



Australian Sustainable Goat Fibre Production: Guidelines

By Delphine Puxty, Angela Schuster and Peter
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July 2020



AgriFutures[®]
Goat Fibre

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Foreword

With a large international trade for goat fibre products, there is an opportunity for Australian producers to increase participation in this trade. Treatment of livestock, fibre harvesting, the social welfare of people, and the stewardship of the environment are all of increasing concern to the global community. Our customers are seeking assurances that fibre is being produced in a sustainable manner, safe for human consumption.

This report, *Sustainable goat fibre production: Guidelines*, provides timely guidance for Australian goat fibre producers. The guidelines have been prepared in consultation with the industry Reference Group established under the project, using internationally and Australian accepted standards, guides and practices in relation to livestock and fibre production.

This document adds to AgriFutures Australia's diverse range of more than 2000 research publications and it forms part of the Goat Fibre program, which aims to direct targeted RD&E that contributes to the profitability, sustainability and productivity of this industry.

Most of AgriFutures Australia's publications are available for viewing, free downloading or purchasing online at: www.agrifutures.com.au.

John Smith

General Manger Research
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About the author

Since 2004, Schuster Consulting Group Pty Ltd has been helping organisations in the agriculture, food production, natural resource management, and technology sectors achieve their objectives through:

- Strategy & Planning
- Project & Program Management
- Standards & Conformance
- Implementation & Engagement.

The team at Schuster Consulting Group are experienced in delivering challenging projects around the world that operate at the point where agricultural regulation and industry conformity assessment intersect and interact.

Acknowledgments

The authors acknowledge the AgriFutures management team, the industry Reference Group established under the project, and the industry stakeholders who provided guidance throughout.

Abbreviations

AHA	Animal Health Australia
AAWSG	Australian Animal Welfare Standard and Guidelines
AISG	Australian Industry Standards and Guidelines – Goats
AWI	Australian Wool Innovation
BCS	body condition score
CVD	Commodity Vendor Declaration
ESI	export slaughter interval
ICCPR	International Covenant on Civil and Political Rights
GiG	Going into Goats: Profitable producers' best practice guide
GoatMAP	Australian Johne's Disease Market Assurance Program for Goats
LGAP	Livestock Global Assurance Program
LPA	Livestock Production Assurance
MBM	meat and bone meal
MLA	Meat & Livestock Australia Ltd
NLIS	National Livestock Identification System
NVD	National Vendor Declaration
OIE	World Organisation for Animal Health
pH	potential of hydrogen (the acidity or alkalinity of a solution on a logarithmic scale)
PPE	personal protective equipment
RMS	Responsible Mohair Standard 1.0
SA	South Africa
SDG	Sustainable Development Goals
SFA	Sustainable Fibre Alliance
SOP	standard operating procedure
WHP	withholding period

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Executive Summary

Sustainable goat fibre production: Guidelines provide guidance for Australian goat fibre producers concerning the sustainable production of goat fibre.

The Guidelines provide outcomes-based guidance to Australian goat fibre growers to enable them to produce goat fibre using sustainable methods that achieve good animal health and welfare, social welfare and environmental stewardship outcomes.

The Australian goat fibre industry is comprised of the cashmere and mohair producers.

The Australian cashmere industry was established in the 1970s and after years of selective breeding, the Australian Cashmere Goat has evolved into a distinctive breed of goat, far removed from its wild rangeland goat origins. In 2012, there were about 10,000 cashmere goats in Australia with total production of fibre being 3 tonne (hair in) and 1 tonne (dehaired) at a gross value of \$88,000.

Mohair is produced from Angora goats. In 2006, there was estimated to be 59,000 Angora goats in Australia on 500 holdings, with 50% of total production in the hands of 30 commercial producers. Australian mohair production was estimated to be 137 tonnes in 2011-12, with a gross value of \$1.45 million.

Consumers of goat fibre products are increasingly interested in the origin of the products and the methods employed to produce goat fibre. They are seeking assurance that fibre is produced in a sustainable manner.

Customer sustainability expectations typically relate to animal health and welfare, social welfare and environmental stewardship. In addition, customers have legitimate expectations that the products they purchase are safe for human use.

Methods used

These Guidelines have been prepared in consultation with the industry Reference Group established under the project using internationally and Australian accepted standards, guides and practices in relation to livestock and fibre production.

The Guidelines have been modified from international guidance and standards and adapted to suit Australia's unique production environment and to align with Australia's integrity systems, terrestrial regulations and existing standards.

Results/key findings

The *Sustainable goat fibre production: Guidelines* provide outcomes-based guidance which can be used to implement sustainable production practices and are designed to:

- Provide guidance in relation to the best practices for goat fibre production.
- Provide a progressive approach for producers to implement responsible practices in relation to managing their land, their people and their livestock.
- Ensure the traceability of product so that customers are confident that Australian goat fibre is safe and sustainably produced.
- Drive improvement in animal care, economic resilience, environmental management and social welfare where needed.
- Demonstrate parity with international conformity assessment schemes goat fibre customers have in place.

The Guidelines cover the following outcomes and principles:

1. Animal health and welfare

Outcome: The wellbeing and health of animals is paramount for producers and the broader goat fibre industry.

Principles:

- Infrastructure - Infrastructure and equipment are designed, constructed and maintained to safeguard animal welfare.
- Nutrition - Goats have access to adequate feed and water to meet their needs to maintain normal growth, development and health, and to prevent prolonged hunger, thirst, malnutrition or dehydration.
- Handling - Goats are handled in a way that reduces the risk of stress and injury.
- Management - Goats are managed to ensure good health and quality fibre production.
- Transport - Goats are transported to reduce stress and injury.

2. Economic resilience

Outcome: Improving productivity and profitability ensures the economic resilience of producers.

Principles:

- Sustainable productivity and profitability - Long-term profitability underpinned by measurable productivity gains helps ensure economic resilience and guarantee long-term supply of quality product.

3. Environmental stewardship

Outcome: Producers are committed to maintaining a healthy natural environment, including soil, water, air and a thriving natural ecosystem.

Principles:

- Land management - Grazing land is managed to improve or maintain soil, water, vegetation and biodiversity values.
- Chemicals - Chemicals are handled, used and stored in a way that prevents environmental damage and limits exposure to people and animals.
- Climate variability - Action is taken to adapt to increased climate variability.

4. People and community

Outcome: A safe, healthy and capable workforce, together with the provision of a safe product to our customers is essential to the sustainability of the goat fibre industry.

Principles:

- Employment - Employment conditions are fair and equitable.
- Work health and safety - Work practices, facilities and equipment are safe.
- Communities - The production of goat fibre ensures the provision of a safe product to customers.

5. Management system

Outcome: Producers comply with legal and other requirements and continually improve their performance.

Principles:

- Compliance and improvement - Goat fibre producers maintain a management system to demonstrate compliance with legal and other requirements and allows for continual improvement of performance.

Guidelines are provided to assist in the attainment of each principle and ultimately, each outcome.

Implications for relevant stakeholders

The *Sustainable goat fibre production: Guidelines* can assist producers seeking to:

- Adopt good and responsible practices on-farm in relation to animal health and welfare, economic resilience, social welfare and environmental stewardship.
- Drive improvement in animal care, economic resilience, environmental management and social welfare where needed.
- Demonstrate to their customers that they are able to meet domestic and international requirements for sustainable goat fibre production.

