SHEEP SUSTAINABILITY FRAMEWORK

ANNUAL REPORT 2024

Source: Australian Wool Innovation

SHEEP PRODUCERS AUSTRALIA

WOOLPRODUCERS AUSTRALIA

CONTENTS

This report covers the activities of the Sheep Sustainability Framework (SSF), which was established by Sheep Producers Australia (SPA) and WoolProducers Australia (WPA) and is supported by Meat & Livestock Australia (MLA) and Australian Wool Innovation (AWI).

Unless otherwise stated, data in this report covers the year commencing 1 July 2023 – 30 June 2024 (or FY2024). The SSF Board has reviewed and approved the report for publication on 7 August 2024.

This is the fourth annual report for the SSF (the first was published in 2021). This report and others can be found on the *SSF website*.

This report has been prepared with reference to the *Global Reporting Initiative (GRI) Standards 2021*. See page 62 for an index of disclosures.

External assurance has not been sought for this report and a position on external assurance has not yet been developed by the SSF Board. However, some information in the report is the subject of third-party assurance and auditing regimes.

For questions about this report or its contents, contact:

Courtney Nelson

MANAGER – SHEEP SUSTAINABILITY FRAMEWORK
Meat & Livestock Australia
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Source: Meat & Livestock Australia

Highlights

Four of six existing missing metrics have been addressed with the inclusion of data on biodiversity and the wellbeing of our producers.

There have been improvements in pain management adoption for most animal husbandry procedures.

Net greenhouse gas (GHG) emissions generated by the sheep industry have generally been declining since 2018.

The SSF has created greater alignment with the Australian Beef Sustainability Framework (ABSF) to enable more efficient reporting for multi-species producers.

According to the Global Life Satisfaction Index, sheep graziers are more satisfied with their life than the average Australian.

The gross value of production for sheepmeat and greasy wool increased in FY2023.

Challenges

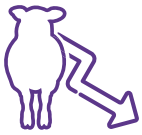
Access to labour, particularly general farm labour, remains an issue for the industry.

The adoption of basic workplace health and safety practices, such as risk assessments and worker inductions, is relatively low.

Challenges with data have made it difficult to provide updates against key industry priorities and indicators, such as the land transport of sheep within Australia.

Data on the percentage of land identified for conservation purposes is yet to be identified.

The difference between the pastoral award and national minimum wage has decreased, signifying the agricultural industry may be less attractive to workers.



The number of sheep transacted through National Saleyard Quality Assurance (NSQA) program accredited saleyards decreased.

SECTION 1: INTRODUCTION

Letter from the Board Chair

The sheep industry's proactive establishment of the SSF is a significant asset to industry, demonstrating our societal relevance and commitment to achieving better outcomes.

As this is my first report as the new independent Chair of the SSF Board, I wanted to firstly thank and acknowledge the work done by Lucinda Corrigan and the inaugural members of the Board for establishing the SSF.

The SSF Board, Steering Group and support bodies should be congratulated on the work done so far but there is more to do, and we are being reminded of that as the regulation of sustainability reporting increases.

Moves in Europe, the US and here in Australia to regulate environmental, social and governance (ESG) reporting have been or are in the process of being developed. While I believe effective and appropriate regulation is important to ensure transparency, integrity and a degree of consistency across regions and jurisdictions regarding ESG reporting by companies, it also reinforces the need for the SSF.

The metrics that are identified and the historical reporting of the Framework allows industry, government and, with these requirements around ESG reporting, companies to better understand the sustainability credentials of the Australian sheep industry and the progress that is being made to improve the outcomes in this space.

The SSF has achieved a lot this past year addressing four of the existing metric gaps, refining other metrics and hosting its Industry and Consultative Committee Forums. I would like to thank Courtney Nelson (MLA) and Scott Williams (Steering Group Chair) for the work they do and the rest of the Steering Group and Board that volunteer their time, skills and contributions.

Angus Gidley-Baird

CHAIR
SSF Board

SENIOR ANIMAL PROTEIN ANALYST
Rabobank

The Board

Ben Thomas
Sheep Producers Australia

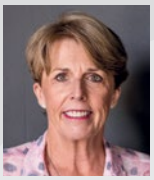
Bonnie Skinner
Sheep Producers Australia

Brett Smith
WoolProducers Australia
Joined November 2023

Jamie Heinrich
Sheep Producers Australia

Jo Hall
WoolProducers Australia

Steve Harrison
WoolProducers Australia



Helen Carrigan
WoolProducers Australia
Retired November 2023

The Steering Group

Belinda Dexter
Minerva Foods Australia

Ed Dunn
MH Premium Farms

Jane Kellock
Kellock Farming

Lachlan Monsbourgh
Rabobank

Maria Crawford
Coles Group
Joined March 2024

Anna Playfair-Hannay
Woolworths
Retired December 2023

Julian Collins
ABMT Textiles
Retired March 2024

Letter from the Steering Group Chair

There has been significant evolution and development within the SSF this year. We have added new metrics and we have modified others to ensure they provide maximum value to our stakeholders.

The Sustainability Steering Group (SSG) has worked extensively this year with the ABSF to align the metrics utilised and improve sustainability reporting for mixed-species producers.

We've also sought to address several metric gaps to ensure that the SSF provides a comprehensive and valuable insight into how the industry is progressing.

The other major development this year has been establishment of the SSF's Digital Data Dashboard. This dashboard aggregates all of the SSF's reporting to date, making it far more accessible and useful for industry.

There have also been some changes in the SSG during the past year. Anna Playfair-Hannay from Woolworths and Julian Collins from ABMT Textiles stepped down from the committee. Anna and Julian were very valuable members of the SSG, and I thank them for their contribution. We were also fortunate that Maria Crawford from Coles agreed to join the committee.

There has also been change amongst the secretariat with Sarah Hyland (formerly of MLA) and Bridget Peachey (AWI) being replaced by Courtney Nelson and Emma Gittoes Bunting respectively. Sarah and Bridget were excellent members of the team. Courtney and Emma have already become invaluable to the Framework.

Thank you to all the members of the SSG for continuing to provide their time and expertise to the SSF and this report.

Dr Scott Williams

CHAIR
SSF Steering Group

DIRECTOR
Forest Hill Consulting

The Committees

The SSF is led by a Board that oversees its governance and strategic direction. The Sustainability Steering Group (SSG) is a panel of experts that supports the Board to continuously strengthen the Framework and its reporting.

THE BOARD

The SSF is owned, designed, and developed by the Australian sheepmeat and wool industry through the peak national policy and advocacy bodies Sheep Producers Australia (SPA) and WoolProducers Australia (WPA).

The SSF Board is responsible for overseeing the governance of the Framework and setting its strategic direction.

THE STEERING GROUP

The Sustainability Steering Group (SSG) comprises representatives from various sheep-producing regions and stakeholder groups throughout the wool and meat value chain in Australia.

The SSG is responsible for integrating the SSF across the Australian value chain, and continuously strengthening the impact and relevance of the SSF through material issue examination and robust annual reporting.

SUPPORT

The sheep industry Research and Development Corporations (RDCs), Australian Wool Innovation (AWI) and Meat & Livestock Australia (MLA) provide resources in support of the SSF.

Source: Meat & Livestock Australia

Data summary

STATUS OF DATA COLLECTION

Data status key and 2024 progress summary

		% OF INDICATORS WITH THIS STATUS IN 2024
Second and third wave data	Directional improvement	25%
	Holding steady	23%
	Directional decline	12%
	Baseline data point	36%
	Indicator, metric or data to be identified	4%

CARING FOR OUR SHEEP

		REPORTING YEAR		TREND
		2023	2024	
Incidence of mulesing in the Australian flock				
1.1.1a Percentage of producers who mules their ewe lambs	Merino	52%	57.7%	●
	Non-Merino	8%	3.9%	●
1.1.1b Percentage of wool declared as non-mulesed/ ceased mulesing	Merino	15.8%	18.6%*	●
	Non-Merino	40.1%	47.1%*	●
Use of appropriate pain management associated with mulesing, castration, and tail docking				
1.1.2a Percentage of producers who use appropriate pain management at mulesing	Merino	88%	89.7%	●
	Non-Merino	83%	96.2%	●
1.1.2b Percentage of producers who use appropriate pain management at castration	Merino	12%	22.3%	●
	Non-Merino	11%	14.7%	●
1.1.2c Percentage of producers who use appropriate pain management at tail docking	Merino - Hot knife	78%	78.8%	●
	Merino - Rings	11%	24.2%	●
	Non-Merino - Hot knife	39%	32.3%	●
	Non-Merino - Rings	10%	14.4%	●

CARING FOR OUR SHEEP

		REPORTING YEAR		TREND
		2023	2024	
Lamb survival				
1.2.1a Percentage of producers pregnancy scanning ewes for litter size		29%	31.4%	●
Adoption of best practice management				
1.2.2a Percentage of producers who have completed Lifetime Ewe Management (LTEM) training		9.4%	11.4%	●
Shearing welfare				
1.2.3a Total number of days per year spent by shearing trainers in woolsheds nationally		1,112	925*	●
Wild predator management				
1.2.4a Percentage of producers with a documented wild predator management strategy		-	18.5%	★
Transport of sheep within Australia to ensure welfare of sheep				
1.2.5a Percentage of sheep transported in line with animal welfare standards (fit to load)		🔍	🔍	
Sheep welfare in saleyards				
1.2.6a Percentage of sheep transacted through National Saleyard Quality Assurance (NSQA) program saleyards		50%	35.6%	●
Wellbeing of live sheep during export				
1.2.7a Percentage of mortality on ships		0.14%	0.17%	●
Humane on-farm euthanasia				
1.3.1a Percentage of producers aware of humane killing requirements in the *Australian Animal Welfare Standards & Guidelines* (AAWSG) for sheep		78%	76.8%	●
Humane processing				
1.3.2a Percentage of lambs and sheep slaughtered through an establishment accredited by the *Australian Animal Welfare Certification System* (AAWCS)		81.5%	88.3%	●
Australia maintaining freedom from disease				
2.1.1a Australia continues to be declared free from 12 major diseases		YES	YES	●
On-farm activity to prevent and treat disease				
2.1.2a Percentage of producers who vaccinate for clostridial diseases		-	87.6%	★
2.1.2b Percentage change in Australian Sheep Breeding Values (ASBV)	Change in worm egg count breeding value	-36%	-27%	●
	Change in early breech wrinkle breeding value	-15%	-27%	●

CARING FOR OUR SHEEP

	REPORTING YEAR		TREND
	2023	2024	
Producers adhering to biosecurity requirements			
2.1.3a Percentage of sheep producers compliant with Livestock Production Assurance (LPA) biosecurity requirements	80.1%	78.1%	●

**The last value reported was for FY2022. The latest figures reported are for FY2024. See the extended commentary of each metric for further detail.*

ENHANCING THE ENVIRONMENT AND CLIMATE

	REPORTING YEAR		TREND
	2023	2024	
Protecting soil resource			
3.1.1a Percentage of natural resource management regions achieving healthy groundcover thresholds	-	64.1%	★
Conservation practices			
Metric to be determined	🔍	🔍	
Responsible chemical use			
3.2.1a Percentage of producers who have attended a ChemCert course or similar	82%	81.1%	●
Efficient water use in processing			
3.2.2a Kilolitres of water used per tonne hot standard carcase weight (HSCW) when processing sheepmeat	7.2kL	-	★
Minimise waste in processing			
3.2.3a Kilograms of solid waste per tonne hot standard carcase weight (HSCW) when processing sheepmeat	29.8kg	-	★
Maintaining and increasing biodiversity			
Percentage of producers undertaking deliberate activities to measure, maintain or enhance biodiversity	-	72.6%	★
Contribution of sheep production to GHG emissions			
4.1.1a Net emissions: Metric tonne of CO_2e generated by sheep industry (farm and sheepmeat processing)	8.93Mt*	8.94Mt	●
4.1.1b Emission intensity: kg of CO_2e emitted per kg liveweight (LW) when raising sheep	6.8kg	-	★
4.1.1c Emission intensity: kg of CO_2e emitted per kg greasy wool shorn	24.4kg	-	★
4.1.1d Emission intensity: kg of CO_2e emitted per tonne hot standard carcase weight (HSCW) when processing sheepmeat	364kg	-	★
4.1.1e Percentage of sheep producers who have measured GHG emissions for their enterprise using carbon accounting or another process	3%	9.9%	●

ENHANCING THE ENVIRONMENT AND CLIMATE

		REPORTING YEAR		TREND
		2023	2024	
Renewable energy				
4.1.2a Percentage of sheep producers who generate and use renewable energy		50%	46.9%	●
Response to a changing and variable climate				
4.2.1a Climate-adjusted Total Factor Productivity growth		0.0%	0.1%	●

**Revised historical emissions*

LOOKING AFTER OUR PEOPLE, OUR CUSTOMERS AND THE COMMUNITY

		REPORTING YEAR		TREND
		2023	2024	
Health and safety prevention and training				
5.1.1a Percentage of producers who have undertaken a Workplace Health and Safety risk assessment		-	54.6%	★
Number of deaths and serious injuries				
5.1.2a Number of fatalities in the sheep industry		34	26	●
5.1.2b Lost time injury frequency rate (number of claims per million hours worked)	Farming	-	10.9	★
	Meat processing	-	19.7	★
Status of physical and mental health				
5.2.1a Global Life Satisfaction Index score of Australian sheep graziers		-	76.1	★
Capacity of workforce				
6.1.1a Percentage of on-farm industry participants who have completed further education		45%	-	★
Appropriate working conditions				
6.1.2a Federal award rate ratio		1.23:1	1.14:1	●
Availability of workforce				
6.1.3a Percentage of producers who find labour availability to be a major issue in their operation	General labour	35%	42.0%	●
	Shearing labour	38%	35.3%	●
6.1.3b Level of availability of workforce among processors		-	🔍	
Extent of succession planning in the industry				
6.1.4a Percentage of producers with a formal succession plan in place		21%	19.9%	●

LOOKING AFTER OUR PEOPLE, OUR CUSTOMERS AND THE COMMUNITY

		REPORTING YEAR		TREND
		2023	2024	
Extent of workforce diversity				
6.2.1a Age distribution of those who are employed in sheep farming and shearing services	15-34	20%	-	★
	35-54	32%	-	★
	55-74	40%	-	★
	75-100	7%	-	★
6.2.1b Gender breakdown of those who are employed in sheep farming and shearing services	Men	72%	-	★
	Women	28%	-	★
6.2.1c Percentage of Indigenous and Torres Strait Islanders who are employed in sheep farming and shearing services		1.5%	-	★
6.2.1d Percentage who speak a Language Other Than English (LOTE) by those who are employed in sheep farming and shearing services		2%	-	★
Community perceptions of the sheep industry				
7.1.1a Percentage of Australians who believe that Australian lambs are farmed and raised in a humane manner		55%	54%	●
7.1.1b Percentage of respondents who believe wool is more environmentally friendly than other fibres		52%	-	★
Consumer perceptions of product quality				
7.2.1a Percentage of Australians who believe that Australian lamb is worth paying a bit more for		25%	27%	●
7.2.1b Willingness to pay (WTP) for 100% wool garments		52%	-	★

ENSURING A FINANCIALLY RESILIENT INDUSTRY

		REPORTING YEAR		TREND
		2023	2024	
Rate of return				
8.1.1a Rate of return on capital, including and excluding capital appreciation, using a five-year rolling average	Including	-	9.7%	★
	Excluding	-	0.8%	★

ENSURING A FINANCIALLY RESILIENT INDUSTRY

		REPORTING YEAR		TREND
		2023	2024	
Contribution to the Australian economy				
8.2.1a Gross value (AUD) of agricultural production for sheepmeat		$4.425b	$4.553b*	●
8.2.1b Gross value (AUD) of agricultural production for greasy wool		$2.645b	$3.145b*	●
Productivity				
8.3.1a Total factor productivity average annual growth rate		0.1%	0.0%	●
8.3.1b Percentage change in the Sustainable Merino (SM) index		-	2.1%	★
Investment in research, development and adoption (RDA)				
8.4.1a AUD invested in research, development and adoption (RDA) per annum	Sheepmeat	$21.8m	$20.5m	●
	Wool	$32.7m	$33.2m	●
Value of product				
9.1.1a Australian value share (%) of sheepmeat exports		45.0%	46.0%	●
9.1.1b Australian value share (%) of greasy wool exports		75.5%	70.2%	●
Access to markets				
9.1.2a Cumulative alleviation (from 2020) of red meat non-tariff barriers		-	$474m	★
9.1.2b Percentage value share of Australian sheepmeat, sheep offal and live sheep exports covered by one or more preferential trade agreements (PTA)		75.5%	71.7%	●
9.1.2c Percentage value share of Australian greasy wool exports covered by one or more preferential trade agreements (PTA)		83.1%	90.0%	●
Compliance with product integrity and safety standards				
9.2.1a Proportion (%) of the wool clip that is produced with a voluntary product integrity scheme		13.9%	13.0%	●
9.2.1b Compliance rates (%) for chemical residues in sheepmeat		99.45%	99.91%	●

**The gross production value for sheepmeat and greasy wool, as reported in the SSF's 2023 Annual Report, was for FY2021. The latest production figures reported are for FY2023. See the extended commentary for further data points.*

About the Framework

The SSF is in its fourth year reporting data on industry progress against key sustainability priorities across the Australian sheep industry's domestic value chain. This reporting improves transparency and provides evidence to our customers that the food and fibre they purchase has been produced responsibly, to build trust and confidence.

