value, recommended portion sizes, balanced meal ideas, and tips for using leftovers.

Healthcare engagement

Healthcare communications on red meat's role in a healthy, sustainable diet led to 5,609 resource downloads from the Healthy Meals website and 21,186 resources distributed to GP clinics.

CSIRO sustainable diet research

A new CSIRO study, funded by Meat & Livestock Australia and published in the Dietetics journal in August 2025, examined the role of protein sources in achieving nutrient adequacy in healthy and environmentally sustainable Australian diets.

Importantly, the subgroup of sustainable healthy diets that included 60-80% protein from animal sources were the most nutritionally adequate.

Livestock export and food security

The livestock export industry supports nutrition, food security, and employment in destination markets. A Livestock Export RD&E-funded project is quantifying these benefits using internationally aligned sustainability indicators. The final report is due late 2025.

Supporting Indonesia's nutrition goals

Indonesia's Nutritious Meals Program aims to import one million beef breeders and one million dairy cattle as part of its program to reduce malnutrition in children. The Livestock Export RD&E Program is funding a project to explore how Australia's industry can support this initiative.

Visit the Healthy Meals website

Scan the QR code to explore resources and tools for healthy, sustainable eating.



Scan the QR code to explore resources and tools for healthy, sustainable eating.





Ensuring healthy and safe conditions for people in the industry includes addressing mental health, occupational injuries and illness, and exposure to chemicals.

| ID | INDICATOR | DATA | TREND |
|------|---|--|-------|
| 18.1 | Notifiable fatalities (five-year totals) | Farms - 34 Feedlots - 1 Processing - 2 (2019-2023) | • |
| 18.2 | Lost Time Injury Frequency Rate (number of claims per million hours worked) | Farms – 12.6 Processing – 23.1 (2023) | |
| 18.3 | Global Life Satisfaction Index of Australian beef graziers | 69.7 (2024) | • |

Data Explained

18.1 Source: Safe Work Australia46

Fatalities data is derived from the Work-related Traumatic Injury Fatalities database (TIF), which includes information on all work-related fatalities in Australia. This database collates information sourced from workers' compensation data, fatality notifications from Australia's various WHS authorities, and information in the National Coronial Information System. The TIF data is based on small numbers and can be volatile. Aggregating the data over five years reduces concerns over data volatility.

18.2 Source: Safe Work Australia⁴⁷

Lost Time Injury Frequency Rate (LTIFR) refers to the number of lost time injuries – injuries that occurred in the workplace that resulted in an employee's inability to work the next full work day – that occurred in a given period. The LTIFR is calculated across all livestock farms and meat processing facilities. The calculator uses National Dataset for Compensation Based Statistics data to determine the number of lost time injuries in each industry, and data from the Australian Bureau of Statistics Labour Force Survey to determine the number of hours worked.

18.3 Source: University of Canberra⁴⁸

The Global Life Satisfaction (GLS) score is calculated based on respondents rating their satisfaction with their life 'as a whole' on a scale of 'completely dissatisfied' (0) to 'completely satisfied' (10). Scores are multiplied by 10 to give an index of 0 to 100. The score of 69.7 for beef graziers compares to the overall GLS for Australians of 66.2.

The decline is consistent with global measurements of happiness. The World Happiness Report 2025 notes that seven of the top 10 countries ranked by happiness also experienced declines in 2024^{49.}

⁴⁶ Safe Work Australia, Work-related fatalities data, https://data.safeworkaustralia.gov.au/about-our-datasets/work-related-fatalities-data

⁴⁷ Safe Work Australia, Workers' compensation injury frequency rates, https://data.safeworkaustralia.gov.au/interactive-data/topic/workers-compensation-injury-frequency-rates

 $^{^{48}\} University\ of\ Canberra,\ Regional\ Wellbeing\ Survey,\ https://www.regionalwellbeing.org.au/the-data-tables$

⁴⁹ University of Oxford, World Happiness Report 2025, https://www.worldhappiness.report

Snapshot of Activities

Farm safety – cattle ramps

During Farm Safety Week, WorkSafe Victoria released practical resources to help producers upgrade cattle ramps and improve safety during livestock loading.

Mort & Co – Al safety system

Mort & Co implemented Presien's Blindsight, an Al vision system that detects people, vehicles, and objects around mobile and fixed equipment to prevent collisions. It also logs incident data for reporting. Mort & Co won the 2024 Australian Workplace Health & Safety Award for Best WHS Technology Deployment.