The Guidelines may be used by producers to provide verification that their practices align with international customer requirements; however, it is important to consider that such requirements vary market by market and customer by customer. As such producers, are encouraged to familiarise themselves with their customers' expectations in comparison with these Guidelines.

Recommendations

The *Sustainable goat fibre production: Guidelines* have been developed to be a useful, standalone resource for the Australian goat fibre industry. They have also been written in a way that would support the development of a verification or quality assurance program. It is recommended that these Guidelines be considered in this context, should industry identify the need for such a program.

Introduction

Livestock are an important source of protein and fibre for the global community. The way livestock are treated and their fibre harvested, the social welfare of our people and the stewardship of the environment is of increasing concern to the global community and our customers who are seeking assurances that fibre is being produced in a sustainable manner.

Customer sustainability expectations typically relate to animal health and welfare, social welfare and environmental stewardship. In addition, customers have legitimate expectations that the products they buy are safe for human use.

Such expectations are generally provided in international guidance that is contained within, for example, the following: the World Organisation for Animal Health (OIE)¹ *Terrestrial Animal Health Code* (OIE Code); the Textile Exchange's *Responsible Mohair Standard* (RMS)²; the Sustainable Fibre Alliance's *Sustainable Cashmere Standards Codes of Practice for Animal Welfare and Rangeland Stewardship*³; the *Australian Animal Welfare Standards and Guidelines* (AAWSG)⁴; Australian state and territory regulations; and Australia's livestock industry integrity systems, such as Livestock Production Assurance (LPA)⁵ and the National Livestock Identification System (NLIS)⁶.

The *Sustainable goat fibre production: Guidelines* provide outcomes-based guidance that can be used to implement sustainable production practices, and are designed to:

- Provide guidance in relation to the best practices for goat fibre production
- Provide a progressive approach for producers to implement responsible practices in relation to managing their land, their people, and their livestock
- Ensure the traceability of product so that customers are confident that Australian goat fibre is safe and sustainably produced
- Drive improvement in animal care, economic resilience, environmental management, and social welfare, where needed
- Demonstrate parity with international conformity assessment schemes that goat fibre customers have in place.

These guidelines have been modified from international guidance and standards, and adapted to suit Australia's unique production environment and to align with Australia's integrity systems, terrestrial regulations and Australian standards.

¹ World Organisation for Animal Health <https://www.oie.int/>

² Textile Exchange, Responsible Mohair Standard <https://textileexchange.org/responsible-mohair/>

³ Sustainable Fibre Alliance, Sustainable Cashmere Standards Codes of Practice for Animal Welfare and Rangeland Stewardship <https://www.sustainablefibre.org/animal-welfare-code-of-practice>

⁴ Animal Health Australia, Australian Animal Welfare Standards and Guidelines <http://www.animalwelfarestandards.net.au/>

⁵ Integrity Systems Company Ltd, Livestock Production Assurance <https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/>

⁶ Integrity Systems Company Ltd, National Livestock Identification System <https://www.integritysystems.com.au/identification--traceability/national-livestock-identification-system/>

These guidelines also align to sustainability themes that are becoming commonly accepted among Australia's other livestock production industries. These themes align to the United Nations' Sustainable Development Goals (SDG)⁷. While these themes have been largely driven by the dairy, beef and sheep production sectors, they apply equally to goat fibre production.

In Australia, well-enforced laws and regulations govern human rights and fair work. As such, the guidelines focus on the areas of ensuring a safe and healthy workforce and providing a safe product to customers. Equally, strong environmental laws and regulations govern the use of natural resources for primary production; individual state and territory regulations prevent cruelty to animals.

The *Sustainable goat fibre production: Guidelines* cover the following outcomes and principles:

1. Animal health and welfare

Outcome: The wellbeing and health of animals is paramount for producers and the broader goat fibre industry.

Principles:

- Infrastructure – Infrastructure and equipment are designed, constructed and maintained to safeguard animal welfare.
- Nutrition – Goats have access to adequate feed and water to meet their needs to maintain normal growth, development and health, and to prevent prolonged hunger, thirst, malnutrition or dehydration.
- Handling – Goats are handled in a way that reduces the risk of stress and injury.
- Management – Goats are managed to ensure good health and quality fibre production.
- Transport – Goats are transported to reduce stress and injury.

2. Economic resilience

Outcome: Improving productivity and profitability ensures the economic resilience of producers.

Principles:

- Sustainable productivity and profitability – Long-term profitability underpinned by measurable productivity gains helps ensure economic resilience and guarantee long-term supply of quality product.

3. Environmental stewardship

Outcome: Producers are committed to maintaining a healthy natural environment, including soil, water, air and a thriving natural ecosystem.

Principles:

- Land management – Grazing land is managed to improve or maintain soil, water, vegetation and biodiversity values.
- Chemicals – Chemicals are handled, used and stored in a way that prevents environmental damage and limits exposure to people and animals.
- Climate variability – Action is taken to adapt to increased climate variability.

⁷ United Nations, Sustainable Development Goals <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

4. People and community

Outcome: A safe, healthy and capable workforce, together with the provision of a safe product to our customers, is essential to the sustainability of the goat fibre industry.

Principles:

- Employment – Employment conditions are fair and equitable.
- Work health and safety – Work practices, facilities and equipment are safe.
- Communities – The production of goat fibre ensures the provision of a safe product to customers.

5. Management system

Outcome: Producers comply with legal and other requirements, and continually improve their performance.

Principles:

- Compliance and improvement – Goat fibre producers maintain a management system to demonstrate compliance with legal and other requirements, and to allow for continual improvement of performance.

Guidelines are provided to help attain each principle and, ultimately, each outcome.

Producers may use these guidelines to verify that their practices align to international customer requirements. However, it is important to consider that such requirements vary market by market and customer by customer. As such, producers are encouraged to familiarise themselves with their customers' expectations in comparison with these guidelines.

Scope

These guidelines contain the outcomes, principles and guidance for Australian producers managing goats for mohair and cashmere production.

These guidelines can help producers seeking to:

- Adopt good and responsible practices on-farm in relation to animal health and welfare, economic resilience, social welfare and environmental stewardship
- Drive improvement in animal care, economic resilience, environmental management and social welfare where needed
- Demonstrate to their customers that they are able to meet international requirements for sustainable goat fibre production.

Animal health and welfare

Outcome: The wellbeing and health of animals is paramount for producers and the broader goat fibre industry.

Infrastructure

Principle:

Infrastructure and equipment are designed, constructed and maintained to safeguard animal welfare.

Well-designed and maintained infrastructure and equipment will help deliver good animal welfare outcomes and operational efficiencies. Goats are less likely to become stressed and injure themselves as a result. They will also move more readily through facilities, such as yards, making it easier for handlers.

Infrastructure, in particular, yards and fences, should accommodate goat behaviour, which can differ significantly from sheep. Infrastructure for cattle and sheep can be repurposed for goats, provided the specific behavioural traits of goats are considered.

All infrastructure and equipment should be well constructed and maintained to prevent escape, injury, slips and falls. Good design and regular maintenance will also help to prevent injury to goat handlers.