The role of the SSF is to monitor, measure, and report industry performance against sustainability priorities.

Data and trends gathered through the SSF will identify opportunities on-farm, in transport, processing, and at the customer interface in Australia, where practices can be improved by both the industry and individuals.

In doing so, the SSF can be used by industry to help protect and grow access to investment, finance, customers, and markets by providing credible evidence of performance and improvement. Further, individual enterprises may use the SSF to understand the industry's material issues and consider these in their forward planning.

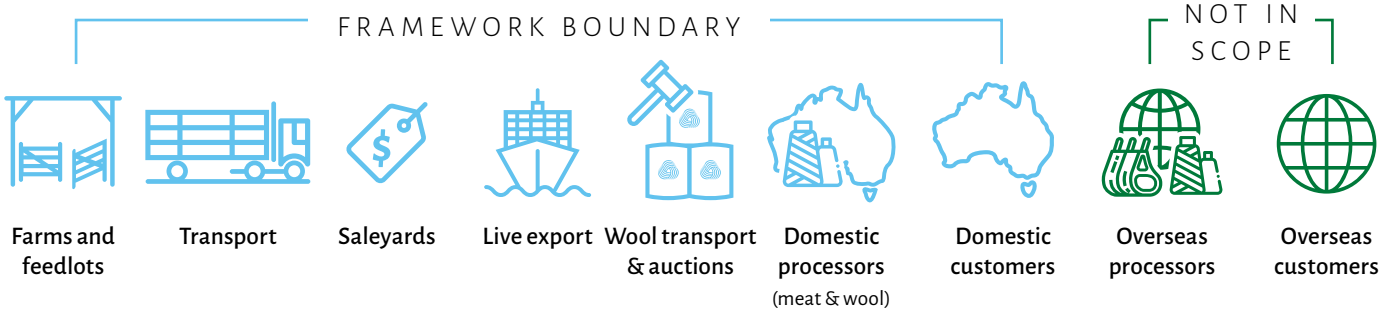
The SSF aims to:

- promote industry transparency with trading partners, customers, and the community
- better inform investment in improvement in focus areas
- protect and grow access to financial capital
- foster constructive relationships with external stakeholders to work collaboratively with the industry.

The SSF does not:

- establish or endorse measurement systems at an individual business level
- provide an accreditation or certification system
- endorse prescriptive management practices
- create additional work for individual businesses.

REPORTING SCOPE



Australia is a leading exporter of sheepmeat worldwide, with its competitors including New Zealand, the United Kingdom and Uruguay [1]. The US and China are the primary destinations for lamb exports, while China, Malaysia and the US remain the largest export destinations for mutton.

Australia generally exports over 90% [2] of its wool clip, mostly in a greasy wool (unprocessed) state, for processing. The domestic processing industry is relatively small. The largest processor of Australian greasy wool is China.

The SSF Steering Group and Board considered the commitment to extend the Framework's reporting scope to international meat and wool processing and retail from FY2024 and beyond. Due to the complexity of this supply chain, the multiple participants in the value chain and limited data availability, it was concluded that the SSF's current reporting scope is most appropriate and should remain. The SSF Steering Group and Board will continue to periodically re-evaluate this position.

Industry at a glance

Australia supplies

24% of the world's clean wool *(IWTO Market Information Edition 18)*

70% of the world's apparel wool *(Wool 2030)*

50% of the world's sheepmeat in 2023 *(MLA)*

FLOCK SIZE

76.5 million
head of sheep

MLA Industry Projections 2024 Australian Sheep [3]

ENTERPRISES

31,488
agricultural enterprises involved

ABS [15]

BREEDING EWES

41.6 million
breeding ewes on hand
64% Merino, 36% non-Merino

MLA State of the Industry Report 2023 [1]

SHEEPMEAT

AUD $4.3 billion
gross value of sheepmeat and live sheep production forecast for 2024/25

ABARES Agricultural Outlook 2024 [4]

706,905 tonnes cwt
in sheepmeat (lamb and mutton) produced in 2022

MLA State of the Industry Report 2023

428,262 tonnes swt
lamb and mutton exported in 2022

MLA State of the Industry Report 2023

45,500
people employed in the sheep production and shearing sector

ABS 2021 Census

WOOL

AUD $3 billion
value of greasy wool production forecast for 2024-25

ABARES Agricultural Outlook 2024

324 million kg
greasy wool production forecast for 2023/24 season

Australian Wool Production Forecast Report April 2024 [5]

308 million kg
greasy wool export forecast for 2023/24

ABARES [16]

200,000
people employed across wool industry production, farm services, research, and marketing

Trust in Australian Wool 2021

SHEEPMEAT PROCESSING

26.1 million head lamb
slaughter forecast for 2024

MLA Industry Projections 2024 Australian Sheep

10.1 million head sheep
slaughter forecast for 2024

MLA Industry Projections 2024 Australian Sheep

23.8 kg
average national lamb carcase weight forecast for 2024

MLA Industry Projections 2024 Australian Sheep

35,000
people employed by red meat processors

AMPC Annual Report 2022-23

LIVE EXPORT

684,287 sheep
exported from Australia in 2023

AUD $74 million
value of live sheep exports in 2023

Source: ABS

Our operating environment

Sheep producers manage an estimated 65.8 million hectaress of land, where they work to preserve, protect and improve the natural resources and biodiversity on their farms.

Australia's sheep industry is predominantly an extensive pasture-based industry, with an average flock size of 2,000 sheep. Sheep are produced in a wide range of climates — from the arid and semi-arid parts of the inland region to the medium- to high-rainfall areas of New South Wales, Victoria, South Australia, Tasmania, Queensland, and southern Western Australia. Sheep are grazed on pastures year-round, with supplementary feeding occurring when there are pasture shortages.

Wool is a 100% natural, renewable, and biodegradable fibre. Wool-producing sheep are shorn at least once a year, and sheep are often retained by the same producer over their lifetime, maintaining genetics and bloodlines over many generations. The Australian sheep industry is committed to continuously improving its practices.

INVESTMENT IN INNOVATION AND RESEARCH

The nature of Australia's unique landscape brings numerous challenges to farming, which have led to innovative methods of production. Investment in research, development and innovation, achieved through the levy system, partnering with industry and government, ensures that our farming practices remain competitive and fit-for-purpose for Australia's unique production, geographic, and climatic environments.

The sheep industry has four Research and Development Corporations (RDCs) — Australian Wool Innovation (AWI), Meat & Livestock Australia (MLA), LiveCorp and the Australian Meat Processor Corporation (AMPC). The RDCs invest producer levies and co-contributions from the Australian Government in research, development, innovation, and marketing.

INTEGRITY SYSTEMS

The sheep industry takes quality standards seriously, from establishing and anticipating customer specifications to the demonstrating and reporting of specific measures. Our sophisticated traceability systems guarantee the integrity of Australia's sheepmeat and wool products to our customers.

The National Livestock Identification System (NLIS) provides identification and lifetime traceability of sheep. In September 2023, Integrity Systems Company (ISC) was awarded a $22.5 million Federal Government grant to enhance the NLIS database and its supporting systems [6]. The funding will help to modernise the current system for tracking livestock and their movements and support changing producer needs into the future.

Livestock Production Assurance (LPA) is an on-farm assurance program covering food safety, animal welfare, traceability, and biosecurity. It provides evidence of livestock history and on-farm practices when transferring animals through the value chain. This integrity system protects the disease-free status of Australian sheep and underpins the reputation of our products as clean, safe, and natural.

The Australian National Wool Declaration (NWD) and Classer's Specifications are the standardised mechanisms by which woolgrowers declare specific on-farm practices, wool quality, and traceability. They assist Australia's wool clip to meet evolving customer requirements. Australian wool is bought and sold with an International Wool Textile Organisation (IWTO) test certificate that characterises all critical features of each bale of wool.

Increasingly, Australian wool producers have become involved in various sustainability certification schemes that provide more in-depth information regarding on-farm activities and attributes which are increasingly required by our customers. The *Responsible Wool Standard* (RWS), *Authentico*, *ZQ*, *NATIVA*, and the *Australian Wool Sustainability Scheme* (including SustainaWOOL and ResponsiWOOL) are examples of such certification schemes in use.

The *Australian Animal Welfare Standards and Guidelines for Sheep* apply to all those responsible for the care and management of sheep. They are based on current scientific knowledge, recommended industry practice, and community expectations.

MARKET AND REGULATORY FORCES

In 2024, Australia endorsed the Emirates Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Action at the United Nations Climate Change Conference (COP28). The declaration includes five objectives focusing on adaptation and resilience activities, promoting food security and nutrition, supporting agricultural workers, strengthening water management, and maximising climate and environmental benefits associated with agriculture. Signatories commit to expedite the integration of agriculture and food systems into climate action and, simultaneously, to mainstream climate action across policy agendas and actions related to agriculture and food systems.

The Global Biodiversity Framework (GBF) continues to influence Australian policy makers, as Australia is one of 17 countries in the world described as 'mega diverse'. In response to this, Australia has committed to protect and conserve 30 per cent of land by 2030, achieve zero new extinctions, take real and significant climate action, and establish a nature repair market. Additionally, Australia will host the first Global Nature Positive Summit in Sydney in October 2024.

The use of environmental and sustainability claims is also becoming more common in the marketing of consumer goods. Greenwashing can misdirect environmentally conscious customers toward disingenuous products and organisations. Both the Australian Securities and Investments Commission (ASIC) and the Australian Competition and Consumer Commission (ACCC) are sharpening their focus on greenwashing.

Global transmission of diseases such as foot-and-mouth disease (FMD) remains a significant biosecurity threat to Australia's sheep industry. An outbreak in Australia would have devastating consequences for our industry in animal health and welfare, lost production, restricted trade, and harmful impacts on communities.

Source: Australian Wool Innovation

Progress against the strategic plan

Developed by the Board and SSG, the aim of the *SSF Strategic Plan* is to embed the SSF into the sheepmeat and wool industry so it becomes a living, working industry instrument and its use is part of 'business as usual'.

Three strategies, each with supporting activities, have been identified to move the SSF forward and propel it towards its objectives.

STAKEHOLDER ENGAGEMENT

To maximise its impact, the SSF must connect and consult appropriately with the breadth of sheepmeat and wool supply chain stakeholders in Australia who influence, drive, and implement industry actions. SSF communications aim to raise awareness, improve understanding, and promote the activity and value of the SSF using effective messaging via optimum channels.

CONSULTATIVE COMMITTEE FORUM

The SSF held its second Consultative Committee Forum in October 2023 with more than 50 representatives from across industry and the Australian sheepmeat and wool value chains, focusing on providing input into the SSF's second materiality assessment.

INDUSTRY FORUM

The SSF held an Industry Forum in March 2024 in Sydney. The event was attended by more than 40 stakeholders and focused on understanding how the Framework's reporting is being utilised to inform policy and research by industry.

IMPROVING COMMUNICATIONS

The SSF has continued ***Newes and Wether,*** the quarterly e-newsletter that brings subscribers up-to-date with SSF activities and sheep industry sustainability issues.

More information on our stakeholder engagement can be found on Page 23 (Consulting with our stakeholders).

DATA COLLECTION AND REPORTING

The purpose of the SSF is to monitor, measure, and report industry performance against sustainability priorities. This requires contemporary, meaningful, and high-quality information.

NATIONAL SHEEP PRODUCER SURVEY

Undertaken by AWI and MLA, the National Producer Survey was initiated to capture on-farm animal husbandry and environmental practice information from a nationally representative sample of 1,200 sheep and wool producers.

The survey was repeated in 2024 (it was previously conducted in 2022). This data is be used to track on-farm progress in a sound, consistent and comparable way.

SHEEPMEAT PROCESSING ENVIRONMENTAL PERFORMANCE REVIEW

AMPC engaged CSIRO to perform the 2022 Environmental Performance Review (EPR) for the red meat processing industry. The EPR is the flagship sustainability report for the Australian red meat processing industry, continuing a series of sectoral environmental performance reviews since 1998. For the first time, this EPR captures and reports species-specific data, enabling the SSF to report sheep processing baseline data. The EPR will be conducted biennially.

2021 CENSUS DATA MINING

The SSF accessed the Australian Bureau of Statistics Agricultural Statistics Program from the 2021 Census to obtain sheep industry-specific demographic data. This has allowed the SSF to accurately report the age, gender, education, and cultural diversity of the on-farm workforce across the sheepmeat and wool industry.

CONTINUOUS IMPROVEMENT

Continuous improvement for the SSF is defined as the practice of regular re-examination of the Framework to ensure its focus and administration remain relevant. This includes ensuring the SSF Board and Steering Group are in alignment with current and emerging material topics.

GLOBAL REPORTING INITIATIVE (GRI) TRAINING

Members of the SSF Board and SSG attended training in reporting in reference to the Global Reporting Initiative (GRI).

The GRI Sustainability Reporting Standards (GRI Standards) enable an organisation to report information about its most significant impacts on the economy, environment, and people, including impacts on their human rights, and how it manages these impacts.

CONNECTING WITH INDUSTRY-ADJACENT FRAMEWORKS

The SSF has been active in establishing relationships and sharing insights with other industry frameworks.

The SSF Steering Group held its second annual joint meeting with the ABSF Steering Group in December 2023.

The SSF also participated in the Australian Agricultural Sustainability Framework's Community of Practice (AASF CoP). The AASF is coordinated by the National Farmers' Federation and aims to provide a central source of information about Australian agricultural sustainability.

CODIFICATION OF DATA COLLECTION PROTOCOLS

The principle of reporting defensible data is a core part of the SSF Strategic Plan. Ensuring accurate data collection is essential to maintaining the integrity of reporting. Both the selection of appropriate data collection instruments and clearly delineated instructions for their correct use reduce the likelihood of errors occurring year to year.

These controlled and centralised procedures will be held securely within Integrity Systems Company.

SECTION 2: THE FRAMEWORK'S OPERATIONS

Material topics

Materiality is the process of identifying sustainability topics important to the continued success of the Australian sheep industry.

The materiality assessment for the SSF, conducted in 2020, involved a desktop review and testing topics with industry stakeholders. This informed development of the Framework, including establishing the sustainability priorities. Further testing occurred as part of the third-stage consultation to confirm topics, scopes, and ranking, which were subsequently validated by the SSG.