MLA Health & Wellbeing Project

MLA explored the health challenges faced by red meat producers and identified key needs for a preventative health solution:

- Improved access to health services
- Consistent care over reactive interventions
- Clear link between health and business performance
- Tailored program content for health professionals
- Flexible delivery options (face-to-face and digital) for rural areas

Exoskeleton technology for processors

AMPC is supporting the adoption of exoskeletons to improve worker safety and productivity. These wearable devices assist with posture, movement, and force, ranging from grip-enhancing gloves to support structures for joints and limbs, including energy-returning footwear.







Safeguarding labour practices and fair work for all workers is addressed in this section, including freedom of association, safeguarding seasonal and casual workers, and freedom from modern slavery.

| ID | INDICATOR | DATA | TREND |
|------|---|-----------------------------------|-------|
| 19.1 | Fair Work Ombudsman Compliance Notices Issued | Farms – 3 Feedlots – 0 | • |
| | | Processing – 2 (2023-2024) | 1 |

Data Explained

19.1. Source: Fair Work Ombudsmen

The Fair Work Ombudsman (FWO) is responsible for promoting compliance with Australian workplace laws. It educates people about their rights and responsibilities at work and can resolve workplace issues. Most of the time, breaches of the Fair Work Act 2009 invoke a civil penalty

or fine. When an employer doesn't cooperate with a Fair Work Inspector to fix a breach, the FWO can issue a compliance notice instead of starting legal proceedings. Five compliance notices were issued out of approximately 52,000 agricultural businesses involved with cattle in Australia in 2023/24.

Snapshot of Activities

Relevant Legislative requirements

Australian cattle farmers work under the Fair Work Act 2009, which provides a National Employment Standard (NES) of minimum entitlements, and the Pastoral Award for specific industry wages and conditions. Additionally, Work Health and Safety (WHS) legislation mandates duties for managing risks and ensuring a safe working environment on the farm.

Pastoral Award

The Pastoral Award (MA000035) is a Modern Award that provides specific wages, conditions, and classification levels for workers in the pastoral (livestock) industry. Farmers must ensure they are paying correct award rates and providing appropriate conditions for their employees.









Commitment to fostering a workplace and industry that values and promotes diversity in beliefs, backgrounds, and identities, while ensuring equitable opportunities, fair treatment, and an inclusive culture for everyone. This includes upholding non-discrimination, embracing gender, cultural, and religious diversity, and supporting First Nations people.

| 20.1 Percentage of women and men in the workforce | | DATA | | | | | | TREND |
|---|--|-----------------|---------------|-------|--------------------|-------|--------------------|-------|
| | | 32.1% Beef f | 67.9% arms | | 66.0% feedlots | 1 | 6 70.8% cessors | |
| 20.2 | Age breakdown of the workforce | 9.5% | 16.4% | 16.1% | 17.4% | 19.2% | 21.4% | N/A |
| | | 15-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | |
| | | | | (20 | D21) | | | |
| 20.3 | Percentage of Indigenous employment in the workforce | | | | .1% D21) | | an. | • |

Data Explained

20.1-20.3. Source: Australian Bureau of Statistics⁵⁰

Data from the Australian Bureau of Statistics 2021 Census has been used as the data source for the diversity priority, utilising the four-digit level of Industry Employment (INDP) categories.

The Census provides the best overview of the diversity and inclusion of the Australian beef industry, with the next census due in 2026.

Snapshot of Activities

The NB2 indigenous group has engaged 12 communities spanning the Gulf of Carpentaria to South West Queensland, spanning three million hectares, more than 80,000 cattle and the employment of over 100 indigenous people. A diverse range of enterprises are managed within this area, including large-scale breeding operations, businesses that derive income from adjustment, and businesses involved in carbon projects.

The group prioritises residential-style workshops oncountry that allow for practical activities, storytelling, peer learning and time to build social capital within the group. Engaging a mixture of Elders, board members, managers, and the next generation has been important to creating impact. Over two years, the group has focused on business, herd, and feedbase management, alongside environmental sustainability. The peer-learning environment has allowed participants to share some of the challenges that come from community-owned-and-operated enterprises that have unique goals to serve their people, such as employment and training, maintaining access to country and sacred sites, and fostering the long-term sustainability of their traditional land.

Snapshot of Activities

- Stage 1 of AMPC's Enhancing the Food Production
 Workforce with Neurodiversity project is an initiative aiming to identify best practices for implementing a neurodiversity employment program in red meat processing. It focuses on providing tailored training for:
 - Employers
 - Neurodivergent jobseekers
 - Their families

The overarching goal of the Program is to build a sustainable talent pipeline of neurodivergent individuals to help address ongoing labour and skills shortages in the industry.