Guidelines

Yards and handling facilities

Yard designs should encourage the easy flow of goats with minimum pressure. Goats can crowd together and smother, so it is important to make sure they can remain standing when being worked in small yards or handling facilities.

Sheep and cattle yards can usually be modified to handle goats, depending on the processes that need to be undertaken. As goats are adept at climbing, consider the positioning of rails, stays and obstacles to avoid escape. Netting or weldmesh can also be fixed across existing rails.

Handling facilities should allow routine management treatments, such as drafting, drenching or foot trimming, to be done with a minimum of stress to both the handler and the animal.

The design of facilities should take into account goat behaviour, the purpose and length of confinement and the space.

If goats are tethered, other considerations should be made to ensure their welfare is not compromised.

	<p>The Australian Industry Welfare Standards and Guidelines – Goats permits tethering of goats under certain conditions; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers’ expectations about tethering.</p>
	<p>For more information about tethering goats, see the Australian Industry Welfare Standards and Guidelines – Goats http://www.animalwelfarestandards.net.au/goat/</p>

Gate and door latches should be designed and installed such that goats cannot open or interfere with them. This will help prevent goats from escaping.

Fencing

It is important to remember that goats are intelligent animals and will develop habits based on their experiences. If goats are exposed to poor structural fences, especially when they are young, they will tend to treat all fences as if they are weak and look for opportunities to escape. Goats may also injure themselves when trying to escape, so it is important to consider this when designing fencing.

Establishing very well-fenced training paddocks and exposing goats to them upon arrival on-farm can be helpful to prevent these habits forming. Goats can be held in these small, highly secure paddocks for some time to encourage them to respect fences. This is particularly useful when introducing goats to electric fencing.

Placing stays on the outside of fences can help to prevent goats from climbing over fences. Because goats are also more inclined to crawl under fences than jump over, it is important to ensure such behaviour is discouraged by repairing holes and the strategically placing electric wires. Fences should be no less than 1.2 m high.

Fencing design and construction should also consider potential predation. It is important to understand the behaviour of the predators, and ensure fences prevent or limit their entry into the goat paddocks. For example, because wild dogs can dig under fences, a wire apron at the bottom of the fence can prevent them entering goat paddocks.

Water

The water intake of goats varies with the dry matter content of feed: the higher the dry matter content, the more water they need. Sufficient fresh, clean water should be made available at all times.

If they are well maintained, reticulated water systems using pipes and troughs can provide more reliable and better-quality water than dams and watercourses (creeks and rivers). Ensure troughs do not provide an opportunity for goats to climb, particularly if the trough sits near a fence or within a fence to service two paddocks.

Hard, dry surfaces should be provided around watering points to help minimise the risk of hoof and foot disease.

Goats tend to congregate around water at particular times of the day before moving off to feed or camp. Goats generally need 4–5 litres of water/day, which can increase to more than 10 litres for lactating does. When planning water supply, consider mob size and total water requirement during peak times, particularly when troughs are used because this has important implications for flow rates and trough size.

Goats will travel no further than about 5 km from a watering point, so ensure water points are sighted within this radius.

Water points present a particular safety risk to young kids. Risks include drowning or perishing from thirst if the kids cannot reach the water level to drink. Options to reduce these risks include:

- Selecting kidding paddocks that minimise the risks
- Using shallow troughs that kids reach to drink, can stand in and climb out of
- Placing rocks in troughs so kids can climb out of deeper water
- Checking troughs regularly
- Covering dams and wells
- Avoiding or fencing off boggy or heavily silted dams and watercourses.

Shelter

Goats need shelter from adverse environmental conditions. They can tolerate cold weather well if they are dry and out of the wind. Shelter is particularly important for goats after shearing and during kidding.

Where paddocks do not have sufficient natural shelter in the form of trees, shrubs, long grass and natural features, artificial shelter can be provided by tree windbreaks or buildings. If buildings are used, they should be appropriately sited, orientated and designed to ensure adequate protection, drainage and ventilation. Maintenance of these buildings should include cleaning regularly, removing sharp protrusions, and repairing or replacing broken rails, panels and posts.

Shearing and fibre harvesting shed

The shed or area used for fibre harvesting should be designed, built and maintained with animal welfare and efficiency in mind. Sheep shearing sheds may be used or repurposed; however, goat behaviour, such as climbing and the tendency to smother, should be considered when using or retrofitting such sheds and when handling goats.



Extensive research into shearing shed design by Australian Wool Innovation can be viewed at <https://www.wool.com/people/shearing-sheds-and-sheep-yards/shearing-shed-design/>

Thoroughly cleaning the shearing shed or harvesting area before harvesting is important, particularly if the shed or area has been used for another purpose, including wool harvesting and handling.

While goats are confined for harvesting, they should be protected from cold and heat stress. Good ventilation during harvesting ensures sufficient flow of fresh air, but openings should not cause drafts.

Flooring

All areas used for holding, handling and moving goats (including shelters and harvesting areas) should have floors that maximise grip and reduce the risk of slips, falls and injury. Flooring should be drained, provide a non-slip surface, and be hygienically managed.

Ensure adequate drainage of handling areas because goats will not usually enter water, and will avoid muddy areas unless forced.

Lighting

Goats tend to move towards light; they will balk at and avoid dark corners in sheds, yards and races. Design and position yards to minimise shadowing, especially in the drafting area. Ensure that the exit point from a shed or race is open and well lit.

In all goat-handling areas, lighting should be adequate for animal movement and proper inspection of animals. In shearing and handling areas, good lighting is also important.

Electricity

Ensure all electric fittings and devices are kept out of reach of goats. If this is not possible, ensure fittings and devices have a protective covering that prevents chewing and other damage by goats.

General construction and maintenance

Wherever possible, use durable materials to build infrastructure to reduce the risk of escape, damage and injury to goats. All buildings should be structurally sound.

The infrastructure provided for lactating should not allow females to jump or climb away from persistent kids. For example, artificial shelters should be tall enough to prevent does jumping on top of them.

Ensure all removable or portable panels are secured and cannot be accidentally displaced so as to cause injury.

Infrastructure and equipment that is in reach of goats must not be constructed of, or be treated or painted with, substances that may be toxic to goats. Infrastructure should also not be built on areas that could present a contamination risk, such as the site of an old dip. Any sites that could present a food safety contamination risk should be fenced off to exclude access by animals.



Some export markets may have requirements about the materials used for the construction of infrastructure. Producers are encouraged to familiarise themselves with their customers' expectations in this matter.

Remove all waste materials after building and installing infrastructure and equipment. Anything that might be toxic to livestock or present a food safety or fibre contamination risk should be stored so that they cannot contaminate livestock, fibre or feed.

Check infrastructure and equipment before use, e.g. before goats enter a paddock after an extended period of time; inspect all fences, gates, shelters and water points.

All infrastructure and equipment should be in good working order and maintained in accordance with a maintenance schedule. Infrastructure maintenance should include cleaning regularly, removing sharp edges and protrusions, and repairing or replacing broken rails, panels and posts.

Maintenance and service records should be kept.