Each topic was ranked based on the industry's economic, environmental, and social impact (positive or negative) and the topic's influence on stakeholders' decisions in relation to the industry. Topics are ranked as highly material, material, or important in the materiality matrix below.

The highly material topics for the SSF are:

- Animal husbandry and handling
- Animal wellbeing and welfare
- Biodiversity
- Water security
- Greenhouse gas emissions
- Soil health and pasture management
- Water quality
- Chemicals
- Safety
- Biosecurity
- Food safety and quality

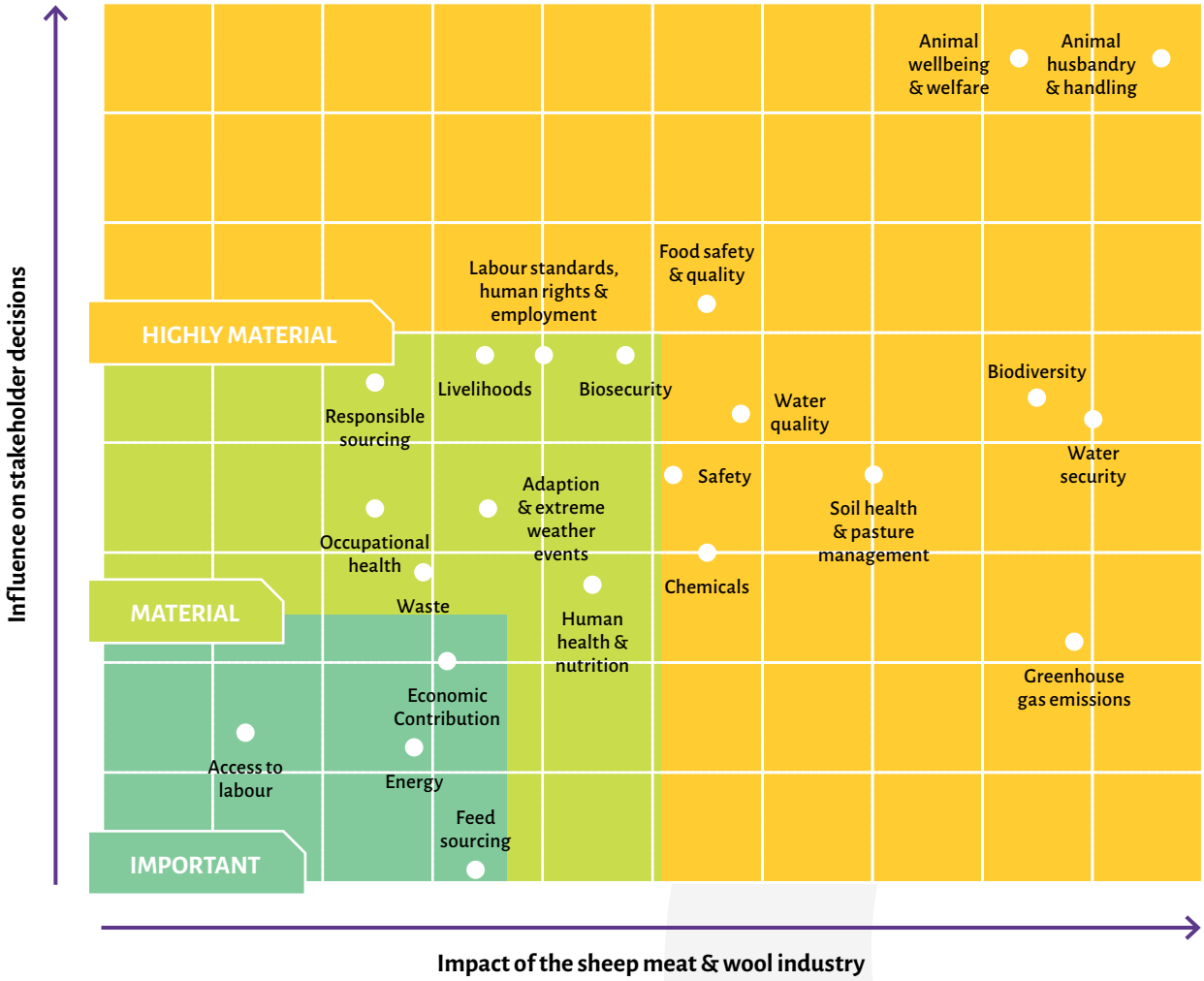


Figure 1. Materiality matrix for the Australian sheep industry.

MATERIALITY ASSESSMENT UPDATED

Material topics are typically updated every two to three years. The SSF materiality assessment was updated this year with the changes to the material topics to be incorporated into the 2025 Annual Report.

The revised materiality assessment was initiated in late 2023 and was conducted by STR Consulting and ERM. The study aimed to refine the material topics established in 2020 to better suit the current sustainability landscape and the industry's changing operating context.

The process sought to align with the evolving needs of both internal stakeholders within the industry and external stakeholders throughout the value chain. Furthermore, the assessment aimed to adhere to double materiality methodologies, considering both internal and external factors impacting sustainability.

The 2024 SSF materiality assessment will be a foundational element in updating the existing SSF's material topics and their position within thematic strategic pillars from 2025 onwards by establishing new priority topics and definitions, restructuring some topics within existing pillars, and emphasising clearer processes.

The assessment highlighted a more mature understanding of sustainability topics among stakeholders. It underscored the greater connections between the topics' drivers, emphasising the need for cross-sector collaboration to effectively address complex cross-industry challenges.

Source: Australian Wool Innovation

Consulting with our stakeholders

The SSF regularly consults with its stakeholders to understand the sustainability risks and impacts of most interest to them, and to ensure the Framework is meeting their needs.

The SSF utilises two key forums to engage with its broad range of stakeholders. Further information on the types of stakeholders that engaged with the SSF can be found in Appendix 3.

CONSULTATIVE COMMITTEE FORUM

The Consultative Committee is an invaluable reference group for the SSF and includes representatives from Australian and international retailers, banks, investors, NGOs, industry representative groups, government, and researchers.

The event is held once a year to share information, identify emerging issues and opportunities, and obtain valuable input and feedback from stakeholders.

INDUSTRY FORUM

An annual industry forum is held to ensure ongoing engagement and ownership of the SSF by industry. The SSF must represent the views of the industry to be an effective customer and consumer-facing framework.

The event involves internal industry stakeholders including Research and Development Corporations (RDCs), peak industry councils (PICs), state farming organisations (SFOs), industry representative groups and service providers.

This year's forum focused on understanding how the data provided by the Framework is being utilised by industry and its customers.

EVENTS

SSF representatives often present at events and online webinars, forums and meetings with representative groups, whose membership base extends to both internal and external stakeholders across the value chain, enabling the SSF to reach a broader audience.

DIGITAL ENGAGEMENT

As of 1 April 2024, the SSF had increased its engagement across all three of its primary communications channels.

The SSF LinkedIn page has **843** followers, an increase of **21%** from the previous year.

The SSF reinvigorated its Facebook page and has **158 followers.**

The quarterly SSF e-newsletter *Newes and Wether* was read more than **895 times.**

Global reporting alignment

Global environment, social and governance (ESG) reporting standards are rapidly evolving, with an increasing focus on climate and environment related impacts. The SSF is continuing to adapt its reporting with a focus on aligning with these changing sustainability reporting requirements.

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS (UN SDGS)

The United Nations Sustainable Development Goals (UN SDGs) were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet, and ensure that all people enjoy peace and prosperity by 2030.

The UN SDGs consist of 17 goals, 169 targets, and 232 unique indicators. National governments, including Australia, are expected to contribute to and report on all 17 goals through the UN process. The sheep industry supports Australia's contribution to the UN SDGs. Using a robust methodology based on consideration of each goal's targets and indicators, the SSF demonstrates alignment with 10 of the 17 goals including both leading and supporting contributions or impacts.

The Framework is most closely aligned with:

Goal 2 — Zero hunger

By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

Figure 2. Alignment of Sheep Sustainability Framework to the United Nations Sustainable Development Goals.

GLOBAL REPORTING INITIATIVE

The most widely used standards for sustainability reporting are those of the Global Reporting Initiative (GRI).

The GRI Sustainability Reporting Standards (GRI Standards) enable an organisation to report information about its most significant impacts on the economy, environment, and people, including impacts on their human rights, and how it manages these impacts.

In July 2022, GRI released a sector standard for companies in the agriculture, aquaculture and fishing sectors (GRI 13).

The SSF commissioned a review of the alignment of its reporting with the GRI 13 sector standard in early 2023. Overall, there is good alignment between the material topics in the SSF and GRI 13. However, some differences in scope, language, terminology, and topics were identified. The SSF continues to work to ensure alignment with the GRI 13 and has sought to address some of these differences in this report.

TASKFORCE ON NATURE-RELATED FINANCIAL DISCLOSURES

In September 2023, the Taskforce on Nature-related Financial Disclosures (TNFD) released a set of disclosure recommendations and guidance for organisations to report and act on evolving nature-related dependencies, impacts, risks and opportunities. These enable business and finance to integrate nature into decision making, and ultimately support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.

Many Australian companies have committed to reporting in alignment with the TNFD. At present, the SSF has not sought to align with these disclosures but will be working towards this in the future.

TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

The Australian Government's Treasury has committed to ensuring large businesses and financial institutions provide Australians and investors with greater transparency and accountability when it comes to their climate-related plans, financial risks, and opportunities. It is anticipated that Australian entities which meet prescribed size thresholds will be expected to make disclosures in alignment with the Taskforce on Climate-related Financial Disclosures (TCFD).

Many Australian companies are in the early stages of understanding and reporting in alignment with the TCFD. At present, the SSF has not sought to align with these disclosures but will be working towards this in the future.

SCIENCE BASED TARGETS INITIATIVE

The number of companies committing to targets in alignment with the Science Based Targets initiative (SBTi) has reached more than 7,000, up from 5,000 the year prior. This demonstrates increasing emphasis on corporate responsibility, which will impact sourcing requirements for global supply chains. The SBTi Forest, Land and Agriculture guidance enables companies to reduce global greenhouse gas emissions from agriculture and commit to zero deforestation targets by 2025.

Many participants in the wool supply chain report against the SBTi targets. The SSF currently does not include these targets in its reporting framework. However, there is strong alignment with the key focus areas of the SBTi.

Source: Australian Wool Innovation

SECTION 3: REPORTING

The Framework's structure

Vision

Sustainably producing the world's best sheepmeat and wool, now and into the future.

Definition

Sustainable sheepmeat and wool production means producing sheepmeat and wool by current and future generations in an ethical and environmentally, socially, and financially responsible manner.

Principles

The principles that guide implementation and improvement of the SSF are

1. Transparency
2. Accountability
3. Inclusivity
4. Credibility
5. Practicality
6. Relevance

The SSF structure comprises

4 Themes | **9** Focus areas | **21** Priorities

THEME	FOCUS AREA	PRIORITY
Caring for our sheep		
	1. Animal care and handling	1.1 Reduce, refine and replace painful husbandry practices
		1.2 Implement best practice sheep management
		1.3 Ensure humane processing and on-farm euthanasia
	2. Animal health	2.1 Prevent and manage disease
Enhancing the environment and climate		
	3. Environment	3.1 Improve natural resource management
		3.2 Responsible environmental practices
		3.3 Encourage biodiversity
	4. Climate change	4.1 Reduce net greenhouse gas emissions
		4.2 Adapt to a changing climate, including extreme weather events
Looking after our people, our customers and the community		
	5. Health and safety	5.1 Improve industry safety culture
		5.2 Improve our people's health
	6. Capacity building	6.1 Support and grow our workforce
		6.2 Encourage workforce diversity
	7. Contribution to community	7.1 Enhance community trust
		7.2 Deliver products that customers demand
Ensuring a financially resilient industry		
	8. Profitability, productivity and investment	8.1 Maintain or increase industry profitability
		8.2 Maintain or increase contribution to the Australian economy
		8.3 Increase productivity
		8.4 Encourage innovation
	9. Market access	9.1 Ensure positive market positioning and access
		9.2 Guarantee product integrity and safety

The indicators and metrics

The SSF has been working hard to find metrics and data to support all its indicators. In this report, 96% of SSF indicators have supporting data.

While the SSF reports are produced annually, some data reporting periods vary from annual, biennial to every five years depending on the metric.

METRIC UPDATES

On recommendation from the Steering Group and on approval from the Board, the following metric changes have been made.

METRIC CHANGE

Caring for our sheep

1.2.4a Percentage of producers who use a wild predator management strategy

This metric was changed to '*percentage of producers who have a documented wild predator management strategy*'.

Producer adoption of wild predator management strategies is considered a good indicator of effective predator control. To continue to support best practice adoption, the indicator has been changed to quantify the proportion of producers that have a documented wild predator management strategy.

2.1.2a Percentage of producers who vaccinate their flock (any vaccine)

This metric was changed to '*Percentage of producers who vaccinate for clostridial diseases*'.

This metric was changed to create alignment between the SSF and the ABSF, to enable more effective reporting across livestock species.

Clostridial vaccines are generally the most administered vaccines across industry, regardless of production region. Other types of vaccinations tend to be region- or issue-specific. The SSG considered that it was reasonable to assume that almost all producers who used any type of vaccine would be using a clostridial.

Enhancing the environment and climate

3.1.1a Percentage of sheep-grazing land achieving 50% groundcover

This metric was changed to '*Percentage of natural resource management regions achieving healthy groundcover thresholds*'.

In a report by Leys et al. (2020) [7] target groundcover thresholds were developed for each National Resource Management (NRM) region across Australia. Modifying this metric to report on the number of NRM regions meeting their specific targets, relevant to their climatic conditions and topography, provides a more robust understanding of groundcover management.

This change also ensures greater alignment with reporting in the ABSF.

Looking after our people, our customers and the community

5.1.1a Total $ investment in health and safety prevention and management

This metric was changed to '*Percentage of producers who have undertaken a workplace health and safety (WHS) risk assessment*'. Furthermore, the indicator was also amended to 'Health and safety prevention and training'.

The SSF has previously sought to report on the total monetary investment in health and safety but securing accurate figures for industry investment in health and safety prevention and management has been difficult.

In the absence of this data, the SSF has decided to focus on safety culture within the industry and adjusted this metric accordingly, to report on the number of producers considering WHS risks on-farm.

Should data become available on total industry investment in health and safety, the SSF will consider including this information as well.

5.1.2b Number of serious injury worker's compensation claims in the sheep industry

This metric has been changed to the '*Lost time injury frequency rate (number of claims per million hours worked)*' for farming and processing.

The lost time injury frequency rate (LTIFR) measures the number of lost-time injuries per million hours worked during a single financial year. It is a common measure of serious injuries used by workplaces and businesses.

LTIFRs are useful for drawing conclusions about the factors that contribute to lost productivity, including inadequate injury prevention. It should also be noted that claims may only extend to when a worker decides to seek compensation, and not reflect the true number of incidents.

Ensuring a financially resilient industry

8.1.1a Rate of return on capital, excluding capital appreciation, using a three-year rolling average

This metric was changed to *'Rate of return on capital, including and excluding capital appreciation, using a five-year rolling average'*.

The SSF chose to adopt the five-year rolling average as it supports a longer-term view of industry's profitability and investment and minimises influence from short-term industry or market volatility. This also supports greater alignment with the ABSF.

8.3.1b Percentage change in the Dual Purpose Plus (DP+) index

This metric has been changed to the 'Percentage change in the Sustainable Merino (SM) index'.

The Sustainable Merino index has been chosen to replace the Dual Purpose Plus (DP+) index which was phased out in May 2024.

9.1.2a The non-tariff barrier (NTB) impact on trade (sheepmeat and offal) in $A

This metric was changed to *'Cumulative alleviation (from 2020) of red meat non-tariff barriers'* to align with the *Red Meat 2030* success factor of reducing NTBs by $1 billion by 2030.