 Meat Business Women (MBW) is a women's advocacy networking group founded in the United Kingdom and brought to Australia in 2018 by AMIC, as part of its commitment to support and encourage women to join the industry. MBW provides networking events, conferences and mentoring courses for all women working within the post farm-gate meat supply chain, including processors, wholesalers, retailers and smallgoods manufacturers. Its objectives are to:

- Develop the image, culture and landscape of the meat industry to make it more attractive to female talent
- Nurture new female entrants into the sector through networking, education and mentoring
- Skilfully improve networking.
- Women of Lot Feeding is a not-for-profit organisation launched in 2016. Over the past 10 years, it has created and maintained a network of passionate women within the lot feeding sector, while providing them with inspiration, support and opportunities to help pave the way for sustainable careers in the Australian lot feeding industry.





The priority is focussed on maintaining the efficacy of antimicrobials through responsible use to abate adverse effects in humans and animals.

| ID | INDICATOR | DATA | TREND |
|------|---|-----------------------|-------|
| 21.1 | Percentage of feedlots covered by an antimicrobial stewardship plan | 91.64% (2024) | |
| 21.2 | Percentage of compliance with antibiotic Maximum Residue Limits | 100% (2022-23) | • |

Data Explained

21.1. Source: NFAS Audits⁵¹

The antimicrobial stewardship guidelines for the Australian cattle feedlot industry are now included as a requirement of the NFAS, which has been in operation in the Australian feedlot industry for more than 29 years. The 91.64% data related only to beef feedlots accredited under the NFAS. 2.41% of audited feedlots did not use antimicrobials, therefore not requiring an antimicrobial stewardship plan.

21.2. Source: Department of Agriculture, Fisheries and Forestry⁵²

At the time of publication, the 2023-24 data for cattle residue testing had not been released.

Targeted animal product residue monitoring programs, such as those for antibiotics, are designed to meet management objectives or monitor potential chemical residues that could pose a risk for access to export or domestic markets. All animal product residue monitoring programs are designed, operated, and reviewed by the NRS.

Snapshot of Activities

Feedlot sector commitment

ALFA and the feedlot industry remain committed to antimicrobial stewardship (AMS). Under the NFAS, AMS plans must be reviewed every six to 12 months, depending on feedlot size, and signed off by a consulting veterinarian.

National Antimicrobial Usage System

MLA is piloting a National Veterinary Antimicrobial Usage System, developed in 2024. After six months of engagement with peak livestock bodies, the project has secured broad support, enabling more accurate attribution of antimicrobial use across livestock sectors.

Food supply AMR research

A government-funded project led by Food Standards Australia New Zealand, in partnership with the Department of Health, is investigating antimicrobial-resistant (AMR) bacteria in the Australian food supply. The final report is expected to be released in late 2025.

⁵¹ National Feedlot Accreditation Scheme, Feedlot Auditing

⁵² Department of Agriculture, Fisheries and Forestry, National Residue Survey 2023-24 Annual Summary, https://www.agriculture.gov.au/sites/default/files/documents/nrs-summary-english.pdf



Workforce Development & Capacity Building



This priority is about developing a capable and adaptable workforce by attracting talent, providing diverse career pathways and enhancing training and education programs, particularly during beef production and processing. Achieving this will improve employee retention, address skilled labour shortages, attract young workers, and upskill people in technological advancements and regulatory reporting.

| ID | INDICATOR | DATA | TREND | |
|------|---|--|-------|--|
| 22.1 | Number of traineeships and apprenticeships enrolled and completed | (Commenced / Completed) Farms - 1,285 / 1,010 Feedlots - 54 / 10 Processing - 4,729 / 2,313 (2024) | • | |
| 22.2 | Percentage of industry workforce with a higher education qualification | 22.4% (2021) | • | |
| 22.3 | Number of participants undertaking MLA, LiveCorp, AMPC, or peak industry council training | 12,503 (2024) | • | |

Data Explained

22.1. Source: National Centre for Vocational Education Research⁵³

There are limitations on the accuracy of the available data for this indicator. Where possible, codes for only beef cattle-related industries have been used. Farming includes agriculture and rural operations without specialisations (training course codes beginning with AHC). Meat processing includes all meat for human consumption but excludes poultry (training course codes beginning with AMP). It is not possible to deduce how many relate specifically to processing cattle only. This data is for January - December 2024.