Emergency response

All farm staff should be competent in carrying out emergency response procedures as well as locating and using related emergency equipment. For example, staff should know where fire-fighting equipment is stored and how to use it if a fire emergency arises.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Australian Industry Welfare Standards and Guidelines – Goats http://www.animalwelfarestandards.net.au/goat/• Going into Goats Module 1: Property planning https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 4: Infrastructure https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 10: Mohair production https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• MLA Factsheet 4: Understanding goat behaviour and handling https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• MLA Factsheet 5: Infrastructure for goats https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• AWI Shearing shed design https://www.wool.com/people/shearing-sheds-and-sheep-yards/shearing-shed-design/• LGAP 1001 Livestock assurance – <i>Requirements for animal welfare and management</i> www.animark.com.au
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Nutrition

Principle:

Goats have access to adequate feed and water to meet their needs to maintain normal growth, development and health, and to prevent prolonged hunger, thirst, malnutrition or dehydration.

Goats are mixed feeders – they graze and browse, with browse making up a much higher proportion of a goat’s diet than in the diets of cattle and sheep. Fibre goats have similar nutritional needs to dairy and meat goats; however, some other important considerations can influence the quality and quantity of the fleece produced. Goat fibre producers need to understand and consider these needs to optimise fibre production and economic performance.

Fibre growth is influenced by nutrition as well as day length. The rate of fibre growth increases with feed supply and longer days. Nutrition can also affect fibre diameter because it is directly correlated to liveweight. A rapid change in nutritional status will cause a variation in fibre diameter along the length of the fibre, affecting staple strength and, potentially, the price. In summary, poor nutrition can produce inferior fleece in terms of quality and quantity, and lower returns.



For more information about nutrition and fibre production, see MLA Going into Goats Module 7: Nutrition; and Module 10: Mohair production.

<https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>

Selectivity

Goats have a narrow mouth and muzzle that allows them to select the most palatable and digestible parts of plants. They tend to move quickly from plant to plant, taking small amounts in each mouthful. Their selectivity also changes, depending on the season and the growth stage of plants. They are better adapted to graze a more diverse range of plants than sheep and cattle; this range offers more opportunities for this type of selective grazing.

Providing goats with the ability to exercise their preference to browse and graze selectively can improve welfare and production.

Browse

Browse is a term used to describe the component of the diet other than grasses, soft herbs and forbs. It primarily includes vegetation from trees and shrubs, including woody herbaceous shrubs such as saltbush and lucerne. Goats may eat the soft shoots and bark of browse, along with the leaves.

Goats prefer to browse and, if they are left to graze freely in a natural environment, it can make up 60% of their dietary intake. As browse is usually positioned above the soil surface, the preference for goats to browse rather than graze makes them less susceptible to internal parasites if they feed naturally. Internal parasite infection can become an issue if goats are forced to graze with no option to browse.

Guidelines

Carrying capacity

Carrying capacity is the total number of animals that can be grazed in an area over a long period of time. It takes into account year-to-year and season-to-season variability to provide a long-term average. Continuously exceeding the long-term carrying capacity can degrade the land significantly and cause poor animal welfare outcomes.

Stocking rates

Stocking rate is the number of animals that can or are grazed on a particular area for a particular period of time. Stocking rates should be based on the feed requirements of the animals and on regular, timely assessments of feed quality and quantity. This means stocking rates can vary considerably year-to-year and season-to-season.

Assessment of feed requirements and available feed

Routinely assess and calculate the feed requirements of goats because these requirements will change, depending on the animals' growth and reproductive stage. Pregnant and lactating does should be given adequate feed to meet their higher nutritional needs.

Monitor the goats' body condition score (BCS) to assess whether feed availability is meeting their needs.

	<p>For more information about using the body condition score (BCS), see MLA Factsheet 3: Understanding dressing percentage when marketing goats.</p> <p>https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/</p>
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The BCS should be regularly used to assess whether the animals' nutritional requirements are being met and if they are in good health. All employees should be familiar with the BCS method of assessing animals. If body condition scoring indicates that their nutritional needs are not being met or they may be suffering disease or infection, action should be taken to rectify the situation.

An assessment of the quantity, quality, palatability and continuity of the feed on offer, including browse, can also be carried out during the routine inspection of goats. Assess the browse component of feed on offer because this an important source of roughage for goats can help with internal parasite control.

Grazing areas should be carefully and regularly inspected for any plants that may be poisonous to goats. Remove goats from these areas until the plants are destroyed or their toxicity declines to safe levels.

The amount of feed on offer can be calculated as the number of available grazing days. If the feed on offer is becoming depleted, move the goats before their BCS or the environment is affected.

Adjustments to grazing plans, stocking rates and supplementary feeding can then be made to ensure the feed on offer to goats meets their nutritional needs.

Documenting the grazing and feeding plan, including stocking rates and carrying capacity, can help with long-term planning and with management of critical feed gaps, both seasonal and those caused by adverse climatic conditions, such as flood or drought.

Supplementary feeding

If supplementary feeding is necessary, carefully formulate rations to ensure the feed is suitable to the goats' nutritional needs. Introduce supplementary feed gradually to allow goats to adapt to the new diet.

If goats are grazed on stubble, failed crops or dry pasture, supplementation with other energy and/or protein sources may be necessary.

All supplementary feed brought on to the farm should come with a Commodity Vendor Declaration (CVD). It demonstrates that the product is not contaminated with chemical residues and does not contain restricted animal materials (i.e. meat or bone meal). This declaration can also be used for any supplementary feed produced on-farm.

	<p>Australia has an inclusive ban on the feeding of all meals, including meat and bone meal (MBM) derived from all vertebrates, including fish and birds, to all ruminant animals.</p>
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Equipment used to deliver food to goats should be kept clean and in good working order. Take care to ensure the equipment does not enable goats, particularly kids, to become caught, entangled or injured. Regularly check for and remove spoilt food.

All supplementary feeds should be stored to prevent spoilage due to moisture, pest attack and general degradation. Feed should not be stored in facilities, vessels or containers that may contain or be covered in toxic substances. Hazardous and toxic materials should not be stored near food storage areas.

Agricultural chemical treatments

Goat meat samples are regularly tested for chemical residues. All agricultural chemicals used on pastures, crops or supplementary feed should be applied and managed according to the instructions on the label so as to minimise the risk of contamination. Always understand and adhere to grazing withholding periods on chemical labels.

The Livestock Production Assurance (LPA) program helps producers to guarantee that animals are not exposed to foods containing chemical contamination and are not fed animal products.



For more information about the Livestock Production Assurance (LPA) program, visit <https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/>

Water

The variation in water intake of goats depends on environmental conditions, diet and physiological state. Sufficient fresh, clean water should be made available at all times.



Guidance about water infrastructure for goats is provided in the Infrastructure guideline.

Regularly check water quality and supply during routine inspection of goats. Any identified issues should be rectified immediately to ensure goats are not deprived of clean, fresh water for an extended period of time.

Access to feed and water

Goats should have access to feed and water daily, except when reasonable management practices, such as shearing, preparation for sale, transport, slaughter and drenching, deprive them for longer periods, to a maximum of 48 hours. It is recommended that goats have access to natural pastures or crops and browse at all times, unless they are being handled for animal husbandry procedures or to prepare for transport (curfew periods).