METRIC ADDITION

Enhancing the environment and climate

3.3.1a Percentage of producers undertaking deliberate activities to maintain or enhance biodiversity

Biodiversity is notoriously hard to measure in a representative and comparable fashion. However, consumer demands for sustainably produced products are increasingly requiring sheep producers to demonstrate that they are undertaking practices to manage the environment including maintaining or improving biodiversity.

Therefore, the SSF has taken the position to report on the percentage of producers who take steps to measure, maintain or enhance biodiversity on their property, utilising data from the National Producer Survey 2024.

Looking after our people, our customers and the community

5.2.1a Global Life Satisfaction Index score of Australian sheep graziers

The SSF sought to find a metric to speak to the physical and mental health of the industry and elected to use the Global Life Satisfaction Index score, provided by the Regional Wellbeing Survey.

The Global Life Satisfaction Index score is calculated based on respondents rating their satisfaction with their 'life as a whole' on a scale from 'completely dissatisfied' (0) to 'completely satisfied' (10). It encapsulates people's satisfaction with their standard of living, health, what they are achieving in life, personal relationships, safety, feeling part of their community and future security.

Measuring feelings can be very subjective but is nonetheless a useful complement to more objective data when comparing quality of life across countries. The Regional Wellbeing Survey aligns with accepted OECD measures and reporting.

INDICATOR, METRIC OR DATA TO BE IDENTIFIED

Caring for our sheep

1.2.5a Percentage of sheep transported in line with animal welfare standards

Enhancing the environment and climate

3.1.2 Conservation practices

Looking after our people, our customers and the community

6.1.3b Level of availability of workforce among processors

Source: Meat & Livestock Australia

Caring for our sheep

Highly material topics

- Animal husbandry and handling
- Animal wellbeing and welfare
- Biosecurity

ABOUT THE MATERIAL TOPICS

Animal wellbeing and welfare

Positive public perceptions of the Australian sheep and wool industry are driven through community confidence that the industry is continuously striving towards animal welfare improvements.

Animal welfare is protected by legislation in each of the states and territories of Australia. This legislation is harmonised through nationally-agreed *Australian Animal Welfare Standards and Guidelines* which specify the legal standards of management and husbandry required to protect and maintain the welfare of sheep.

The SSF reports on aspects of animal welfare including access to food and water, provision of shelter and space, management of disease. It also reports on the management of sheep on-farm, in transit and at destination.

WoolProducers Australia (WPA) specifically defines a positive welfare state of an animal to be when "it is healthy, comfortable, well nourished, safe and able to express natural behaviours, indicated by science-based evidence". Good husbandry and veterinary practices and sufficient availability of resources enable a positive welfare status to be achieved.

Animal husbandry and handling

Good health and handling of sheep provide productivity advantages. The outcome of improved husbandry practices (refining/replacing aversive practices, relieving pain) and improved capacity to diagnose, prevent and treat disease contributes to an increase in individual animal and herd performance and a reduction in livestock mortality.

In the SSF, husbandry practices include shearing, mulesing, lamb marking, use of pain management and antimicrobials, euthanasia on-farm and slaughter practices at processing.

The Australian Animal Welfare Standards and Guidelines, along with Sheep Producers Australia (SPA) and WPA, support the use of pain management to reduce the impact of husbandry procedures on animals. In the 2023 report, the SSF identified that the appropriate pain management strategy for the relevant husbandry procedure (or method) was not always selected. Therefore, there has remained a focus on educating industry stakeholders to share information on the most appropriate pain management for various husbandry procedures and its correct application.

SPA and WPA are currently working with Animal Health Australia (AHA) to deliver a national communication and extension campaign to support industry in adoption of best practice lamb marking procedures.

Biosecurity

The threat of biosecurity incursions remains a risk to trade, even as Australia increases the capacity of industry to prevent emergency animal diseases, such as FMD, which is impacting neighbouring countries.

The LPA National Vendor Declaration (NVD) communicates the food safety and treatment status of every animal every time it moves between properties, to saleyards or processors. NVDs are key to Australian red meat traceability and market access, and act as a legal document of movement throughout the value chain. All declarations must be supported by accurate farm records. This is a pledge that the meat has been produced safely and ethically on-farm and meets biosecurity requirements.

Furthermore, in September 2022, federal and state agriculture ministers agreed to implement a nationally consistent individual electronic identification (eID) system for sheep and goats by 1 January 2025. Industry is working through the implementation of this commitment.

SPA and WPA support raising awareness of biosecurity and the implementation of biosecurity practices on-farm. Both organisations also support a national approach to biosecurity, acknowledging that it is the responsibility of industry, all levels of government and the public.

FOCUS AREA 1: ANIMAL CARE AND HANDLING

PRIORITY 1.1 Reduce, refine and replace painful husbandry procedures

Painful husbandry procedures can impact animal welfare. Mulesing is a high-profile issue in this area. Efforts are continually being made to reduce, refine or replace the need for painful husbandry procedures.

INDICATOR		VALUE	STATUS	SOURCE
1.1.1 Incidence of mulesing in the Australian flock				
1.1.1a Percentage of producers who mules their ewe lambs	Merino	57.7%	●	National Producer Survey 2024
	Non-Merino	3.9%	●	

These figures are taken from the National Producer Survey conducted in 2024 with n=1,268 sheep producers. The figures reported are for ewe lambs only.

In comparison, the National Producer Survey 2022 found that 52% of producers mulesed Merino lambs and 8% of producers mulesed non-Merinos.

The slight increase in mulesing reported in the 2024 National Producer Survey is not statistically different from the previous survey undertaken in 2022, and the trend for producers in mulesing their ewe lambs continues to decrease since data was reported in 2021 (67%).

Producers' decision to mules their sheep is often influenced by the anticipated flystrike risk, which is affected by recent and forecast weather conditions.

1.1.1b Percentage of wool declared as non-mulesed/ ceased mulesing	Merino	18.6%	●	AWEX 2023/24
	Non-Merino	47.1%	●	

These figures represent the percentage of Australian bales of first-hand auction offered wool (excluding reoffers) with the National Wool Declaration (NWD) status of either non-mulesed or ceased mulesing.

The NWD is a voluntary scheme where not all wool is declared. For the 2023/24 season:

- 78.8% of all Merino wool was declared
- 62.7% of all non-Merino wool was declared.

The SSF last reported on figures from the 2021/22 season. In the intervening 2022/23 season, 17.9% of Merino and 43.7% of wool was declared as non-mulesed or ceased mulesing.

Since the last report, the percentage of wool declared as non-mulesed or ceased mulesing increased by 2.8% for Merino and 7.0% for non-Merino wool.

INDICATOR		VALUE	STATUS	SOURCE
1.1.2 Use of appropriate pain management associated with mulesing, castration and tail docking				
1.1.2a Percentage of producers who use appropriate pain management at mulesing *Baseline: producers who mulesed in 2023*	Merino	89.7%	●	National Producer Survey 2024
	Non-Merino	96.2%	●	

It is good husbandry practice for mulesing to be accompanied by appropriate pain management. The local anaesthetic Tri-Solfen® was registered for use in mulesing in 2007. Several products which contain the non-steroidal anti-inflammatory drug meloxicam are also registered for pain management for mulesing. The use of Tri-Solfen® and products containing meloxicam are recognised as appropriate pain management for mulesing (see Table 1).

INDICATOR		VALUE	STATUS	SOURCE
1.1.2 Use of appropriate pain management associated with mulesing, castration and tail docking				

The data is reported from the sample of producers who **reported that they mulesed animals in 2023** from the National Producer Survey 2024. From the survey, 95.0% of Merinos and 95.4% of non-Merinos received pain management (of some kind) for mulesing. The figures above reflect those that received appropriate pain management for the procedure.

Since the last report, the percentage of producers using appropriate pain management for mulesing of Merinos held steady (88% in 2023) and significantly increased for non-Merinos from 83%.

1.1.2b Percentage of producers who use appropriate pain management at castration *Baseline: producers who castrated their male sheep in 2023 using the ring method only*	Merino	22.3%	●	National Producer Survey 2024
	Non-Merino	14.7%	●	

It is good husbandry practice for castration to be accompanied by appropriate pain management. Appropriate pain management for castration is dependent on the method used. The use of Tri-Solfen® and/or a registered product containing meloxicam is considered appropriate for the knife method while NumOcaine® is and/or a registered product containing meloxicam is considered appropriate for the ring method (see Table 1).

The figures are reported from the sample of producers who **reported they castrated their sheep using the ring method** in the National Sheep Producer Survey 2024.

Since the last report, the percentage of producers who used appropriate pain management for castration of their male lambs (using the ring method) increased by 10.3% for Merinos and 3.7% for non-Merinos.

Producers who castrate male lambs

Merino 98.3%

Non-Merino 95.3%

Producers who castrate and use the ring method

Merino 98.2%

Non-Merino 98.9%

1.1.2c Percentage of producers who use appropriate pain management at tail docking *Baseline: producers who tail docked their male lambs in 2023 using the ring and hot knife methods*	Merino – Hot knife	78.8%	●	National Producer Survey 2024
	Merino – Rings	24.2%	●	
	Non-Merino – Hot knife	32.3%	●	
	Non-Merino – Rings	14.4%	●	

It is good husbandry practice for tail docking to be accompanied by appropriate pain management. Appropriate pain management for tail docking is dependent on the method used. The use of Tri-Solfen® and/or a registered product containing meloxicam is appropriate for the knife method while NumOcaine® and/or a registered product containing meloxicam is appropriate for the ring method.

These figures are reported from the samples of **producers who tail docked their male lambs in 2023 using the ring method and producers who tail docked their male lambs in 2023 using the knife method.**

Since the last report, the percentage of producers using appropriate pain management for tail docking using the hot knife method, held steady for Merinos (78% in 2023) and declined for non-Merinos (39%). For the ring method, the percentage of producers using appropriate pain management increased from the last report for both Merinos (11%) and non-Merinos (10%).

Producers who tail dock male lambs

Merino 96.6%

Non-Merino 82.0%

Tail docking method used

Note the differences in the prevalence of hot knife and ring use between Merino and non-Merino producers for tail docking.

	HOT KNIFE	RING
Merino	65.6%	30.8%
Non-Merino	24.4%	76.7%

Appropriate pain management

The following table summarises the types of pain management that have been acknowledged as appropriate for the various husbandry procedures (mulesing, castration and tail docking) within the SSF.

Table 1 – Matrix of appropriate pain management methods considered within the SSF

	MULESING	CASTRATION	TAIL DOCKING	
		Ring	Knife	Ring
Anaesthetic and antiseptic spray at the surgery site (e.g. Tri-Solfen®)	✓	✗	✓	✗
Analgesic/pain killing oral gels; veterinary and non-veterinary prescribed - (e.g. Butec®, Buccalgesic®)	✓	✓	✓	✓
Analgesic/pain killing injection (e.g. meloxicam)	✓	✓	✓	✓
Anaesthetic injection at the surgery site (e.g. NumOcaine®)	✗	✓	✗	✓

Resources on using pain management

Several resources are available through AWI and MLA to inform producers on appropriate pain management products.

- *Anaesthetics and analgesics at lamb marking*, AWI resource
- *Plan, prepare and conduct best welfare practice lamb marking procedures*, AWI resource
- *Pain management use in sheep*, MLA eLearning modules
- *Pain mitigation in sheep and cattle*, MLA resource
- *Pain mitigation in sheep*, MLA resource

PRIORITY 1.2 Implement best practice sheep management

Implementing best practice sheep management will support the health and wellbeing of animals and ensure industry meets customer and community expectations regarding animal welfare.

INDICATOR	VALUE	STATUS	SOURCE
1.2.1 Lamb survival			
1.2.1a Percentage of producers pregnancy scanning ewes for litter size	31.4%	●	National Producer Survey 2024

The information gained from pregnancy scanning for litter size allows producers to manage each group of ewes more strategically. Managing ewes based on their litter size (single or multiples) through changes in feeding or paddock allocations at lambing time can lead to increased lamb survival. It is for this reason that scanning for litter size is a good proxy for lamb survival.

In the survey, 45.1% of producers reported they scanned their ewes. Of these, 69.6% scanned for dry, single, and multiple fetuses. This is a 2.4% increase on results from the previous survey conducted in 2022.

1.2.2. Adoption of best practice management			
1.2.2a Percentage of producers who have completed Lifetime Ewe Management (LTEM) training	11.4%	●	AWI FY2023

The percentage of producers who have completed LTEM was evaluated at the end of FY2023. This is calculated by comparing the number of producers who have completed LTEM (4,601) with AWI-eligible wool levy payers (40,387 wool levy payers at 30 June 2023).

LTEM is a course designed to increase woolgrowers' knowledge and understanding of the influence of ewe nutrition and management on overall reproduction rates and lamb and ewe survival. Participation in the six-day LTEM training program indicates a strong likelihood of best practice adoption. 250 producers completed LTEM within the financial year.

1.2.3 Shearing welfare			
1.2.3a Total number of days per year spent by shearing trainers in woolsheds nationally	925	●	AWI FY2024

Targeted training reinforces best practice with new shearers and upskills existing shearers. Practical coaching is a key strategy to develop highly skilled shearers and optimise sheep welfare during shearing.

The last value reported by the SSF was for FY2022. In FY2023, a total of 845 days were spent by shearing trainers in woolsheds nationally. Since FY2022, this figure has declined by 16.8%.

AWI offers training on a demand basis, with fluctuations in training days dependent on contractors and woolgrowers seeking shearer training.

1.2.4 Wild predator management			
1.2.4 Percentage of producers with a documented wild predator management strategy *Base: producers who reported having a problem with predators on their property in 2023.*	18.5%	★	National Producer Survey 2024

Producer adoption of wild predator management strategies is considered a good indicator of effective predator control. To support adoption of best practice, the metric was changed this year to include producers who have a documented wild predator management strategy. For this reason, this is a benchmark data point.

This figure is from producers who reported having a problem with predators in 2023, which was 74.9% of producers surveyed. For reference, 44% of producers reported using wild predator management strategies in 2023.

INDICATOR	VALUE	STATUS	SOURCE
1.2.5 Transport of sheep within Australia to ensure their welfare			
1.2.5a Percentage of sheep transported in line with animal welfare standards (fit to load)		-	-

The SSF has been examining potential data sources to report this metric. It is anticipated that through a Federal Sustainability Reporting Uplift Grant, awarded to MLA, that a method to measure and track the health and welfare status of livestock before, during and after road transport in Australia will become available in FY2025.

1.2.6 Sheep welfare in saleyards			
1.2.6a Percentage of sheep transacted through NSQA saleyards	35.6%		MLA FY2023

The National Saleyards Quality Assurance (NSQA) program was developed in 1996-97 to provide the saleyard sector of the livestock industry with a QA program linking the sectors of industry from the 'paddock to the plate'. NSQA is audited by a third party (which is currently AUS-MEAT).

In FY2023, the data showed a 14.4% decrease in the number of sheep that were transacted through an NSQA facility compared to the previous financial year. The number of facilities participating in the NSQA program also decreased, contributing to the decline of this metric.

1.2.7 Wellbeing of sheep during live export			
1.2.7a Percentage mortality rate on ships	0.17%		DAFF 2023

The Department of Agriculture, Fisheries and Forestry (DAFF) reports livestock mortalities on every sea voyage. In the 2023 calendar year, a total of 654,416 sheep were exported by sea, a 72% increase in volume from 2022 [8].

The total mortality rate for sheep on ships increased slightly by 0.03% compared to the previous calendar year. There were no live sheep voyages in 2023 that exceeded the notifiable mortality limit within this period.

PRIORITY 1.3 Ensure humane processing and on-farm euthanasia

On-farm euthanasia and processing are an integral part of sheep production. It is important that these procedures are done competently.

INDICATOR	VALUE	STATUS	SOURCE
1.3.1 Humane on-farm euthanasia			
1.3.1a Percentage of producers aware of humane killing requirements in the Australian Animal Welfare Standards & Guidelines (AAWSG) for sheep.	76.8%		National Producer Survey 2024

This figure is reported as a percentage of producers surveyed in the National Sheep Producer survey 2024 (n=1,268) that were aware of the Australian Animal Welfare Standards and Guidelines (AAWSG) for Sheep.