22.2 Source: Australian Bureau of Statistics⁵⁴

The ABS 2021 Census showed that 22.4% of employees have obtained a higher education qualification. This includes diploma and advanced diploma, bachelor's degree, graduate diploma and graduate certificate, and postgraduate degrees.

23.2. Source: Compiled from Australia beef industry bodies

Training events and courses are functions of MLA, LiveCorp, AMPC, and the peak industry bodies. This includes ALFA's animal welfare officer training, Cattle Australia's National Beef leaders program, professional development courses, and MLA's suite of adoption programs including Profitable Grazing Systems, Producer Demonstration Sites, and EDGE Network courses.

⁵³ National Centre for Vocational Education Research, VOCSTATS, https://www.ncver.edu.au/research-and-statistics/vocstats

⁵⁴ Australian Bureau of Statistics, Find Census Data, https://www.abs.gov.au/census/find-census-data

Snapshot of Activities

ALFA Future Feeders Network

Launched in 2024, the Future Feeders Network is an inclusive platform for individuals in the feedlot industry to connect, collaborate, and shape the future of Australia's grain-fed beef sector. Its goal is to support emerging leaders in building a sustainable, ethical, and profitable industry that's recognised for high standards of animal welfare and environmental stewardship.

Feedlot TECH

An initiative by ALFA in partnership with MLA, Feedlot TECH offers flexible, online training in core feedlot skills. Courses can be completed anytime, anywhere, and easily integrated into daily operations and onsite training programs.

LEP training

The LEP employs in-market teams across importing countries to coordinate training and support exporters. Their role is to ensure feedlot, abattoir, and handling staff meet Australia's strict animal welfare standards.

Red Meat Industry Knowledge Hub

This online portal provides processors with a central access point for publications, tools, templates, benchmarks, and training courses. It supports integration with Learning Management Systems (LMS) and offers ready-to-use content to enhance workforce capability.

National Beef Leaders (NBL) program

NBL is the grass-fed cattle industry's flagship leadership program. It was launched by Cattle Australia in 2024 to identify, develop and empower the next generation of industry leaders. The program is centred on the empowerment of the next generation of grass-fed beef industry leaders, with a focus on attracting and retaining exceptional people and nurturing their potential. By developing skilled and capable leaders, we are securing a strong and sustainable future for the grass-fed beef industry.



Governance

The ABSF is an initiative of the Australian beef industry and is governed by an Advisory Board and Steering Group (SG). The ABSF Advisory Board appoints the SG, which is an independent body whose members are chosen for their individual skills, expertise, and ability to operate strategically using a whole-of-industry lens.

When determining SG membership, consideration is given to ensuring that northern and southern cattle farming systems are adequately represented. Members are not appointed as representatives of any bodies, companies, or organisations, ensuring the SG remains independent, objective, and non-partisan. The SG members are each appointed for a specified

term, ensuring knowledge rollover. The purpose, composition, role, and term of the group is periodically reviewed by the ABSF Advisory Board. MLA acts as Secretariat to assist the SG. The SG Chair is not an executive of any industry body or MLA.

| | Advisory Board | | | | | | |
|---|---|---------------------|----------|--|---|------------------------|---|
| Approve | CA | CA CATTLE AUSTRALIA | | ALFA MINISTER DESCRIPTION | | AMIC | |
| Direct | | | | Steering | Group | | |
| Consult | nsult Consultative Committee | | | Industry Forum | | Subject matter experts | |
| Support | mla MART A LAVESTOCK AUGUMALIA | AMPC | | | Data custodians | Research institutions | Industry bodies |
| Roles and res | ponsibilities | | | | | | |
| | Direc | | | Consult | | Support | |
| oversight of the ABSF, e science-based objective representation of the inc Approve recommendation made by the Steering Green Appoint the Steering Green | overnance of the ABSF rovide strategic direction and versight of the ABSF, ensuring cience-based objective expresentation of the industry the design, development, and delivery of the ABSF left left if y sustainability priority areas Develop and implement strategic and communications/engagement plans | | egic and | issues and provide fee Participate | mation, identify emerging opportunities, and edback to the ABSF in engagement and ctivities where appropriate | | key activities, ices t through research ent of the ABSF and ability activities BSF as the source |

Principles

The ABSF is underpinned by five guiding principles: relevance; inclusivity; credibility; practicality; and, transparency. These principles guide the SG decisions around implementation, engagement, and reporting.