Goats should not be deprived of food and water if they are ill or injured. Does in late pregnancy should not go without water for more than 8 hours.

Avoid feed and water deprivation exceeding 48 hours.



The Australian Industry Welfare Standards and Guidelines – Goats permits water deprivation to a maximum of 48 hours; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about water deprivation.

Changes to diet, including a different pasture or crop, should be introduced gradually to allow goats to adapt.

Contingency planning and drought management

The risks to animal welfare can be minimised by having contingency plans in place if supply or quality issues arise with feed or water. This may include having other feed or water sources available in the event of damage to pastures or infrastructure, such as after bushfire or flooding. Arrangements to supply water from off-site sources should also be considered.

Drought management requires longer term planning and may include strategies to reduce herd numbers and/or supplementary feeding.

	<p>For more information about contingency planning, see the Australian Industry Welfare Standards and Guidelines – Goats, No. 3: Risk management of extreme weather, natural disasters, disease, injury and predation http://www.animalwelfarestandards.net.au/goat/</p>
	<p>For more information about drought management, see <i>Nutrition of goats during drought</i> (McGregor 2003) https://www.agrifutures.com.au/wp-content/uploads/publications/05-188.pdf</p>

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none"> • Australian Industry Welfare Standards and Guidelines – Goats http://www.animalwelfarestandards.net.au/goat/ • Australian Ruminant Feed Ban https://www.animalhealthaustralia.com.au/what-we-do/disease-surveillance/tse-freedom-assurance-program/australian-ruminant-feed-ban/ • Livestock Production Assurance (LPA) program – Requirement 3: Stock foods, fodder crops, grain and pasture treatments https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/ • National Farm Biosecurity Manual – Grazing Livestock Production https://www.farmbiosecurity.com.au/toolkit/plans-manuals/ • Going into Goats, Module 4: Infrastructure https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/ • Going into Goats, Module 7: Nutrition https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/ • Going into Goats, Module 10: Mohair production https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/ • MLA Factsheet 3: Understanding dressing percentage when marketing goats https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/ • MLA Factsheet 4: Understanding goat behaviour and handling https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/ • MLA Factsheet 5: Infrastructure for goats https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/ • MLA Factsheet 6: Managing livestock numbers https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/ • McGregor, B.A. 2003 <i>Nutrition of goats during drought</i>, Rural Industries Research and Development Corporation, Kingston ACT https://www.agrifutures.com.au/wp-content/uploads/publications/05-188.pdf
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Handling

Principle:

Goats are handled in a way that reduces the risk of stress and injury.

Goats have natural instincts, such as herding, and display a flight response when under stress. When goats are stressed, they are at a greater risk of injury. For example, they may try to escape by jumping over rails or may smother each other when being handled in yards if they feel stressed. Repeated exposure to stress can also reduce animal productivity and health.

Some behavioural responses can be used to the handler's advantage. For example, the goats' point of balance and flight zone should be used to encourage goats to move in the direction the handler wants them to go.

Goats handling practices should consider animal behaviour, be appropriate to the desired outcome, and focus on reducing health and welfare risks by minimising the amount of stress.

Guidelines

Competency of handlers

Goats natural herding behaviour should be considered when mustering, yarding and handling them. For example, because goats move best as a group, trying to move individual animals can cause considerable stress. It is also more difficult for handlers.

Handlers should be aware of the flight zone of the goats they are handling, and understand that this zone can vary, depending on the goats' previous contact with people. Low-stress stock handling methods include limiting sudden movement or loud noises that could cause stress.

Goats on foot should be moved at the pace of the slowest animals in the group, allowing time to rest and mother up, if necessary.

Standard operating procedures (SOPs) for animal husbandry procedures should be made available in written and diagrammatical form, if necessary. Handlers should be made aware of the SOPs and encouraged to review these regularly.



Some export markets may require external handlers and contractors to be aware of their responsibilities when handling goats, and to sign a declaration that demonstrates they understand these obligations. Producers are encouraged to familiarise themselves with their customers' expectations about the requirement for contractor declarations.

Appropriate infrastructure and equipment

The infrastructure and equipment used for handling goats and animal husbandry procedures should be appropriate to the task. The design and construction of all infrastructure equipment should consider the animals' natural behaviour. All facilities should be well maintained.

Goats should be monitored for signs of stress while they are in yards, shearing sheds and other handling facilities for management practices. If required, action should be taken to resolve the situation.

Human–animal interaction

Human–animal interaction should be limited to what is necessary for procedures such as mustering, identification, veterinary treatments, breeding, kidding, and horn and hoof management.

Physical contact between handlers and goats should be minimised. It should not include kicking, striking, slamming gates on goats, tripping, throwing or dropping them, dragging or pulling them by the fleece, tail, ears, head, horns or neck, or dragging by the back leg. Handlers may hold goats by their horns to restrain animals during animal husbandry procedures or to guide their movement.

Extra care should be taken when handling young kids, pregnant does, lame goats, and bucks. Heavily pregnant does should be handled only when necessary and then in a way that avoids causing stress.

Livestock handling aids, e.g. rattles and flags, designed to help move livestock are preferred over physical contact. The use of such aids should be limited to the minimum needed to complete the task because overuse can cause stress to animals.

	<p>The Australian Industry Welfare Standards and Guidelines – Goats permit the use of electric goads (also called prodders or jiggers) under certain circumstances; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about the use of electric goads.</p>
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Goats are highly sensitive to electric goads and their use to move goats may be counterproductive. Electric goads should only be used in exceptional circumstances. When using electric goads, the handler should consider the welfare of the animal as per Australian standards.

Electric goads should:

- Be used only on goats that are refusing to move
- Be used only when the goat has room to move
- Be used only on the hind quarters, and never applied to sensitive parts, such as the face, eyes, ears, mouth, nose, genitals, udders or anus
- Not be used on adult goats that are visibly pregnant
- Not be used on visibly weak, injured or sick goats
- Not be used on goats less than three months old unless goat welfare is at risk
- Not be used repeatedly on the same animal
- Be limited to battery-powered instruments
- Be picked up when needed and returned after use
- Be administered as a short application and not held on the animal after the initial contact

- Be used only by personnel who have been given specific instruction on the appropriate use of electric goads.

Dogs

Dogs can cause considerable stress to goats because they are naturally frightened of dogs. The use of dogs should be limited whenever possible. Handlers should control dogs when using them to move and handle goats so that dogs do not put excess pressure on them.

Dogs that habitually bite goats should be muzzled while working with goats.

Livestock guardian animals

If livestock guardian animals, such as dogs, donkeys, llamas or alpacas, are used to protect goats from predators, they should be well trained and not cause any other stress to goats. For example, guardian dogs should not chase, play or interfere with the natural behaviours of the goats they are protecting.

Livestock guardian animals should be selected on their ability to warn off expected predators. The guardian animals should not be at risk of attack from predators.

It is also important to consider the living conditions guardian animals will experience. These animals should be adapted to the natural environment and climate, and be able to live with the goats without significant human interaction.

The health and welfare of all livestock guardian animals should be considered in the farm's animal health and welfare plan.