The survey showed that 84.8% of producers were aware of the AAWSG for Sheep. Of those that reported awareness of the AAWSG, 90.6% were aware of the specific standards for the humane killing of sheep. This result was slightly less (-1.6%) than reported last year.

1.3.2 Humane processing			
1.3.2a Percentage of lambs and sheep slaughtered through an establishment accredited by the Australian Animal Welfare Certification System (AAWCS).	88.3%		MLA FY2023

The Australian Animal Welfare Certification System (AAWCS) is an independently audited certification program. It is used by livestock processors to demonstrate compliance with Australian industry standards from receival of livestock to the point of humane processing.

This figure increased by 6.8% this year.

FOCUS AREA 2: ANIMAL HEALTH

PRIORITY 2.1 Prevent and manage disease

The outbreak or spread of pests and diseases would have a severe impact on the sheep industry — on both individual businesses and access to markets. Vaccination is a key prevention mechanism for endemic diseases. Appropriate treatment of disease reduces impact on individual animals. Biosecurity measures, including effective traceability, also mitigate risk of disease.

INDICATOR	VALUE	STATUS	SOURCE
2.1.1 Australia maintaining freedom from disease			
2.1.1a Australia continues to be declared free from 12 major diseases	YES	●	Animal Health Australia 2023

Australia continues to be free of the world's worst sheep diseases, recognised by the World Organisation for Animal Health (WOAH).

This metric is derived from the *Animal Health in Australia Annual Report 2023* [9] that draws together information provided by the Australian Government Department of Agriculture, Fisheries and Forestry, state and territory government agencies and Animal Health Australia's members.

The major diseases considered include foot-and-mouth disease (FMD), classical scrapie, *Brucella melitenisis*, *Chlamydophila abortus* (enzootic abortion of ewes, ovine chlamydiosis), Nairobi sheep disease virus, peste des petits ruminants (PPR), *Psoroptes ovis* (sheep scab), *Salmonella abortus-ovis* (salmonellosis), sheep pox, Wesselbron virus, maedi-visna and pulmonary adenomatosis (Jaagsiekte).

2.1.2 On-farm activity to prevent and treat disease			
2.1.2a Percentage of producers who vaccinate for clostridial diseases	87.6%	★	National Producer Survey 2024

Vaccination is an important and highly effective method to protect sheep from disease. When used correctly as part of a property health plan, vaccines can help prevent many common endemic diseases.

A sound vaccination program improves animal health and welfare and enhances enterprise productivity. The prevalence of vaccine use is a strong indicator of Australia's commitment to disease prevention.

This metric was changed to create alignment between the SSF and the ABSF, to enable more effective reporting across livestock species.

Clostridial vaccinations are generally considered to be the most common vaccine across industry, regardless of production region. Other types of vaccinations tend to be region or issue specific and for this reason would not be appropriate to include.

The National Producer Survey 2024 found that 91.9% of producers vaccinated their sheep with at least one type of vaccine. Of these, 95.2% vaccinated for clostridial diseases. Furthermore, 94% of producers vaccinated their entire flock with at least one vaccination of any type of vaccine.

INDICATOR		VALUE	STATUS	SOURCE
2.1.2b Percentage change in Australian Sheep Breeding Values (ASBV)	Worm egg count (WEC)	Percentage change = -27%	●	MERINOSELECT Database MLA 2024 Analysis
	Early breech wrinkle (EBWR)	Percentage change = -27%	●	MERINOSELECT Database MLA 2024 Analysis

Worms and breech flystrike are among the most important health challenges for the Australian sheep industry. Genetic improvement is key to preventing disease. Tracking changes in Australian Sheep Breeding Values (ASBV) over time provides insights on changes in genetic disease resistance in the Australian flock.

The industry average ASBV for Worm Egg Count was =-10.05 in the 2021 lamb drop and lowered to -12.78 in the 2022 lamb drop.

The industry average ASBV for Early Breech wrinkle was -0.22 in the 2021 lamb drop and reduced to -0.28 in the 2022 lamb drop.

The values above report the percentage change in the lambs born between 2021 and 2022. The ASBV for both worm egg count (WEC) and early breech wrinkle (EBWR) breeding values both reduced, meaning that the flock's resistance to worms and breech flystrike is improving.

2.1.3 Producers adhering to biosecurity requirements

2.1.3a Percentage of sheep producers compliant with LPA biosecurity requirements	78.1%	●	Integrity Systems Company 2023

To meet the requirements of the Livestock Production Assurance (LPA) program, each enterprise must have a documented biosecurity plan. In 2023, there were 1,402 sheep producers audited, of which 78.1% had a biosecurity plan in place. This number declined by 2% from 2022.

The LPA program conducts both random and risk-based auditing, to provide an indication of conformity across the industry. The 21.9% who did not have a biosecurity plan when audited have either put a biosecurity plan in place or have been removed from the LPA program. Removal from the program means that sheep from that enterprise may not be transacted.

Integrity Systems Company (ISC), which administers the LPA program, is currently implementing improvements to the accreditation process to improve the assurance the program provides as well as support increased producer knowledge and conformity. Producers will have access to resources and self-assessments that will help them to develop a documented biosecurity plan for their property.

Enhancing the environment and climate

Highly material topics

- Biodiversity
- Greenhouse gas (GHG) emissions
- Soil health and pasture management
- Water security
- Water quality
- Chemicals

ABOUT THE MATERIAL TOPICS

Biodiversity

Australian farmers are custodians and managers of more than 50% of Australia's land mass and have great potential to maintain or improve biodiversity outcomes throughout the country. However, biodiversity has remained hard to measure and report in a representative and comparable fashion. Many groups are focusing on ways to develop sound methodologies to measure and report on the biodiversity of ecosystems in which sheep and other livestock are produced.

The Global Biodiversity Framework (GBF) continues to influence Australian policy makers, as Australia is one of 17 countries in the world described as 'mega diverse'. In response to this, Australia has committed to protect and conserve 30 per cent of land by 2030, achieve zero new extinctions, take real and significant climate action, and establish a nature repair market.

The SSF has taken steps towards reporting on biodiversity through the inclusion of a metric on the percentage of producers undertaking deliberate activities to maintain, measure or enhance biodiversity. Standards for biodiversity assessment continue to be developed and are seeking to encompass a wide range of aspects such as species abundance, species diversity, area and ecosystem changes and more. While some of these may not be captured within the SSF's metric, it is important for industry to take the first steps to reporting on this highly material topic.

Greenhouse gas emissions

The SSF includes scope 1, 2 and 3 emissions and the mitigation of emissions in the medium and longer term in its reporting.

CN30 is the Australian red meat industry's voluntary target to achieve carbon neutrality by 2030. It includes the grazing, feedlot, and processing sectors for sheep, cattle, and goats. It aims to achieve carbon neutrality while capturing benefits for sustainability, productivity, and profitability.

The Australian red meat industry is the custodian of nearly 50% of Australia's land mass, placing it in a unique position to influence both carbon emissions and sequestration.

The CN30 program invests in a range of technologies and projects designed to achieve the industry target. The optimisation and implementation of strategies to promote soil organic carbon is a cornerstone of CN30 investment, and equally important is the development and commercialisation of emission-reducing technologies. These investments have included the advancement of methane-suppressant additives, delivery methods for additives in grazing systems, and genetic selection for low methane-producing animals.

Read more on *CN30* and its tools.

SPA and WPA both support the reduction of greenhouse gas emissions and the carbon footprint of the agricultural sector. WoolProducers Australia also supports the need to develop a wool specific emissions reduction target for 2030.

Both organisations also recognise the need for a collaborative and coordinated approach with government, research organisations and the broader supply chain to continue to invest in emissions reductions technologies.

Soil health and pasture management

Good grazing land management adjusts for changes in climate, soil health and grazing pressure from pest animals to maintain production efficiency and reduce the cost of animal feed. It is also important to consider soil nutrient and sediment loss, erosion and soil carbon.

The SSF operates a Balance of Grass and Tree Cover Dashboard which enables stakeholders, industry, and producers to analyse trends in woody vegetation and ground cover at a regional level. The dashboard involves the integration of an exhaustive 30 years of satellite data identifying annual trends in woody vegetation and seasonal trends in ground cover.

Furthermore, soil is home to more than 25% of biodiversity.

Managing and preserving soil health is a critical part of sustainable agriculture. Australia has a National Soil Strategy [10] that sets out how Australia will value, manage and improve our soil for the next 20 years.

Water safety and security

Agriculture accounts for around three quarters of total water use in Australia [11]. Therefore, producers have a significant responsibility to ensure water safety by minimising fertiliser run-off, pesticide use and livestock effluent from polluting waterways and groundwater.

Water scarcity is a persistent issue in Australia given the relatively dry and variable climate and now the emergence of climate change. Producers have become increasingly efficient with water usage but water security, particularly for livestock production, remains a concern.

The Forewarned is Forearmed (FWFA) project by industry developed several resources to help equip farmers to proactively manage the impacts of extreme weather events. Australia has one of the most variable climates of any country in the world. Extreme weather events (such as heatwaves, frost and heavy rainfall) and climate variability have a huge impact on our agricultural production and income. An improved understanding of extreme events will allow farmers to make proactive management decisions on-farm to minimise the effects of these events on production, such as buying and selling livestock or fodder in line with longer term seasonal forecasts.

Chemicals

Agriculture relies on different types of chemicals for various purposes, such as fuel, pesticides, fertilisers and veterinary chemicals. They have brought long-term benefits by reducing the effects of weeds, pests and diseases on agricultural production. This has led to increased productivity, better quality produce, more competitive industries and improved environmental outcomes [12].

However, in using chemicals, there is a responsibility to protect the individuals using them and the environment from adverse effects including residues, groundwater and waterway contamination.

SPA supports the enhanced education of industry participants regarding the correct use of chemicals to avoid chemical residue issues.

Source: Meat & Livestock Australia

FOCUS AREA 3: ENVIRONMENT

PRIORITY 3.1 Improve natural resource management

Maintaining natural resources, including water, soil and vegetation, is fundamental to the success of the industry.

INDICATOR	VALUE	STATUS	SOURCE
3.1.1 Protecting soil resource			
3.1.1a Percentage of natural resource management regions achieving healthy groundcover thresholds	64.1%	★	CIBO Labs December 2022

Fractional ground cover is a key indicator of land condition and refers to pasture plants, native species, and plant and tree leaf litter that can protect the soil surface from erosion. Ground cover is also a good proxy for degree of biodiversity and magnitude of atmospheric carbon dioxide uptake and storage.

The SSF's Balance of Tree and Grass Cover satellite imagery dashboard allows discernment and evaluation of seasonal measures from sheep grazing regions. While the 30 years of satellite data expressed is continuous, the ground cover tracking for the SSF will be reported annually.

This year the metric was modified to report on the number of NRM regions across Australia meeting their target groundcover, relevant to their climatic conditions and topography. This change also ensures greater alignment with reporting in the ABSF.

As a baseline, it was decided that figures will be drawn from the summer seasonal data collection phase. In December 2022, 25 of 39 sheep-producing NRM regions were reaching their groundcover targets.

3.1.2 Conservation practices			
3.1.2a New metric to be determined	🔍		

The previously reported data for the percentage of sheep-producing land identified for conservation or protection purposes is no longer collected and reported by ABARES and ABS.

The SSF continues to work to identify a suitable alternative metric.

PRIORITY 3.2 Responsible environmental practices

Responsible environmental practices on-farm include use of chemicals and pest management including pest plants and animals. In processing, water use and waste minimisation are important issues. All of these elements must be managed appropriately to minimise harm to the environment.

INDICATOR	VALUE	STATUS	SOURCE
3.2.1 Responsible chemical use			
3.2.1a Percentage of producers who have attended a ChemCert course or similar	81.1%	●	National Producer Survey 2024

Independent training of producers on the safe and effective use of agricultural chemicals (e.g., ChemCert) is an important step in responsible chemical use.

The National Producer Survey reports that 81.1% of producers have attended a chemical training course. This was 0.9% less than the results reported in 2023.

Of the producers who had completed a chemical training course, 77% have ChemCert accreditation or hold a current ChemCert card.

INDICATOR	VALUE	STATUS	SOURCE
3.2.2 Efficient water use in processing			
3.2.2a Kilolitres of water used per tonne hot standard carcase weight (HSCW) when processing sheepmeat	7.2kL	★	AMPC Environmental Performance Review CSIRO 2022

This metric provides a measure of water usage by the Australian sheepmeat processing sector. The Australian Meat Processor Corporation (AMPC) reports water use and waste production from processing in its Environmental Performance Review (EPR).

This was the first time that sheep and cattle processing figures have been calculated separately in the review. AMPC has engaged CSIRO to conduct the EPR biennially with the next review to occur in FY2025.

3.2.3 Minimise waste in processing			
3.2.3a Kilograms of solid waste per tonne hot standard carcase weight (HSCW) when processing sheepmeat	29.8kg	★	AMPC Environmental Performance Review CSIRO 2022

This metric provides a measure of solid waste (organic and inorganic) produced by the Australian sheepmeat processing sector. The Australian Meat Processor Corporation (AMPC) reports water use and waste production from processing in its Environmental Performance Review (EPR).

This was the first time that sheep and cattle processing figures have been calculated separately in the review. AMPC has engaged CSIRO to conduct the EPR biennially with the next review to occur in FY2025.

PRIORITY 3.3 Encourage biodiversity

Biodiversity is increasingly highlighted by stakeholders as an important consideration in appropriate environmental management.

INDICATOR	VALUE	STATUS	SOURCE
3.3.1 Maintaining and increasing biodiversity			
3.3.1a Percentage of producers undertaking deliberate activities to measure, maintain or enhance biodiversity	72.6%	★	National Producer Survey 2024

This figure represents the percentage of producers who take steps to measure, maintain or enhance biodiversity on their property. The inclusion of this metric is an important first step for the SSF in reporting on biodiversity management practices on-farm.

The results indicate that 72.6% of producers surveyed through the National Producer Survey 2024 (n=1,268) undertake deliberate activities to measure, maintain or enhance biodiversity on their property.

Examples of these activities include groundcover management, minimum tillage and multi-species planting.

Furthermore, 6% of producers said they used remote sensing technologies or external assessment to track biodiversity indicators on their property.

FOCUS AREA 4: CLIMATE CHANGE

PRIORITY 4.1 Reduce net greenhouse gas emissions

Greenhouse gas emissions (GHGs) contribute to climate change and climate variability, including extreme weather events. Under *Red Meat 2030* and *Wool 2030*, sheep producers aim to be carbon neutral by 2030. Using renewable energy sources will help to reduce GHG emissions. Carbon sequestration and improving ewe reproductive rates will also play a role.