Steering Group

The responsibilities of the SG include:

- Data gathering, management, and reporting
- Industry consultation
- Goal promotion
- Advice on research, development and adoption
- Materiality reviews
- Synthesising research
- Developing priorities and indicators
- Representing industry's sustainability journey



Patrick Hutchinson Chair Director, Gibraltar Strategic Advisory



Jacob Betros Secretariat Manager – Sustainability Credentials, Meat & Livestock



Amy Brooks
Manager, Marketing, Community
Engagement and Group Safety,
Stockyard Beef



Bryce Camm CEO, Camm Agricultural Group



Peter GallDirector Livestock &
Ambassador, Hewitt Foods



Olivia Lawson
Director & Co-Principal,
Paringa Livestock Pty Ltd



Jessica MitchellLivestock Supply Chain
Manager, HW Greenham & Sons



Paul McDougall

Manager – Natural Capital,

Paraway Pastoral Company



Kari Moffat Sustainability Manager, AAM Investment Group



Brad Robinson

Manager (Sustainability),

Mort & Co Ltd



Scott StrachanHead of Sustainability and
Environment, Harvest Road Group

SG Members

Sustainable Development Goals

The 17 United Nations Sustainable Development Goals (SDGs) provide an urgent call for action by all countries to work toward a shared blueprint for peace and prosperity for people and the planet, now and into the future.

Multiple key supply chain stakeholders align their business and operational decisions to the SDGs. By understanding how the SDGs align with the ABSF, the Australian beef industry can better illustrate and communicate how it is contributing to sustainability in a global context.

The below diagram depicts which SDGs align with the ABSF. Within this report, adjacent to each ABSF priority heading in this update, are the associated SDGs pertaining to it. The ABSF addresses SDGs:

- 2 zero hunger
- 5 gender equality
- 6 clean water and sanitation
- 7 affordable and clean energy
- 8 decent work and economic growth
- 9 industry, innovation and infrastructure

- 10 reduced inequalities
- 12 responsible consumption and production
- 13 climate action
- 14 life below water
- 15 life on land
- 17 -partnerships for the goals

SUSTAINABLE GALS DEVELOPMENT GALS





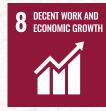


















AND COMMUNITIES













Global Roundtable for Sustainable Beef

The ABSF is a member of the Global Roundtable for Sustainable Beef (GRSB) which envisions a world where beef is a trusted part of a thriving food system and in which the beef value chain is environmentally sound, socially responsible, and economically viable. The ABSF sits on the GRSB Board of Directors for the 2024 and 2025 calendar years, along with Cattle Australia.

The GRSB mission is to advance, support, and communicate continual improvement in sustainability of the global beef value chain through leadership, science, and multistakeholder engagement and collaboration. The GRSB has 120 members across 24 countries, and represents producers, processors, allied services and industries, retailers, civil societies, national roundtables, and observers. The ABSF provides resources and expert advice to the GRSB.

In 2021, the GRSB released three global goals to be reached by 2030:

- Animal health and welfare provide cattle with an environment in which they can thrive through best practices.
- 2. Climate reduce the net global warming impact of beef by 30%.
- 3. Nature positive ensure the beef value chain is a netpositive contributor to nature.

The 2024 Global Conference on Sustainable Beef, held from September 30 to October 3 in Punta del Este, Uruguay, convened industry leaders, policymakers, researchers, and sustainability advocates to advance sustainability in the beef sector. Organised by the GRSB, the conference highlighted progress toward reducing the industry's environmental impact, improving animal welfare, and enhancing community wellbeing through sustainable practices.

The theme of the conference was *Proof Positive: Reporting Global Beef Sustainability*. Key topics included strategies for reducing greenhouse gas emissions specific to regions, methods for building environmentally positive beef supply chains, and innovations in technology and traceability. The event also emphasised GRSB's three main goals. At this conference, the GRSB released the first Sustainability Progress Report, an aggregate summary of national and regional roundtable progress against the GRSB Global Goals.



Stakeholder Engagement

Engaging with stakeholders ensures the ABSF is measuring, reporting, and addressing the issues the industry and community are interested in, and which genuinely influence the sustainability of Australian beef production.