	<p>Guidance for developing animal health and welfare plans is provided in the Management guideline.</p>
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Hygiene

All work areas, infrastructure and equipment for handling goats and animal husbandry procedures should be kept clean to prevent the spread of disease and parasites in goats and handlers. The use of disinfectant may be necessary for some equipment to destroy pathogens that can be spread when equipment is used on multiple animals.

Goats handlers should maintain good personal hygiene, including regular hand washing, to help prevent infection with zoonotic diseases, such as Q Fever. It also helps to prevent the spread of diseases through the goat herd. Handwashing facilities should be provided in key locations.

Animal identification

	In Australia, all goats must have an NLIS tag applied before they are moved from their property of birth.
	Guidance about animal identification requirements for Australian goats is provided in the Management guideline.

Any procedures to identify animals, such as earmarking, tagging and tattooing, should follow the manufacturer's and/or veterinarian's instructions. Steps taken to prevent infection include keeping equipment and materials clean during and between use.

	The Australian Industry Welfare Standards and Guidelines – Goats permits ear marking; however, it may not be the case for all export markets, and other customer requirements may exist for earmarking. Producers are encouraged to familiarise themselves with their customers' expectations about earmarking.
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If animals are identified using earmarks, visual tags or tattooing for on-farm purposes, but are to be moved from their property of birth, an NLIS tag must be applied before they are moved.

Hot branding should not be carried out.

Castration

Castration should be planned to minimise stress. Important considerations include the age of the kids, transport requirements, the actual and forecast weather, the availability of trained staff, and the suitability of facilities. Goats should be castrated by competent handlers.

Castration should be undertaken when kids are as young as possible but after a secure maternal bond has been established, usually after 24 hours.

	The Australian Industry Welfare Standards and Guidelines – Goats permit castration before the age 12 weeks; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about age and the use of pain relief.
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Castration should be undertaken before the age of 12 weeks using:

- A rubber ring, including to shorten the scrotum, or
- A bloodless emasculator, or
- Surgery.

Pain relief should be used whenever practical. Producers should seek advice on current pain minimisation strategies.

Castration of animals older than 12 weeks should be performed with appropriate pain relief and haemorrhage control.

Castration of animals older than 6 months must be performed with appropriate pain relief and haemorrhage control.

All animals that are castrated should be carefully monitored for any post-procedural complications, such as bleeding or infection. Any necessary treatments should be administered.

Horn management

Horn management is an important consideration in the ongoing management of a goat herd. Horned goats can seek to dominate and injure other horned goats, particularly, goats without horns.

Procedures to remove horns can be painful and can cause significant blood loss and infection. Disbudding, dehorning and horn trimming should be undertaken only when there are no alternatives, and the procedure benefits the goat's long-term welfare, improves herd management, and reduces work health and safety risk.



The Australian Industry Welfare Standards and Guidelines – Goats permit several procedures for horn management; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about horn management.

If required, the disbudding of kids should be used in preference to dehorning older goats. Disbudding should be performed on kids as young as possible, but after a maternal bond has been formed. Hot-iron cauterisation should be used in preference to excision methods for disbudding kids.

Horn trimming or removing sharp horn points (horn tipping) should be carried out to minimise injury to other goats or if the horn is touching the goat's face or neck. Horns should be regularly checked if they are touching goats' necks or faces.

Horn trimming is preferred over dehorning and should be carried out by a competent handler. Trimming or tipping should remove only a solid, nonvascular portion of the horn, and result in a blunt horn end.

Pain relief should be used whenever practical. Producers should seek advice on current pain minimisation strategies.

All animals subject to horn management should be carefully monitored for any post-procedural complications, such as infections. Administer any necessary treatments.

Fibre harvesting

Fibre harvesting can be a stressful procedure for goats because they may need to be moved away from the herd, be put in unfamiliar positions, and are in close contact with humans for a longer period than normal.

Fibre harvesting should consider other stresses caused by the process and be done in a way that minimises stress and injury to the goats.

Before fibre harvesting, several factors should be considered to ensure the welfare of the goats, including the current and forecast weather, the condition of animals, and the available infrastructure and equipment.

Before beginning harvest, thoroughly clean the shearing shed or area, particularly if it has been used for another purpose, e.g. wool harvesting and handling, to reduce the risk of spreading disease and contaminating fibre.

Animals of similar ages should be penned together to prevent aggressive behaviour and injury to smaller animals. Avoid mixing different groups of animals prior to and during shearing and in confinement post shearing to avoid dominance behaviour.

Be aware of number of hours off feed and water during fibre harvesting. Extra care should be taken when handling goats with special needs such as young kids, pregnant does and lame goats. These animals should be shorn first and returned to grazing paddocks as soon as possible.

Fibre should be harvested by, or directly supervised by, a competent person. Shearers should be appropriately trained and experienced in shearing goats, and be directly supervised by the producer or person appointed by the producer. Trainee shearers should be supervised by an experienced shearer.

When shearing and crutching, take care to minimise cuts. Treat severe cuts at the first reasonable opportunity. For serious cuts or injuries, administer pain relief when it is available.

If bucks are sedated for shearing or crutching, sedation should be given according to the directions of the prescribing veterinarian. Sedated bucks should be carefully managed to prevent exposure, sunburn and smothering as they recover.

Cashmere goats may be shorn in the standing position while restrained in a head bail. The bail should be designed and used to comfortably restrain the goat.



For more information about fibre harvesting of cashmere goats, see *Australian Goat Notes* (Simmonds 2001)

Adjustments to the fibre harvesting schedule may be necessary, including:

- Stopping if cold, wet and windy weather is experienced or predicted and adequate shelter is not available
- Releasing newly shorn goats into adequate shelter, or allowing goats to remain in the shed until the weather risk has passed
- Ensuring adequate feed and water is available for newly shorn goats
- Taking extra precautions in the first six weeks post-shearing, depending on body condition, pregnancy status and seasonal weather conditions.

Carefully consider post-harvest animal health and welfare. Goats may need more shelter, feed and inspections.

Develop SOPs for fibre harvesting and make them available in the shearing shed. Record any incidents during fibre harvesting that affect animal health and welfare. Act to resolve the situation. In some cases, review SOPs before the next fibre harvesting.

Other husbandry procedures can be completed at the time of shearing such as drenching, foot trimming and vaccination to reduce handling time and disturbances.

Artificial breeding procedures

Artificial breeding procedures, including cervical artificial insemination and pregnancy testing, should be done by trained and competent personnel.

Laparoscopic artificial insemination should be carried out only by a veterinarian or a trained and competent operator under veterinarian supervision. Appropriate pain relief should be used.

Collect semen with an artificial vagina rather than with electroejaculation, which should not be used routinely.

Does should be appropriately handled and restrained by an experienced handler for the shortest duration and as gently as possible. Does should spend the minimum amount of time in an inverted position.

Isolating and penning animals

Isolating goats refers to holding an animal without visual or audible contact with animals of the same species. Goats should not be isolated unless it is unavoidable, e.g. if a goat is the last animal in the herd or needs veterinary treatment.

Kids should be separated from their mothers for the shortest possible time.

Goats segregated in a pen because of illness or quarantine should be housed within sight or sound of other goats.

Animals of similar age and size should be penned together and males should be separated from females when in confinement to prevent dominance behaviour and injury. Groups of goats held in confinement should be observed for dominance behaviour that may cause injury and dominant goats should be removed wherever possible.