INDICATOR	VALUE	STATUS	SOURCE
4.1.1 Contribution of sheep production to greenhouse gas (GHG) emissions			
4.1.1a Net emissions: Mt of CO_2e generated by sheep industry (farm and sheepmeat processing)	8.94 Mt	●	MLA 2021
The reported figure is calculated using data from Australia's National Greenhouse Gas Inventory (NGGI) of national emissions, AR5 values for GWP100 and land use (LU) and land use change & forestry (LUCF). As most of the Australian wool is processed overseas, wool processing has not been included. The sheep industry's net emissions have decreased from 9.49 $MtCO_2e$ in 2020 to 8.94 $MtCO_2e$ in 2021.			
4.1.1b Emission intensity: kg of CO_2e emitted per kg liveweight (LW) when raising sheep	6.8kg	★	Integrity Ag 2020
A Life Cycle Assessment report estimated the emissions intensity of the Australian flock used for wool, sheepmeat production or live export for the year 2020.			
4.1.1c Emission intensity: kg of CO_2e emitted per kg greasy wool shorn	24.4kg	★	Integrity Ag 2020
A Life Cycle Assessment report estimated the emissions intensity of the Australian flock used for wool, sheepmeat production or live export for the year 2020.			
4.1.1d Emission intensity: kg of CO_2e emitted per tonne hot standard carcase weight (HSCW) when processing sheepmeat	364kg	★	AMPC Environmental Performance Review CSIRO 2022
This figure reports the emissions intensity of the Australian sheepmeat processing sector. The Australian Meat Processor Corporation (AMPC) reports emission intensity in its Environmental Performance Review (EPR). This was the first time that sheep and cattle processing figures have been calculated separately in the review. AMPC has engaged CSIRO to conduct the EPR biennially with the next review to occur in FY2025.			
4.1.1e Percentage of sheep producers who have measured GHG emissions for their enterprise using carbon accounting or another process	9.9%	●	National Producer Survey 2024
A carbon account is an initial step that producers can take to increase their carbon awareness and determine their net GHG emissions position. The National Producer Survey found that 9.9% of producers have estimated their greenhouse gas emissions for their enterprise in 2023, which is a 6.9% increase on the previous report (3%). Furthermore, 13.4% of producers had undertaken carbon neutral or carbon accounting training which was also an increase on previous figures (9%).			

INDICATOR	VALUE	STATUS	SOURCE
4.1.2 Renewable energy			
4.1.2a Percentage of producers who generate and use renewable energy	46.9%	●	National Producer Survey 2024

The National Producer Survey found that 46.9% of producers generate and use renewable energy. This is 3.1% less than the previous report.

Of the producers who generated and used renewable energy, 82% used solar energy without a battery and 5.5% used wind energy.

This metric may have declined due to the different producers surveyed as part of the National Producer Survey. Changing cohorts may mean that there could be more producers generating and using renewable energy in one year, and less in other years.

Updated Net GHG emissions from the Australian sheep industry

Annual emissions reports by MLA continue to be informed by the best available science and nationally maintained data [13]. GHGs attributed to the red meat industry (including sheep) are updated retrospectively if/when source data from the National Greenhouse Gas Inventory becomes available or is revised.

In 2021, emissions from farm dams and ponded pastures were introduced and back calculated. Refinements to emissions from land use (LU) and land use change & forestry (LUCF) and agricultural soils have also impacted modest revisions to historical emissions.

The below figures are inclusive of LULUCF.

YEAR	2018	2019	2020
Mt of CO_2e generated by sheep industry (farm and sheepmeat processing)	9.90 Mt	8.97 Mt	8.93 Mt

Emissions are attributed to the red meat industry based on animal numbers, feed intake, livestock processed and resource use. It is part of the industry's work in annually benchmarking its GHG footprint, which has been occurring since 2015.

How can Australian sheep producers and wool growers make a start on reducing their GHG emissions?

An important first step for producers is to create a carbon account to determine what their net GHG emissions position is, so they can identify strategies to reduce emissions and improve carbon storage on-farm.

What is carbon accounting?

Carbon accounting is the process producers can use to determine their annual net GHG emissions position. There are two main elements of a carbon account:

- Annual GHG emissions, which come from:
  - carbon dioxide from fossil fuels used for electricity, transport, and inputs such as fertiliser and supplementary feed
  - nitrous oxide from fertiliser application and livestock manure
  - enteric methane produced when ruminants digest food.
- Carbon stocks on-farm, which are stocks of carbon that have been removed from the atmosphere and stored in vegetation and soils.

Why is carbon accounting important?

Calculating baseline carbon emissions and stored carbon is an essential first step for producers who are considering opportunities arising from low or zero carbon branded products. A carbon account can be used in on-farm decision making and sets a benchmark to show progress over time. Just as financial accounting assists in financial decision making and reporting, carbon accounting aids decision making and reporting around how carbon is, or is not, used on-farm.

Resources on understanding carbon

- *Carbon in action* – MLA eLearning module
- *Carbon calculator* – MLA resource
- *CarbonEDGE training program* – MLA resource

PRIORITY 4.2 Adapt to a changing climate, including extreme weather events

Climate change is increasing the incidence of extreme weather events such as droughts, heatwaves, floods and fires. Extreme weather events have significant implications for animal welfare (e.g. mortality, transport), environmental impact and profitability.

INDICATOR	VALUE	STATUS	SOURCE
4.2.1 Response to a changing and variable climate			
4.2.1a Climate-adjusted Total Factor Productivity growth	0.1%		ABARES 1999-00 (base year) to 2021-22.

Total Factor Productivity (TFP) is expressed as average annual percentage growth over a given period and is relative to change from the base year. In this case, climate-adjusted TFP takes climatic activity into account and, year-on-year, will evaluate the change in productivity due to extreme climate events.

Climate-adjusted productivity aims to account for 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 an industry is increasing productivity despite the impacts of climate – in other words, it is adapting and demonstrating resilience to climate change.

As described by ABARES, Australian farmers face a wide range of risks, but they are particularly exposed to variability in climate and commodity prices. The most profitable years for farmers tend to be those with high rainfall and favourable prices, while the least profitable tend to be drought years with unfavourable prices. However, these relationships are complex with many other factors, such as changes in technology and farming practices, also influencing profits over time [14].

NB: This figure may include mixed farming enterprises.

Looking after our people, our customers and the community

Highly material topics · Safety

ABOUT THE MATERIAL TOPICS

Safety

People, whether farmers, workers, customers or community members, are agriculture's most important asset. However, agriculture is one of Australia's most dangerous industries to work in, making up 2.3% of the Australian workforce, but accounting for 20% of worker fatalities.

Serious injuries can be significantly reduced by ensuring that all on-farm workforce participants understand and commit to formal on-farm risk assessments, safety planning and training, induction obligations and legislative requirements in their state or territory. Safe and healthy workplaces and work processes protect people from injury and illness. Proactive focus and investment in safety is a foundation for cultural change.

WPA actively encourages woolgrowers to protect all farm workers, recognising that there are many types of farm labour, including family, full-time, part-time and casual employees or contract labour by eliminating hazards, ensuring all workers have the necessary skills to handle animals and equipment and closely supervising new and inexperienced workers.

FOCUS AREA 5: HEALTH AND SAFETY

PRIORITY 5.1 Improve industry safety culture

People, whether farmers, workers, customers or community members, are agriculture's most important asset. Agriculture is one of the most dangerous industries to work in due to the combination of hazards. Safe and healthy workplaces and work processes protect people from injury and illness. Proactive focus and investment in safety is a foundation for cultural change.

INDICATOR	VALUE	STATUS	SOURCE
5.1.1 Health and safety prevention and training			
5.1.1a Percentage of producers who have undertaken a WHS risk assessment	54.6%	★	National Producer Survey 2024

Serious injuries can be significantly reduced by ensuring that all on-farm workforce participants understand and commit to formal on-farm risk assessments, safety planning and training, induction obligations and legislative requirements in their state or territory.

The National Producer Survey 2024 found that 54.6% of producers have undertaken a WHS risk assessment on farm.

Less than half of producers (42.4%) have a WHS management plan for their property or induct workers in WHS obligations (48.6%).

INDICATOR		VALUE	STATUS	SOURCE
5.1.2 Number of deaths and serious injuries				
5.1.2a Number of fatalities in the sheep industry		26	●	SafeWork Australia 2018 - 2022

Fatality data includes all persons who were traumatically fatally injured, and whose injuries resulted from work activity or exposures, and whose injuries occurred in an incident that took place in Australian territories or territorial waters.

Fatalities data is derived from the Work-related Traumatic Injury Fatalities (TIF) database. 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 on-farm figure combines fatalities attributable to specialised sheep farming and sheep-beef cattle farming and is broken down as follows:

- Sheep farming (specialised): 10 worker fatalities
- Sheep-beef cattle farming: 14 worker fatalities
- Meat processing: 2 worker fatalities.

This number has reduced since the last reporting period.

5.1.2b Lost time injury frequency rate (number of claims per million hours worked)	Farming	10.9	★	SafeWork Australia 2021-22p
	Processing	19.7	★	SafeWork Australia 2021-22p

The 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 workday – which occurred in a given period.

The LTIFR is calculated across all livestock farms and meat processing facilities (irrespective of the species they produce or process). The calculator uses National Disability Services 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.

The 2021-22 data is preliminary (denoted by 'p'). Revisions in preliminary results are likely over future years as open claims are finalised.

PRIORITY 5.2 Improve our people's health

It is critical that the industry supports our people to look after their physical and mental health.

INDICATOR	VALUE	STATUS	SOURCE
5.2.1 Status of physical and mental health			
5.2.1a Global Life Satisfaction Index score of Australian sheep graziers	76.1	★	Regional Wellbeing Survey 2022-23

The Global Life Satisfaction Index score is calculated based on respondents rating their satisfaction with their 'life as a whole' on a scale from 'completely dissatisfied' (0) to 'completely satisfied' (10). Scores are multiplied by 10 to give an index of 0 to 100.

It encapsulates people's satisfaction with their standard of living, health, what they are achieving in life, personal relationships, safety, feeling part of their community and future security.

Measuring feelings can be very subjective but is nonetheless a useful complement to more objective data when comparing quality of life across countries. This aligns with accepted OECD measures and reporting.

Reported for the first time in the SSF, the Global Life Satisfaction Index for Australian sheep graziers was similar to that of beef graziers (74.3) and higher than that of Australia overall (69.4).

FOCUS AREA 6: CAPACITY BUILDING

PRIORITY 6.1 Support and grow our workforce

To be sustainable, the sheep industry needs access to people with the right skills to manage and operate businesses, and to look after those people. Access to training and continuous improvement is required to upskill the workforce. Succession planning supports the future workforce.

INDICATOR		VALUE	STATUS	SOURCE
6.1.1 Capacity of workforce				
6.1.1a Percentage of on-farm industry participants who have completed further education		45%	★	ABS 2021 Census

This data is taken from the Australian Census conducted in 2021 for those who are employed in sheep farming and shearing services across the 40 sheep grazing NRM regions of Australia.

Further education is defined as training designed for skilled work outside secondary school. It includes certificate III, IV, diploma and advanced diploma, bachelor's degree, graduate certificate, graduate diploma, and postgraduate degrees.

6.1.2 Appropriate working conditions				
6.1.2a Federal award rate ratio		1.14:1	●	Fair Work Ombudsman Pastoral award Casual national minimum wage FY2024

The federal award rate ratio compares the shed hand hourly casual rate with more than 65 days' work experience ($33.11) from the national pastoral award, with the national minimum hourly casual rate ($23.23 minimum wage + 25% casual loading) per hour.

The shed hand rate is as per the federal pastoral award and is considered the most utilised on-farm payment rate. This ratio reduced compared to FY2023 (1.23:1) bringing the pastoral award rate closer to the casual national minimum wage.

6.1.3 Availability of workforce				
6.1.3a Percentage of producers who find labour availability to be a major issue in their operation	General labour	42.0%	●	National Producer Survey 2024
	Shearing labour	35.3%	●	

The National Producer Survey asks producers to rate the extent to which availability of general labour/shearing labour is an issue for their sheep operation.

In 2023, 42.0% of sheep producers reported major issues with finding general labour and 35.3% with shearing labour. This was a 7% increase for general and a 3.5% decrease for shearing labour since the last survey.

Fewer than half of producers reported no issues with general labour availability (37.9%) or shearers (43.7%).

INDICATOR	VALUE	STATUS	SOURCE
6.1.3 Availability of workforce			
6.1.3b Level of workforce availability among processors			AMPC

The SSF has committed to reporting data on the availability of workforce among sheep and lamb processors using an aggregated industry-level database via AMPC's Data Portal, to which Australian processors voluntarily supply information. It is likely that information will become available in FY2025.

6.1.4 Extent of succession planning in the industry			
6.1.4a Percentage of producers with a formal succession plan in place	19.9%	●	National Producer Survey 2024

The National Producer Survey found that succession preparedness varied among respondents. Nationally, 33.2% are yet to commence any discussion or planning while 28.2% have begun discussions with the family but have not reached an agreed outcome. Only 19.9% report having a formal succession plan in place. This figure has declined slightly from 21% as reported in the *2023 Annual Report*.

Succession planning is often a complex issue for farm businesses. Family situations are unique and meeting the expectations of all members can be difficult. Furthermore, the decisions to be made about assets and liabilities can be triggered by unexpected and traumatic events outside the owner's control, such as divorce or death.

PRIORITY 6.2 Encourage workforce diversity

A diverse workforce brings a range of skills and perspectives to the industry and assists in attraction and retention of workers.

INDICATOR		VALUE	STATUS	SOURCE
6.2.1 Extent of workforce diversity				
6.2.1a Age distribution of those who are employed in sheep farming and shearing services	Aged 15-34	20%	★	ABS 2021 Census
	Aged 35-54	32%		
	Aged 55-74	40%		
	Aged 75-100	7%		

This data is taken from the Australian Census conducted in 2021 for those who are employed in sheep farming and shearing services across the 40 sheep grazing NRM regions of Australia.

The sheep industry skews strongly towards an older age profile, with two in five aged between 55 and 74. For the Australian population, 55-74-year-old people comprise one in four. Of concern is that the industry under-indexes on younger people aged 15-34 at 20% where the national figure is 32%.

6.2.1b Gender breakdown of those who are employed in sheep farming and shearing services	Men	72%	★	ABS 2021 Census
	Women	28%		

This data is taken from the Australian Census conducted in 2021 for those who are employed in sheep farming and shearing services across the 40 sheep grazing NRM regions of Australia.

The sheep industry is strongly male, with fewer than three in 10 women.

INDICATOR	VALUE	STATUS	SOURCE
6.2.1 Extent of workforce diversity			
6.2.1c Percentage of Indigenous and Torres Strait Islanders who are employed in sheep farming and shearing services	1.5%	★	ABS 2021 Census
This data is taken from the Australian Census conducted in 2021 for those who are employed in sheep farming and shearing services across Australia. Indigenous and Torres Strait Islanders represent only 1.5% of those employed in sheep farming and shearing services.			
6.2.1d Percentage who speak a Language Other Than English (LOTE) in those who are employed in sheep farming and shearing services	2%	★	ABS 2021 Census
This data is taken from the Australian Census conducted in 2021 for those who are employed in sheep farming and shearing services across Australia. Two percent of people employed in sheep farming and shearing services speak a language other than English (LOTE).			

FOCUS AREA 7: CONTRIBUTION TO COMMUNITY

PRIORITY 7.1 Enhance community trust

Community trust in farmers is high and is critical to maintain. Reputation underpins the industry's social licence. The sheep industry makes a significant contribution to Australian society — beyond its economic contribution. The SSF will help to demonstrate this.

INDICATOR	VALUE	STATUS	SOURCE
7.1.1 Community perceptions of the sheep industry			
7.1.1a Percentage of Australians who believe that Australian lambs are farmed and raised in a humane manner	54%	●	MLA Consumer Sentiment Study 2023
MLA's Consumer Sentiment Research has been ongoing since 2010. Currently conducted by Pollinate, it tracks community sentiment, trust and perceptions towards the red meat industry. The 15-minute online survey primarily seeks to engage primary household grocery buyers and meal-preppers aged 18-64, living in metropolitan Australia. This figure has held steady since the last report (55%).			
7.1.1b Percentage of respondents who believe wool is more environmentally friendly than other fibres	52%	★	AWI 2022 Global Brand Tracking Study
The AWI Global Brand Tracking design was modified in 2022 to accommodate changes in global market dynamics. The Indian market was removed from the study, and the Australian market was included. These changes mean that the 2022 figure is not comparable with data points from 2020 and 2021. For these reasons, this datum is classed as benchmark. The survey is repeated every two years and will next be conducted in early 2025.			

PRIORITY 7.2 Deliver products that customers demand

Lean red meat is recommended in a healthy diet because it is an excellent source of protein, iron and zinc — essential nutrients important for good health. Wool is a natural, renewable and biodegradable fibre with numerous human health benefits. These qualities are integral in providing a sustainable fibre choice to consumers. Strong consumer demand for Australian sheepmeat and wool is a key success factor for the industry.