These relationships help the ABSF, SG, and industry representatives to make informed decisions, and allow the ABSF to provide stakeholders with the information they need to make better decisions. The ABSF engages with a wide range of stakeholders with an interest in the beef industry and who can affect or be affected by it. The stakeholders can be categorised as:

| INTERNAL STAKEHOLDERS | | |
|--|--|---|
| Industry Representative Bodies | Agricultural Corporations | EXTERNAL STAKEHOLDERS |
| Peak Industry Bodies State Farming Organisations Research & Development Corporations Regional Advisory Committees | Pastoral Organisations Feedlots Processors Live Exporters Grassroots Producers | Financial Institutions Retailers & Food Service Government & Regulators Wholesalers & Distributors Researchers & Consultants Special Interest Groups & Civil Societies |

Each stakeholder group has an associated level of engagement based on the International Association of Public Participation (IAP2) Spectrum. This spectrum articulates the level of engagement versus the level of impact on the decision, and the promise made to the stakeholder based on the level of engagement associated with them.

| Collaborate | Involve | Consult |
|--|---|--|
| Partner with in each aspect of decision making | To work with to make sure that concerns and aspirations are considered and understood | To obtain feedback on analysis, issues, alternatives and decisions |

The ABSF engagement activities recognise that those within and outside the industry must work together for the ABSF to be valuable, relevant, and robust. All views are listened to and considered, with clear reporting of why, or why not, suggestions were actioned.

Consultative Committee

The Consultative Committee serves as a reference group for the ABSF, with forums held to share information, identify emerging issues and opportunities, and obtain valuable input and feedback from stakeholders. The Committee includes Australian and overseas retailers, banks, investors, environment and welfare non-government organisations, agribusinesses, researchers, government, policy organisations and industry groups.

The Consultative Committee meets to:

- Share information about emerging trends, issues and opportunities for sustainable food production
- Identify emerging issues and opportunities for industry
- Confirm the priority areas of sustainable beef production for reporting progress to stakeholders and the wider community
- Enable the SG (and therefore, industry) to better anticipate emerging focus areas for customers and other stakeholders
- Provide the SG with more information to better implement

The Consultative Committee meeting in November 2024 provided all stakeholders with the opportunity to review the 2024 Annual Update, assist in developing ABSF communications and engagement strategies, and provide insights and feedback on industry impact identification and assessment, to help inform the materiality assessment.

Industry Forum

An industry forum is held annually to ensure ongoing engagement and ownership of the ABSF by the beef industry. This year's forum facilitated meaningful engagement with internal stakeholders, whose insights helped shape and affirm the materiality assessment outcomes.

Sustainability Showcase

Feedback from Consultative Committee participants highlighted the desire to see what research and adoption activities were being undertaken in the industry that address the ABSF priorities. The ABSF took the opportunity to host a Sustainability Showcase, presenting a number of projects, activities, and collaboration with industry that relates to priorities across the four themes of the ABSF. The Showcase began with an overview of the outcomes of the materiality assessment and finished with presentations from MLA and AMPC on their respective strategic plans to 2030.

Digital Engagement

4,249

The ABSF LinkedIn Page has 4,249 followers, an increase of 20% from the previous year. This resulted in over 43,000 impressions.

829

eNews subscribers have increased to 829, with a click through rate of 11.75% (compared to an industry average of 2.5%).

2,198

2,198 X followers, with almost 6,000 impressions over the past 12 months.



Glossary

AAWCS

Australian Livestock Processing Industry Animal Welfare Certification System. An independently audited certification program used by Australian livestock processors to demonstrate compliance with the industry best practice animal welfare standards.

ABS

Australian Bureau of Statistics

ALEC

Australian Livestock Exporters Council. A member-based, peak industry body representing Australia's livestock export sector.

ALFA

Australian Lot Feeders' Association. The peak national body for the Australian cattle feedlot industry.

AMIC

Australian Meat Industry Council. The peak council that represents retailers, processors, exporters and smallgoods manufacturers in the post-farm-gate meat industry.

AMPC

Australian Meat Processing Corporation. The Rural Research and Development Corporation that supports the red meat processing industry throughout Australia.

Antimicrobial Resistance (AMR)

The ability of a microbe to resist the effects of medication that once could successfully destroy the microbe. Microbes include bacteria, viruses and other microscopic organisms.

Antimicrobial Stewardship (AMS)

A set of practices aimed at ensuring responsible use of antimicrobials to prevent resistance and maintain efficacy in both human and animal health.

Required under the NFAS for feedlots.

AUSVETPLAN

The Australian Veterinary Emergency Plan otherwise known as AUSVETPLAN contains the nationally-agreed approach for the response to emergency animal disease incidents in Australia.

Biosecurity

Measures and protocols to prevent the introduction and spread of pests and diseases in livestock. Includes documented biosecurity plans, simulation exercises, and international partnerships.

Biogenic Methane

Methane produced by biological processes, such as enteric fermentation in cattle. It has a shorter atmospheric lifespan than fossil-based methane and is central to split gas accounting.