Veterinary chemical treatments

All veterinary chemicals used on animals should be administered and managed according to the instructions on the label or veterinary advice to minimise the risk of meat and fibre contamination. Always understand and adhere to withholding periods on chemical labels.

The Livestock Production Assurance (LPA) program is the on-farm assurance program that underpins market access for Australian red meat, including fibre goats sold into the red meat supply chain. LPA National Vendor Declarations (NVDs) provide evidence of livestock history and on-farm practices and should accompany all livestock when sold.

	For more information about the Livestock Production Assurance (LPA) program, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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Euthanasia

A person in charge of a goat suffering from severe distress, disease or injury that cannot be reasonably treated or that has no prospect of recovery must ensure that the goat is humanely killed at the first opportunity. Handlers should have a clear set of criteria to be able to recognise when an animal needs to be euthanised.

A person killing goats must take reasonable actions to confirm the goat is dead to prevent further suffering.

Humane methods of killing goats of all ages include firearm, captive bolt or lethal injection. For firearm and captive bolt, the poll method is preferred.

A person must use bleeding-out by neck cut to kill a conscious goat only when there is no firearm, captive bolt or lethal injection reasonably available.

If a person kills a kid by a blow to the centre of the forehead, they must ensure the kid is less than 24 hours old. Use this method only when there is no firearm, captive bolt or lethal injection reasonably available.

	For more information about euthanasia, see the Australian Industry Welfare Standards and Guidelines – Goats – 10: Humane killing http://www.animalwelfarestandards.net.au/goat/
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Tools and resources



More information can be found in:

- Australian Industry Welfare Standards and Guidelines – Goats
<http://www.animalwelfarestandards.net.au/goat/>
- Going into Goats Module 5: Goat selection and breeding
<https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 6: Husbandry <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- MLA Factsheet 4: Understanding goat behaviour and handling
<https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- MLA Factsheet 5: Infrastructure for goats <https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- LGAP 1001 Livestock assurance – *Requirements for animal welfare and management* www.animark.com.au
- Simmonds, AJ (ed) 2001, *Australian Goat Notes*, Australian Cashmere Growers Association, Kellyville, Australia

Management

Principle:

Goats are managed to ensure good health and quality fibre production.

Maintaining good goat health helps ensure the production of quality fibre and business performance. Health considerations include:

- Having a documented health, animal welfare and biosecurity plan
- Animal identification
- Disease and parasite prevention, control and treatment
- Treatment of injuries and lameness
- When and how to carry out animal husbandry activities
- Planning and management of key operational activities, such as kidding and fibre harvesting.

Guidelines

Animal health and welfare plan

A documented plan for the management of animal health and welfare should be developed to ensure the ongoing health and welfare of the herd and all other animals on the property. It can be structured around an annual operation plan and include all routine activities during the year as well as events or issues that may arise (such as parasite outbreaks, emergencies, break downs).

Include regular inspection schedules and health and welfare monitoring in this plan. Inspection may need to be increased at critical times, such as during kidding and adverse weather.

Biosecurity plan

Biosecurity is important to prevent and control the spread of diseases and pests that may affect the health and welfare of farmed goats, other livestock and humans. For all primary producers, a documented biosecurity plan is strongly recommended to address biosecurity responsibilities. This could be a standalone plan or be incorporated in the animal health and welfare plan.



For more information about how to develop a biosecurity plan, visit the Farm Biosecurity Toolkit <https://www.farmbiosecurity.com.au/toolkit/update-your-farm-biosecurity-profile/>

The development and maintenance of a biosecurity plan is a requirement for accreditation under the Livestock Production Assurance (LPA) program. Goat meat producers, including cashmere and mohair producers who sell cull and cast-for-age goats that may enter the food supply chain, should maintain LPA accreditation to maximise marketing opportunities and competition for their livestock and, therefore, the price they receive for their livestock.



For more information about the Livestock Production Assurance (LPA) program, visit <https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/>

The Australian Commonwealth and all states and territories have legislation dealing with biosecurity matters. Producers should be aware of the particular biosecurity risks and responsibilities in their region and state or territory.

Animal identification

The National Livestock Identification Scheme (NLIS) is designed to improve the speed and accuracy of trace-back and trace-forward activities involving livestock. The ability to trace the location and movement of goats is important during an animal disease outbreak or fibre or meat contamination.



All farmed goats must be identified with an NLIS-approved ear tag before movement between properties. Movement of goats between properties must be reported to the NLIS database.

For more information, visit <https://www.integritysystems.com.au/identification-traceability/national-livestock-identification-system/>



In Australia, some states and territories have different requirements for how goats are identified for NLIS purposes, as well as the use of other identification methods (such as earmarks).

For more information, visit or contact the relevant agency in your state or territory.

Goats may also be identified for on-farm management using earmarks, visual ear tags and tattooing.



Guidance about how to apply identification to goats is provided in the Handling guideline.

Disease prevention, control and treatment

Disease affects the welfare of goats and can lead to production losses. Many diseases can be prevented through vaccination, which should be carried out according to an enterprise animal health and welfare plan and/or biosecurity plan.

Disease spread can also be prevented by quarantining new goats before they enter the herd or any goats displaying signs of disease. Producers should request a National Goat Health Declaration when buying or introducing new animals to their farm.

Animals should be regularly inspected and monitored for disease, out with appropriate treatments administered as soon as possible and veterinary advice sought as required. Any reportable diseases should be referred to relevant animal health agencies.

Goats that need to be treated but are not able to move on their own should be moved using humane methods only, such as a cart or sled.

Seek advice on goat disease prevention or treatment from qualified advisors, including veterinarians. Also, seek early advice from a veterinarian or government officer for any unusual sickness or death.

Producers should ensure that antimicrobials are used to treat only infected animals, and only under the direction of a veterinarian. Antimicrobials should not be used for prophylactic purposes.

All treatments that are administered to animals should follow the requirements of the Livestock Production Assurance (LPA) program.

	For more information about the Livestock Production Assurance (LPA) program, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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If mortality rates exceed expected levels, act to resolve the problem.

Parasite prevention, control and treatment

Internal and external parasites can cause significant welfare problems and production losses within goat herds. Prevent and control internal and external parasites according to an enterprise animal health and welfare plan and/or biosecurity plan. This should include attention to grazing and herd management, which generally plays a significant role in the control and prevention of parasite infection.

Goats entering a property for the first time should be quarantined, and may be administered a quarantine drench before they enter the herd. Similarly, goats showing signs of parasites may be separated from the herd to prevent spread through the herd.

Regularly inspect and monitor animals for parasites. Goats showing signs of parasite infection should be treated as soon as possible. Refer reportable parasites to relevant animal health agencies.

If dips are used to apply pesticides for parasite control, use spray dips rather than plunge dips. Handlers should consider weather conditions, limit the number of goats in the dip at one time, and use disinfectant if dipping after shearing.

Seek advice on goat parasite prevention or treatment from qualified advisors, including veterinarians.

All treatments administered to animals should follow the requirements of the Livestock Production Assurance (LPA) program.

	For more information about the Livestock Production Assurance (LPA) program, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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If mortality rates exceed expected levels, act to resolve the problem.