INDICATOR	VALUE	STATUS	SOURCE
7.2.1 Consumer perceptions of product quality			
7.2.1a Percentage of Australians who believe that Australian lamb is worth paying a bit more for	27%	●	MLA Domestic Consumer Tracker 2023
The MLA Domestic Tracker is conducted by Kantar. The reported figure is the Moving Annual Total (MAT) for about 100 nationally representative respondents surveyed weekly over 12 months. This year the measure moved slightly from 2022 (25%) but has generally been holding slightly. It is hypothesised that this change may be attributed in part to a slight reduction in lamb prices over 2023, making it more affordable for the consumer.			
7.2.1b Willingness to pay (WTP) for 100% wool garments	52%	★	AWI 2022 Global Brand Tracking Survey
The AWI Global Brand Tracking design was modified in 2022 to accommodate changes in global market dynamics. The Indian market was removed from the study, and the Australian market was included. These changes mean that the 2022 figure is not comparable with data points from 2020 and 2021. For these reasons, this datum is classed as benchmark. The survey is repeated every two years and will next be conducted in early 2025.			

Ensuring a financially resilient industry

Highly material topics · Food safety and quality

ABOUT THE MATERIAL TOPICS

Food safety and quality

The Australian sheep industry works hard to ensure all aspects of food safety, quality, product integrity, and traceability are consistent with its high standards, to protect Australia's reputation for high-quality meat production.

It does so through the Livestock Production Assurance (LPA) program which provides evidence of livestock history and on-farm practices when transferring animals through the value chain. The requirements of LPA underpin market access for Australian red meat, providing customer assurance around food safety and ethical production.

An LPA National Vendor Declaration (NVD) combines with the National Livestock Identification System (NLIS) to provide evidence of the food safety status of every animal as it moves through the supply chain. The LPA NVD communicates the food safety and treatment status of every animal every time it moves between properties, to saleyards or processors. NVDs are key to Australian red meat traceability and market access, and act as a legal document of movement throughout the value chain. All declarations must be supported by accurate farm records. This is an assurance that the meat has been produced safely and ethically on-farm and meets biosecurity requirements.

FOCUS AREA 8: PROFITABILITY, PRODUCTIVITY AND INVESTMENT

PRIORITY 8.1 Maintain or increase industry profitability

Profitability underpins the success of the sheep industry — as well as individual businesses.

INDICATOR		VALUE	STATUS	SOURCE
8.1.1 Rate of return				
8.1.1a Rate of return on capital, including and excluding capital appreciation, using a five-year rolling average	Including	9.7%	★	ABARES FY2019 – FY2023
	Excluding	0.8%	★	

The rate of return on capital has been calculated using data obtained from the annual Australian Agricultural and Grazing Industries Survey (AAGIS). The figures provided represent the average per farm.

The metric was updated this year to adopt a five-year rolling average as it supports a longer-term view of industry's profitability and investment and minimises influence from short-term industry or market volatility. For context, past values include:

	INCLUDING CAPITAL APPRECIATION	EXCLUDING CAPITAL APPRECIATION
FY2017 to FY2021	10.4%	1.0%
FY2018 to FY2022	11.1%	1.0%

PRIORITY 8.2 Maintain or increase contribution to the Australian economy

The industry seeks to demonstrate the value of the industry to stakeholders, including its contribution to the National Farmers' Federation (NFF) target of a $100 billion agriculture sector by 2030.

INDICATOR	VALUE	STATUS	SOURCE
8.2.1 Contribution to the Australian economy			
8.2.1a Gross value (AUD) of agricultural production for sheepmeat	$4.553b	●	ABS FY2023

The last reported gross value of Australian sheepmeat production was for FY2021. Since then, data has become available to FY2023. Since FY2021, the gross value of sheepmeat production has increased 2.9%.

FY2021	FY2022	FY2023
$4.425b	$4.845b	$4.553b

8.2.1b Gross value (AUD) of agricultural production for greasy wool	$3.145b	●	ABS FY2023

The last reported gross value of Australian wool production was for FY2021. Since then, data has become available to FY2023. Since FY2021, the gross value of wool production has increased 18.9%.

FY2021	FY2022	FY2023
$2.645b	$3.230b	$3.145b

PRIORITY 8.3 Increase productivity

Improving farm productivity contributes to profitability by allowing farmers to produce more output using fewer inputs.

INDICATOR	VALUE	STATUS	SOURCE
8.3.1 Productivity			
8.3.1a Total factor productivity average annual growth rate	0.0%	●	ABARES 1999-2000 (base year) to 2021-22

Total factor productivity (TFP) is expressed as average annual growth (%) over a given period and is relative to change from the base year.

Unadjusted TFP annual growth rate (0.0%) is equal to the last reporting period.

NB: This figure may include mixed farming enterprises.

8.3.1b Percentage change in the Sustainable Merino (SM) index	2.1%	★	MERINOSELECT Database MLA 2024 Analysis

Selection indexes incorporate economically important traits into a single value so that genetic progress across a range of important traits can be made in balance. Tracking changes in industry indexes over times provides insights on the genetic progress of the Merino flock.

The new Sustainable Merino index reported here has replaced the previously reported Dual-Purpose Plus (DP+) index which was phased out in May 2024. The index focuses on genetic improvement of fleece weight, growth, lean meat yield and reproduction in combination with reducing breech wrinkle, dag and worm egg count.

This data reports the percentage change in the lambs born between 2021 and 2022. The Sustainable Merino index increased from 129.7 to 132.4, or a 2.1% increase.

PRIORITY 8.4 Encourage innovation

Innovation supports sheep businesses' ability to respond to challenges and opportunities. It can preserve or increase margins and foster competitive advantage.

INDICATOR		VALUE	STATUS	SOURCE
8.4.1 Investment in research, development and adoption (RDA)				
8.4.1a AUD invested in research, development and adoption (RDA) per annum	Sheepmeat	$20.5m	🔴	MLA FY2023
	Wool	$33.2m	🟢	AWI FY2023

The levies and matched funds invested in research, development and adoption activities by the Australian sheepmeat and wool Research and Development Corporations.

Since the last reporting period, investment in sheepmeat RDA has fallen by 6% and investment in wool RDA has grown by 2%.

FOCUS AREA 9: MARKET ACCESS

PRIORITY 9.1 Ensure positive market positioning and access

Market position underpins demand for Australian sheepmeat and wool. Based on reputation, it links to market access and price.

INDICATOR	VALUE	STATUS	SOURCE
9.1.1 Value of product			
9.1.1a Australian value share (%) of sheepmeat exports	46.0%	🟠	MLA 2023

A value-based expression of Australia's share of global sheepmeat exports. In 2023, Australia exported more than 535,000 tonnes of sheepmeat (shipped weight). In comparison to other producer countries, New Zealand exported 383,000 tonnes and the United Kingdom exported 84,000 tonnes.

Australia's value share for sheepmeat exports increased slightly by 1%.

9.1.1b Australian value share (%) of greasy wool exports	70.2%	🔴	AWI 2023

A value-based expression of Australia's share of global greasy wool exports. In 2023, Australia exported more than 325,000 tonnes of wool. In comparison to other producer countries, South Africa exported 41,000 tonnes and New Zealand 23,600 tonnes.

Australia's value share for greasy wool exports decreased by 5.3% compared to last year.

INDICATOR	VALUE	STATUS	SOURCE
9.1.2 Access to markets			
9.1.2a Cumulative alleviation (from 2020) of red meat non-tariff barriers	$474m	★	MLA FY2023

Non-tariff barriers (NTBs) such as the use of import restrictions, labelling, failure to grant export clearance or unnecessary sanitary rules can impose significant delays and additional costs on Australian sheepmeat exports.

Alleviation of NTBs is therefore critical in improving international competitiveness. Recent confirmation of the harmonisation of the extensions to shelf-life for chilled sheepmeat across several Middle East destinations is an example of the benefits of removing an NTB impact.

This indicator was changed this year to align with the *Red Meat 2030* success factor of reducing NTBs by $1 billion by 2030. For comparison, the cumulative alleviation of red meat non-tariff barriers increased from $380m in FY2022 and $290m in FY2021.

NB: Some NTB alleviation value incorporates both sheepmeat and beef.

9.1.2b Percentage value share of Australian sheepmeat, sheep offal and live sheep exports covered by one or more preferential trade agreements (PTA)	71.7%	●	MLA FY2023
9.1.2c Percentage value share of Australian greasy wool exports covered by one or more preferential trade agreements (PTA)	90.0%	●	AWI FY2023

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 export markets. The percentage of preferential coverage fluctuates according to export destination volume/value in any particular year.

The sheepmeat indicator (9.1.2b) aligns with the *Red Meat 2030* success factor of having the majority of exports covered by a preferential trade agreement.

This year the metric declined by 3.8% for sheepmeat. Considering the commodities separately, 73% of sheepmeat and offal are covered by preferential trade agreements, whereas as the equivalent figure for live sheep exports alone is 10%.

The Australian value share for greasy wool exports increased by 6.9% over the period.

No new FTAs were secured during FY2023. However, two FTAs are in the pipeline, which if secured, will raise preferential access coverage. These involve the FTA negotiations with both the European Union and the United Arab Emirates.

PRIORITY 9.2 Guarantee product integrity and safety

Product integrity and safety are critical to meeting customers' expectations. These are underpinned by Australia's integrity systems for sheepmeat and wool.

INDICATOR	VALUE	STATUS	SOURCE
9.2.1 Compliance with product integrity and safety standards			
9.2.1a Proportion (%) of the wool clip that is produced with a voluntary product integrity scheme	13.0%	●	AWEX 2022/23

Voluntary product integrity schemes include Authentico, ZQ Merino, Better Choices, Responsible Wool Standard (RWS), EU-Ecolabel, SustainaWOOL and others. The figure is calculated using first-hand offered bales with P and D Certificates only. It excludes rehandled wool such as bulk-class and interlots.

The percentage of the clip associated with one of these schemes has slightly declined since last year (by 0.9%).

INDICATOR	VALUE	STATUS	SOURCE
9.2.1 Compliance with product integrity and safety standards			
9.2.1b Compliance rates (%) for chemical residues in sheepmeat	99.91%	●	DAFF National Residues Survey FY2023

The National Residue Survey (NRS) within the Department of Agriculture, Fisheries and Forestry (DAFF) monitors residues in animal products through various random and targeted testing programs.

In FY2023, a total of 2,309 samples were collected for analysis. The results highlight excellent compliance with Australian standards and demonstrate the strong commitment of the industry to good agricultural practice.

The consistently high compliance rates help maintain the reputation and integrity of Australian sheep in domestic and international markets.

[1]*The full list of product integrity schemes for the 2022/23 season is available from AWEX.*

Appendices

APPENDIX 1: REPORTING PRINCIPLES

A set of key reporting principles guide the development and implementation of the Framework.

Transparency

The industry will provide an open and honest picture of practice and performance (including improvement, no change or decline), using the most appropriate and robust data available.

Accountability

The industry is accountable for its practices and performance as demonstrated via the Framework and is committed to continuous improvement.

Inclusivity

The constructive views and feedback from industry (including producers, processors and other value chain participants), customers, retailers, special interest groups, government and investors as to how industry can improve practice and performance are valued and considered.

Credibility

Decisions on Framework design will be made with consideration of topics identified as important or material by the industry and its stakeholders. Reporting against Framework priorities and indicators is based on robust evidence.

Practicality

The Framework works within the industry's scope of influence to make changes that encourage improvement and adoption of best practice. The indicators can, or have the potential to be, monitored and managed. The Framework should harmonise with other relevant industry strategies to avoid duplication or contradiction.

Relevance

The Framework's priorities and indicators are aligned with topics identified as important or material to the industry and its stakeholders and are within the industry's scope of influence. The Framework will adapt over time to remain relevant. It will be useful and highlight areas for improvement.

APPENDIX 2: GOVERNANCE

The Board

The SSF Board is comprised of an independent Chair plus six other members, three each representing SPA and WPA. This includes the Chief Executive Officers (CEOs) of both organisations. Excluding the CEOs and Independent Chair, all members are non-executive directors of their representative organisations.

All members of the SSF Board, excluding the CEOs of SPA and WPA, are eligible to sit on the committee for a maximum of three consecutive 24-month (2 year) terms.

The Chair of the Steering Group also attends Board meetings to support information sharing and provide recommendations made by the Steering Group. A representative from each of MLA and AWI attends Board meetings but does not hold voting rights.

The SSF Board met quarterly throughout the financial year. As well as discussing emerging issues for the Australian sheepmeat and wool industries, the Board's primary focus this year was on promoting ongoing engagement with the Framework and discussion of the Framework's second materiality assessment.

The *Terms of Reference for the Board* is available on the SSF website. It includes information on the appointment of the Chair, quorum requirements, decision-marking and how conflicts of interest are managed by the Board.

The Board is responsible for reviewing and approving the release of the Annual Report, including this edition. The Board, as well as the Steering Group, has been actively involved in the SSF's second materiality assessment.

Sustainability Steering Group

The SSG comprises the Chair and between six to eight committee members.

Members of the Sustainability Steering Group (SSG) are identified through an Expressions of Interest process, or through direct nomination. All members of the SSG are endorsed by the Board. The Board oversees the skills and representative composition of the SSG to ensure that it effectively represents various sheep-producing regions and stakeholder groups throughout the wool and meat value chain. Further information on the members' skills and qualifications are available on the SSF website.

Members of the Steering Group are eligible to sit on the committee for a maximum of three consecutive 12-month terms. A representative from each of MLA and AWI attends SSG meetings but does not hold voting rights.

The SSG is accountable to the Board and seeks its endorsement on all major recommendations related to the SSF.

The SSG met five times throughout the financial year. As well as discussing emerging issues for the Australian sheepmeat and wool industries, the SSG's focus this year was the Framework's second materiality assessment, addressing data gaps within the Framework and improving the format of the SSF's reporting, including ensuring alignment with the Global Reporting Initiative (GRI).

The *Terms of Reference for the Steering Group* is available on the SSF website. It includes information on the appointment of the Chair, quorum requirements, decision-marking and how conflicts of interest are managed.

SSG members also participate in professional development opportunities throughout the year to advance individual understanding and improve the collective knowledge of the Committee on sustainability-related issues and reporting. Examples of these activities in 2024 included:

- Two members completed the MicroCert in Sustainable Sourcing in Food and Fibre from University of Melbourne.
- One member completed the Carbon Neutral Agriculture course through the University of Melbourne.

About the industry bodies

Meat & Livestock Australia (MLA) is the declared industry marketing and research body and and is a public company limited by guarantee. MLA delivers marketing, research and development on behalf of cattle, sheep and goat levy payers through five business units and two subsidiary companies. MLA is headquartered in Sydney, Australia but also operates several international offices.

Australian Wool Innovation (AWI) is a not-for-profit enterprise that conducts research, development and marketing along the worldwide supply chain for Australian wool on behalf of about 60,000 woolgrowers that principally fund the company. It is headquartered in Sydney, Australia. The Woolmark Company is the marketing subsidiary of AWI and has 16 offices around the world in key markets for wool.

Neither MLA nor AWI engage in agri-political activities. Responsibility for policy and advocacy lies with the relevant peak industry councils.

APPENDIX 3: STAKEHOLDER CONSULTATION

Establishment of the Framework

Comprehensive engagement with stakeholders was required to help build a SSF that is widely supported by stakeholders and fit for purpose. The consultation approach was based on the principles of the International Association of Public Participation (IAP2). The approach was further informed by the AA1000 Stakeholder Engagement Standard (AA1000SES). This is a broad framework used in the assessment, design, implementation and communication of quality stakeholder engagement.

Further information on this process can be found on the *SSF website*.