Bovaer®

A feed additive (3-NOP) shown to reduce methane emissions in cattle by up to 98% depending on dosage and frequency.

BSE

Bovine Spongiform Encephalopathy or Mad Cow Disease. A brain disorder in adult cattle that may be spread to humans through diseased meat.

CA

Cattle Australia. The national peak body for the Australian grass-fed beef.

Canopy cover

The fraction of ground area covered by the vertical projection of tree crown perimeters.

Carbon Sequestration

A process of capturing and storing atmospheric carbon dioxide, which has the potential to mitigate climate change.

Carcase

The body of an animal after being dressed (removal of head, feet, hide and internal organs).

Castration

Removal of the testicles of a bull by either surgical or non-surgical methods.

Contagious Bovine Pleuropneumonia

A highly contagious infectious disease of cattle that attacks the lungs and thoracic membrane, with a high mortality rate.

C026

Carbon dioxide equivalent, a standard unit for measuring greenhouse gas emissions.

CSIRC

Commonwealth Scientific and Industrial Research Organisation. An Australian federal government agency responsible for scientific research.

DAF

Department of Agriculture, Fisheries and Forestry.

Disbudding

The destruction or excision of horn-producing cells before they attached to the skull.

Dehorning

The removal of horns from cattle. It is a labour-intensive, skilled operation with important animal welfare implications, and is totally avoidable by breeding polled (hornless) cattle.

EUDR

European Union Deforestation Regulation – EU legislation requiring traceability and due diligence to ensure products are not linked to deforestation. Australia is classified as a low-risk country under this regulation.

ESCAS

Exporter Supply Chain Assurance System. An Australian Government regulatory program based on four principles: animal welfare, control through the supply chain, traceability through the supply chain and independent auditing.

Fair Work Ombudsman (FWO)

The Australian government agency responsible for enforcing workplace laws. Issues compliance notices for breaches of employment standards.

Feedlotting

The process of feeding cattle on grain in a feedlot, where cattle are fed a high protein grain-based diet to reach exact market specifications, before being supplied to processors.

FMD

Foot-and-Mouth Disease is a serious and highly contagious animal disease that affects all cloven-hoofed animals. FMD is a disease of animals, not humans and is a different disease than hand, foot, and mouth disease which is common in young children. FMD is not transmitted to humans by eating affected meat.

GDP

Gross Domestic Product. The total monetary or market value of all the finished goods and services produced within a country. Also known as Industry Value Add.

GHG

Greenhouse gas. The gases in the atmosphere which absorb wavelengths of radiation that a planet emits.

GRSB

Global Roundtable for Sustainable Beef. A global, multi-stakeholder initiative that advances sustainability of the global beef value chain through leadership, science and multi-stakeholder engagement and collaboration.

Greenwashing

The practice of making misleading or unsubstantiated claims about environmental or sustainability performance. Increasingly scrutinised by regulators and consumers.

GWP100

Global Warming Potential over 100 years - A metric used to compare the climate impact of different greenhouse gases over a 100-year period. Used in ABSF emissions reporting.

HSCW

Hot Standard Carcase Weight. Used to describe the weight of an animal, particularly when the animal is sold directly from a farm to an abattoir.

LCA

Life Cycle Assessment. A technique to assess environmental impacts associated with a product across a supply chain.

LEP

Livestock Export Program - A collaborative initiative between MLA and LiveCorp to support animal welfare, training, and market access in export destinations.

LPA

Livestock Production Assurance. The Australian livestock industry's on-farm assurance program covering food safety, animal welfare and biosecurity. It provides evidence of livestock history and on-farm practices when transferring livestock through the value chain.

LiveCorp

The service provider and research body for the Australian livestock export industry.

LULUCE

Land Use, Land Use Change and Forestry - A category of emissions and sequestration related to land management, now more accurately attributed to grazing in national inventories.

LSD

Lumpy Skin Disease is an acute to chronic, highly infectious, generalised skin disease of cattle. The disease is caused by a poxvirus and is believed to be mechanically transmitted mostly by a range of arthropods, including biting insects and ticks.

Materiality

The principle of reporting against and addressing the industry's most material issues. These are issues with a direct or indirect impact on an organisation's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large.

Maximum Residue Limits

The maximum concentration of an agrochemical permitted legally in a foodstuff.

MERIL

Methane Emissions Reduction in Livestock - A federally funded program evaluating feed additives and technologies to reduce methane emissions from cattle.

MLA

Meat & Livestock Australia - A producer owned industry service provider that provides marketing and research and development services to cattle, sheep and goat industries.

MSA

Meat Standards Australia. A grading system for meat that has met strict eating quality criteria.

NVE

National Vendor Declarations. A form that documents the movement of livestock when they are bought, sold or moved off a property. This form accompanies all such movements.

NFAS

National Feedlot Accreditation Scheme. An independently audited quality assurance scheme initiated by ALFA that includes quality assurance, welfare and other components.

NLIS

National Livestock Identification System. Australia's system for identifying and tracing cattle, sheep and goats.

Non-Tariff Barriers (NTBs)

Trade restrictions that are not tariffs, such as labelling requirements, quotas, or sanitary regulations, which can affect market access.

NRM Region

Natural resource management region. Australia has 54 NRM regions, which are defined by catchments and bioregions. Many activities of organisations and ecosystem services within the NRM regions are vulnerable to impacts of climate change.

Paris Agreement

An international agreement under the United Nations Framework Convention on Climate Change, dealing with the mitigation of greenhouse gas emissions, adaptation to climate change, and climate change-related finance. The Paris Agreement commits members to the long-term goal of keeping the increase in global average temperatures to well below 2°C above pre-industrial levels, and to limit the increase to 1.5°C.

Polled cattle

Livestock, including cows and bulls, born without horns due to the poll gene for which they can be selectively bred.

Red Meat 2030

A 10-year strategic plan for Australia's red meat businesses, developed in consultation with industry and government.

RMAC

Red Meat Advisory Council - is Australia's only policy leadership and advisory forum made up of producers, lot feeders, manufacturers, retailers and livestock exporters. RMAC represents Australian beef, goatmeat and sheep meat businesses and their interests to the community, industry and government.

RSPCA

Royal Society for the Prevention of Cruelty to Animals is an independent, community-based charity providing animal care and protection services across the country.

Safe Work

Safe Work Australia - An Australian government statutory body established to develop national policy relating to work health and safety and workers' compensation.

SDG

Sustainable Development Goals. A set of 17 goals which are an urgent call for action by all countries - developed and developing - in a global partnership.

Spaying

The surgical procedure of removing the ovaries.

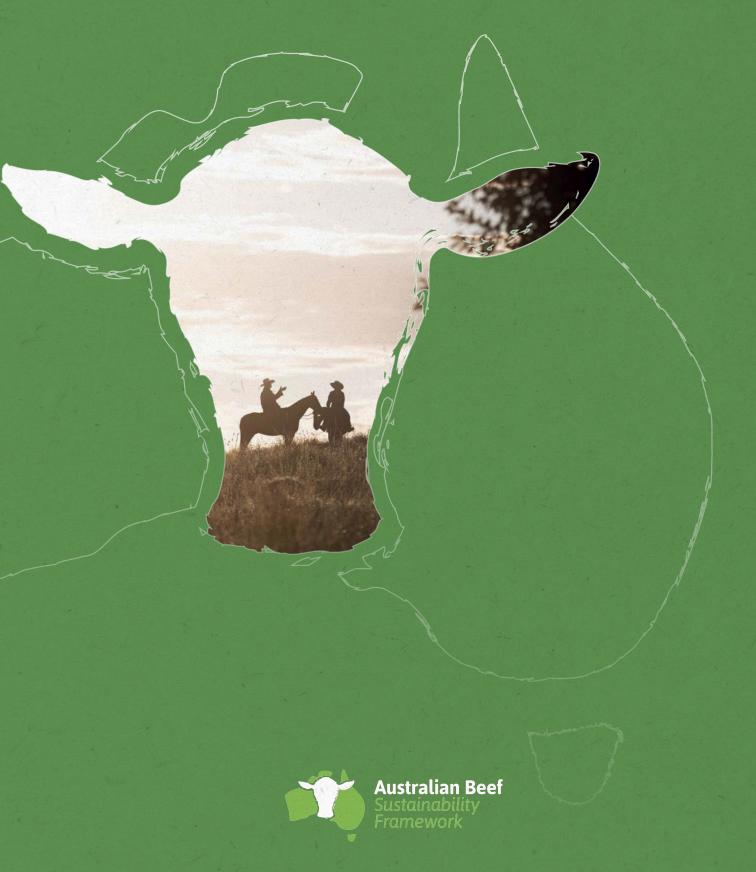
TFP (Total Factor Productivity)

A measure of output relative to all inputs used in production, indicating efficiency and economic performance. Used to assess climate resilience and profitability.

Traceability

The ability to track livestock and beef products through the supply chain to ensure safety, quality, and sustainability. Supported by systems like NLIS and NVD.





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