Consultative Committee Forum

The SSF's second Consultative Committee Forum was held in October 2023 in Melbourne. The event was attended by more than 50 people and included representatives from Australian and overseas retailers, banks, non-government organisations, agribusiness, researchers, government, policy organisations and industry groups.

The purpose of the 2023 event was to:

- provide updates from the 2023 Annual Report
- consult stakeholders about emerging topics concerning the sustainability of the sheep and wool industry for input into its materiality assessment
- provide the SSG with more information to better implement and enable continuous improvement of the SSF.

The following organisations were represented at the event (independent of those represented by members of the Board and Steering Committee):

- AAM Investment Group
- Animal Health Australia
- ANZ
- Australian Association of Stud Merino Breeders
- Australian Beef Sustainability Framework
- Australian Livestock Exporters' Council
- Australian Meat Industry Council
- Australian Veterinary Association
- Australian Wool Innovation
- Australian Wool Testing Authority Limited
- Coles
- LiveCorp
- Livestock SA
- Meat & Livestock Australia
- NAB
- National Farmers' Federation
- NSW Farmers
- Nutrien Ag Solutions
- RSPCA
- Sheep Producers Australia
- Thomas Foods International
- Trust Provenance
- WA Farmers
- WA Livestock Research Council
- WoolProducers Australia

Industry Forum

The 2024 SSF Industry Forum was held on in March in Sydney. The focus for the event was to:

- facilitate key discussions around the awareness and use of metrics identified as areas of improvement in the 2023 Annual Report
- provide the results from the SSF's second materiality assessment
- provide an update on the SSF's progress against its FY2022-24 Strategic Plan.

The event was attended by more than 40 representatives from the following organisations (independent of those represented by members of the Board and Steering Committee):

- AgForce Queensland
- Animal Health Australia
- AUS-MEAT
- Australian Beef Sustainability Framework
- Australian Wool Exchange
- Australian Wool Innovation
- Australian Wool Testing Authority Limited
- CSIRO
- LiveCorp
- Meat & Livestock Australia
- MerinoLink
- Red Meat Advisory Council
- WA Farmers
- WoolProducers Australia

Expert working groups

Other expert working groups are convened when necessary to support the SSF with specialist or technical advice.

A specialist working group was convened in 2024 to support the SSF's second materiality assessment. This included representatives from MLA, AWI and the Steering Group, and on occasion a limited number of independent representatives from throughout the sheep and wool supply chain to inform decisions made throughout this project.

APPENDIX 4: RESTATEMENTS OF INFORMATION

Following publication of the *2023 Annual Report*, the SSF made some minor changes to improve the clarity of the report. For transparency, the changes made were:

1.1.1a Percentage of producers who mules their flock

Clarified that the figures reported are for ewe lambs only and reflect on-farm practice for the 2021 calendar year.

1.1.2a Percentage of producers who use appropriate pain management at mulesing

The commentary was amended to note that several products which contain the non-steroidal anti-inflammatory drug meloxicam are also registered for pain management for mulesing.

1.1.2b Percentage of producers who use appropriate pain management at castration

The commentary was amended to note that a registered product containing meloxicam is appropriate to use for castration using the knife method.

In addition, the SSF notes the following corrections to its reporting from 2023:

3.1.1a Percentage of sheep grazing land achieving 50% groundcover

The SSF reviewed its method of derivation of this metric. In doing so, it became apparent that the area being considered was not as representative of total sheep-producing land as could be possible. Therefore, the Framework has revised its calculations for its past reporting, with the updated figures provided below.

	2022	2023
Previously reported	63.4% (December 2020)	62.2% (December 2021)
Updated calculation	63.8% (December 2020)	68.3% (December 2021)

4.1.1a Net emissions: Mt of CO2e generated by sheep industry (farm and sheepmeat processing)

Annual emissions reports by MLA continue to be informed by the best available science and nationally maintained data [13]. GHGs attributed to the red meat industry (including sheep) are updated retrospectively if/when source data from the National Greenhouse Gas Inventory becomes available or is revised.

In 2021, emissions from farm dams and ponded pastures were introduced and back calculated. Refinements to emissions from land use (LU) and land use change & forestry (LUCF) and agricultural soils have also impacted modest revisions to historical emissions.

The historical emissions figures have been revised in the following manner and incorporate LULUCF.

YEAR	2018	2019	2020
Mt of CO_2e generated by sheep industry (farm and sheepmeat processing)	9.90 Mt	8.97 Mt	8.93 Mt

6.1.2a Federal award rate ratio

The commentary reported alongside this indicator incorrectly reported the minimum award hourly casual rate. Where previously reported as '$26.73 + 25%' it should be $21.38 + 25% which equals $26.73.

On-farm Insights Report 2022

Some changes were also made to the *On-Farm Insights Report* from the National Producer Survey, published in October 2022. For transparency, the changes made were:

Page 14 – Graph showing the proportion of male lambs castrated with pain management

The image previously showed that 42% of producers used appropriate pain management. However, the figure reported in the 2023 Annual Report was 12%.

This is because it is calculated from a base of producers who use any pain management at castration. In essence, 42% of 29% of producers using pain management equals 12% that are using appropriate pain management. The image was updated to reflect this.

APPENDIX 5: FULL LIST OF MATERIAL TOPICS AND SCOPES

Material topics reflect a sector's significant economic, environmental, and social impacts, or substantively influence the assessments and decisions of stakeholders.

The topics and scopes below were identified and ranked during an independent materiality assessment undertaken to inform development of the Framework. They form the basis of the Australian sheep industry's materiality matrix.

In line with good practice, the material topics for the SSF were reviewed in FY2024. These will come be implemented in the 2025 Annual Report.

MATERIAL TOPIC	SCOPE
Highly material	
Animal husbandry and handling	Animal management and handling practices including shearing, mulesing, lamb marking, use of pain management and antimicrobials, euthanasia on-farm and slaughter practices at processing. Treatment and compliance with regulations and industry guidance on-farm, in transit and at destination.
Animal wellbeing and welfare	Animal welfare including access to food and water, provision of shelter and space, management of disease, and lamb survivability on-farm, in transit and at destination.
Biodiversity	Vegetation and land clearing, forestation and carbon sequestration, management of invasive species, the protection of native plant and animal species, genetic diversity, natural ecosystems and ecosystem services.
Water security	Water withdrawal (extraction) and consumption, and responses to water scarcity.
Greenhouse gas emissions	Scope 1, 2 and 3 emissions and mitigation of emissions in the medium and longer term.
Soil health and pasture management	Soil nutrient and sediment loss, erosion and pasture management, soil carbon. Water quality, water stewardship, waterway management, water re-use, wastewater treatment and discharges to watercourses.
Chemicals	Use of fertilisers, herbicides and pesticides on-farm, including withholding periods and the management of restricted substances and hazardous chemicals on-farm and in processing.
Safety	A safe work environment for workers including farm owners, direct employees, seasonal workers and contractors.
Biosecurity	Managing the risk of transmission of infectious diseases, invasive pests or weeds
Food safety and quality	All aspects of food safety, quality, product integrity and compliance with standards.
Material	
Labour standards, human rights and employment	Labour practices and decent work for all workers including freedom of association and freedom from modern slavery. Protection of human rights across the workforce including non-discrimination, diversity and indigenous employment.
Human health and nutrition	Nutrition and food security including access to safe, sufficient and nutritious food.

MATERIAL TOPIC	SCOPE
Material	
Livelihoods	Productivity, profitability, market access, critical mass in processing, and equitable creation of value across the industry value chain.
Adaptation and extreme weather events	Responding to and preparing for extreme weather and events such as droughts, floods and fires — expected to increase with climate change.
Waste	Circular management of multiple solid and liquid waste streams including fibre recovery, food waste, packaging and trade waste.
Occupational health	Healthy working conditions for all workers and farm owners including mental health, occupational illnesses and exposure to chemicals.
Responsible sourcing	Sourcing of raw materials, including traceability and certifications and compliance with accepted standards, including sustainability-related standards and verification.
Important	
Economic contribution	Industry contribution to national and regional development through export income and employment.
Energy	Energy consumption, resource efficiency and the use of renewable energy.
Feed sourcing	Sourcing of animal feed and associated impacts of feed production (e.g. water stress, vegetation removal or labour standards).
Access to labour	Access to people with the appropriate skills, knowledge, training and experience to perform the activities needed to run sheep industry businesses, including modernisation skills.

APPENDIX 6: GRI CONTENT INDEX

Statement of use	Meat & Livestock Australia and Australian Wool Innovation have prepared the information cited in this GRI content index, on behalf of Sheep Producers Australia and WoolProducers Australia (as the parties responsible for the Sheep Sustainability Framework), for the period 1 July 2023 to 30 June 2024 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021
Applicable GRI Sector Standard(s)	GRI 13: Agriculture, Aquaculture and Fishing Sectors 2022

GRI STANDARD	DISCLOSURE	LOCATION	SECTOR STANDARD
General disclosures			
GRI 2: General Disclosures 2021	2-1: Organisational details		*Sheep Producers Australia* *WoolProducers Australia* *Meat & Livestock Australia* *Australian Wool Innovation*
	2-3: Reporting period, frequency and contact point	Page 3	
	2-4: Restatements of information	Page 58	
	2-5: External assurance	Page 3	
	2-6: Activities, value chain and other business relationships	Pages 5-6, 14-15	
	2-7a: Employees	Pages 15, 47	
	2-9 a,b,c (i), (ii), (iv), (v): Governance structure and composition	Pages 55-56	*Sheep Producers Australia* *WoolProducers Australia* *Terms of Reference – Board* *Terms of Reference – Steering Group*
	2-10: Nomination and selection of the highest governance body	Pages 55-56	*Terms of Reference – Board* *Terms of Reference – Steering Group*
	2-11: Chair of the highest governance body	Pages 55-56	*Terms of Reference – Board* *Terms of Reference – Steering Group*
	2-14: Role of the highest governance body in sustainability reporting	Pages 55-56	*Terms of Reference – Board* *Terms of Reference – Steering Group*
	2-15: Conflicts of interest	Pages 55-56	*Terms of Reference – Board* *Terms of Reference – Steering Group*

GRI STANDARD	DISCLOSURE	LOCATION		SECTOR STANDARD
General disclosures				
	2-17: Collective knowledge of the highest governance body	Pages 55-56	*Terms of Reference – Board* *Terms of Reference – Steering Group*	
	2-22: Statement on sustainable development strategy	Pages 5-6	*SSF Strategic Plan FY22-FY2024*	
	2-29: Approach to stakeholder engagement	Pages 18, 23, 57	*Three-Step Engagement Process*	
Material topics				
GRI 3: Material Topics 2021	3-1: Process to determine material topics	Page 21		
	3-2: List of material topics	Pages 60-61	*Sheep Sustainability Framework – Inaugural Report*	
Emissions				
GRI 3: Material Topics 2021	3-3 c, d, e Management of material topics	Page 37	*CN30*	13.1.1
GRI 305: Emissions 2016	305-4 a,b,d GHG emissions intensity	Page 41	*2021 Greenhouse gas footprint of the red meat industry* *Life Cycle Assessment of the Australian sheep industry* *AMPC Environmental Performance Review 2022*	13.1.5
	305-5 a. Reduction of GHG emissions		*CN30*	13.1.6
Biodiversity				
GRI 3: Material Topics 2021	3-3: c,d,e Management of material topics	Page 37	*Biodiversity and vegetation*	13.3.1
Soil health				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Pages 37-38, 39	*Healthy fertile soils*	13.5.1
Pesticides use				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Page 38, 39	*National Residue Survey*	13.6.1
Water and effluents				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Page 38		13.7.1

GRI STANDARD	DISCLOSURE	LOCATION		SECTOR STANDARD
Food safety				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Page 50		13.10.1
GRI 416: Customer Health and Safety 2016	416-1: Assessment of the health and safety impacts of production and service categories	Page 54	*National Residue Survey*	13.10.2
Animal health and welfare				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Pages 29, 30-36	National Sheep Producer Survey 2024 *Animal health & welfare*	13.11.1
GRI 13: Agriculture, Aquaculture and Fishing Sectors 2022	13.11.2 Report the percentage of production volume certified to third-party animal health and welfare standards and list these standards.	Pages 34, 36	*NSQA* *ESCAS* *AAWCS*	3.11.2
Occupational health and safety				
GRI 3: Material Topics 2021	3-3 c,d,e: Management of material topics	Page 44		13.19.1
GRI 403: Occupational Health and Safety 2018	403-9 a(i), (iii), e: Work-related injuries	Page 45		13.19.10

APPENDIX 7: GLOSSARY

TERM	EXPLANATION
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.
ABARES	Australian Bureau of Agricultural and Resource Economics and Sciences.
ABS	Australian Bureau of Statistics.
ABSF	Australian Beef Sustainability Framework.
AMPC	Australian Meat Processor Corporation. The rural Research and Development Corporation that supports the red meat processing industry throughout Australia.
AWI	Australian Wool Innovation. The rural Research and Development Corporation responsible for supporting woolgrowers throughout Australia.
Carbon sequestration	A process of capturing and storing atmospheric carbon dioxide, which has the potential to mitigate climate change.
Castration	Removal of the testicles of a male sheep by either surgical or non-surgical methods. This procedure is usually undertaken for reasons such as limiting the animal's breeding abilities and for safer animal handling.
CN30	Initiative and target relating to the red meat industry ambition of becoming carbon neutral by 2030.
CO_2e	Carbon dioxide equivalent. A standard unit for measuring greenhouse gas emissions.
CSIRO	Commonwealth Scientific and Industrial Research Organisation. An Australian federal government agency responsible for scientific research.
CWT	Carcase weight. Carcase weight is the weight of an animal's carcase (meat and bone) when the offal, hide and hooves have been removed.
DAFF	Department of Agriculture, Fisheries and Forestry.
FMD	Foot-and-mouth disease, a serious and highly contagious animal disease that affects all cloven-hoofed animals.
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.
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.
ISC	Integrity Systems Company. ISC manages and delivers the Australian red meat industry's three key on-farm assurance and through-chain traceability programs: Livestock Production Assurance (LPA) program; LPA National Vendor Declarations (LPA NVD) and National Livestock Identification System (NLIS).
LCA	Life Cycle Assessment. A technique to assess environmental impacts associated with a product across a supply chain.
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.

TERM	EXPLANATION
LTEM	Lifetime Ewe Management. A course designed to increase woolgrowers' knowledge and understanding of the influence of ewe nutrition and management on overall reproduction rates and lamb and ewe survival.
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.
MLA	Meat & Livestock Australia. A producer owned industry service provider that provides marketing and research and development services to cattle, sheep and goat industries.
Mulesing	Mulesing is the removal of skin from the breech and/or tail of a sheep using mulesing shears to prevent the parasitic infection flystrike. The wool around the buttocks can retain faeces and urine, which attracts flies.
NLIS	National Livestock Identification System. Australia's system for identifying and tracing cattle, sheep and goats.
NRM	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.
NVD	National Vendor Declaration. A form that documents the movement of livestock when they are bought, sold or moved off a property. This form accompanies all such movements.
NWD	National Wool Declaration. The NWD is an initiative by the Australian wool industry to assist buyers and their clients gain access to credible information on issues such as mulesing status and dark and medullated fibre risk.
SafeWork Australia	An Australian government statutory body established to develop national policy relating to work health and safety and workers' compensation.
SDG	The United Nations 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.
SPA	Sheep Producers Australia. SPA is the peak industry organisation for sheep and lamb producers in Australia.
SSG	Sustainability Steering Group.
SWT	Shipped weight.
Tail docking	Tail docking is a standard practice in the sheep industry to help reduce susceptibility of an animal to flystrike.
WHS	Workplace Health and Safety. The processes associated with maintaining a safe and healthy workplace.
WOAH	World Organisation for Animal Health. An intergovernmental organisation coordinating, supporting and promoting animal disease control.
WPA	WoolProducers Australia. WPA is the peak national body for the wool producing industry in Australia, representing farmers who have an interest in growing wool.

APPENDIX 8: REFERENCES

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