Predator control

Protect goats from the threat of attack by predators, such as dogs, foxes, and large birds of prey. Young and small animals, particularly new-born kids, are at greatest risk.

Effective strategies include reducing predator populations, installing secure fencing, and using livestock guardian animals, such as dogs, donkey and alpacas. Overhead protection provided by trees, logs and shelters can help to reduce attack from birds.

Strategies to control predator populations should be carried out regularly with a focus on the period before, during and after kidding. Regional level control strategies can be more effective.

All methods used to control predators must be humane. Monitor and record the effectiveness of predator control, including any mortalities that can be attributed to predation.

	Australia has model codes of practice and/or standard operating procedures for the humane control of pest animals. These codes permit some control methods that may not be acceptable in all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about predator control.
	Guidance about predator control is provided in the Land management guideline.

Injuries and lameness

Handlers should be able to identify injuries and lameness in goats. Note and act upon instances of injury and lameness as soon as possible.

Goats that need to be treated but are unable to move on their own should be moved using humane methods only, such as a cart or sled.

Seek advice on treatment from qualified advisors, including veterinarians.

If mortality rates exceed expected levels, act to resolve the problem.

Euthanasia

A person in charge of a goat suffering from severe distress, disease or injury that cannot be reasonably treated or that has no prospect of recovery must ensure that the goat is humanely killed at the first opportunity.

	If a goat needs to be euthanised, handlers should refer to the Australian Industry Animal Welfare Standards and Guidelines – Goats http://www.animalwelfarestandards.net.au/goat/
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Handlers should have a clear set of criteria to be able to recognise when an animal needs to be euthanised.

Planning animal husbandry activities

Before animal husbandry procedures, carry out a risk assessment to determine whether the long-term benefit of the procedure outweighs the short-term impact to the animal's health and welfare.

The timing of animal husbandry activities should consider factors such as the prevailing weather conditions, available facilities and equipment, and the current health status of the animals.

All animal husbandry activities should be carried out by competent handlers or operators.

Planning key operational activities

When planning key operational activities, such as fibre harvesting and kidding, consider factors such as prevailing weather conditions, available resources including feed and labour, and the current health status of the animals.

Where issues or deficiencies are identified, correct them before animal health or welfare issues arise.

	<p>The Australian Industry Welfare Standards and Guidelines – Goats provides guidelines for the management of pregnant and lactating does, kidding and care of new-born kids.</p> <p>Producers are encouraged to familiarise themselves with these guidelines.</p> <p>http://www.animalwelfarestandards.net.au/goat/</p>
	<p>Some export markets have particular requirements for the management of pregnant and lactating does, kidding, and care of new-born kids. Producers are encouraged to familiarise themselves with their customers' expectations about these requirements.</p>

During the breeding season, immature and non-breeding goats (including kids) should be separated from the breeding herd, but only if it does not mean isolate them or affect their welfare. Animals of different genders should not be penned or paddocked next to each other, particularly during the mating season.

Kidding management

Ensure a plan is in place to manage welfare issues that may arise during kidding including those associated with mis-mothering, predation, dystocia and adverse climatic conditions.

Breeding strategy

A clear breeding strategy that results in the economically sustainable production of quality fibre without comprising animal health, welfare or the environment should be developed. The strategy should outline the breeding objective and identify any possible compromises when selecting for particular genetic traits.

When introducing new goats as part of a breeding plan, follow an induction process that allows the goats to adjust to the new environmental and social conditions.

International trade of live animals

Animals are exported according to strict guidelines and regulations. Market and regulatory requirements must be adhered to for supply to livestock export markets.

	<p>Australia maintains very high standards for the live export of animals. Producers should ensure they are aware of their obligations when intending to supply such markets.</p> <p>Some customers may not allow animals to be sold into the live export trade. Producers are encouraged to familiarise themselves with their customers' expectations about the live export of animals.</p>
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Emergency response

To maintain animal health and welfare during emergencies, develop and regularly test an emergency plan. For example, a bushfire emergency plan should consider how goats will be cared for if a bushfire were to threaten the farm.

Emergency response should consider the provision of food, water and shelter if adverse weather affects animal welfare, or if regular supplies of food and water are disrupted.

If animal welfare is at risk, put plans in place to relocate, sell or humanely euthanise goats.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Australian Industry Welfare Standards and Guidelines – Goats http://www.animalwelfarestandards.net.au/goat/• Livestock Production Assurance (LPA) program – Requirement 2: Safe and responsible animal treatments https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/• Livestock Production Assurance (LPA) program – Requirement 5: Livestock transactions and movements https://www.integritysystems.com.au/on-farm-assurance/safe-and-responsible-animal-treatments/• Livestock Production Assurance (LPA) program – Requirement 6: Biosecurity https://www.integritysystems.com.au/on-farm-assurance/safe-and-responsible-animal-treatments/• National Livestock Identification System (NLIS) https://www.integritysystems.com.au/identification--traceability/national-livestock-identification-system/• National Farm Biosecurity Manual – Grazing Livestock Production https://www.farmbiosecurity.com.au/toolkit/plans-manuals/
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- Farm Biosecurity Toolkit <https://www.farmbiosecurity.com.au/toolkit/update-your-farm-biosecurity-profile/>
- National Kid Rearing Plan <https://www.animalhealthaustralia.com.au/what-we-do/endemic-disease/goat-health/goat-national-kid-rearing-plan/>
- GoatMAP (Australian Johne's Disease Market Assurance Program for Goats) <https://www.animalhealthaustralia.com.au/what-we-do/endemic-disease/maps/goatmap/>
- Guidelines for the voluntary control and eradication of CAE from individual herds <https://www.animalhealthaustralia.com.au/what-we-do/endemic-disease/goat-health/cae-in-goats/>
- AHA Snatch Rearing and Pre-Weaning Kid Management Factsheet <https://www.animalhealthaustralia.com.au/what-we-do/endemic-disease/goat-health/goat-national-kid-rearing-plan/>
- Going into Goats Module 3: Industry obligations <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 4: Infrastructure <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 5: Goat selection and breeding <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 6: Husbandry <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 9: Parasite control <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- Going into Goats Module 10: Mohair production <https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>
- MLA Factsheet 4: Understanding goat behaviour and handling <https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- MLA Factsheet 5: Infrastructure for goats <https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- MLA Factsheet 6: Managing livestock numbers <https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- MLA Factsheet 7: Production from a breeding doe <https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>
- LGAP 1001 Livestock assurance – *Requirements for animal welfare and management* www.animark.com.au

Transport

Principle:

Goats are transported to reduce stress and injury.

Transport can be stressful to livestock. It is essential that effective management practices are in place to minimise any risks to livestock welfare during loading, transport and unloading. It is particularly important to ensure animals are fit to travel, and are appropriately prepared for this travel.

Guidelines

Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock

The *Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock* provide guidance for all people responsible for livestock during transport. The standards are based on current scientific knowledge, recommended industry practice, and community expectations. They also include specific requirements for the land transport of goats. Producers should be aware of and follow these standards and guidelines when transporting goats.



A national guide to the pre-transport selection and management of livestock, known as the *Is the animal fit to load?* guide, helps livestock operators to meet the standards.

<https://publications.mla.com.au/login/redirectFrame>

The key areas addressed in the standards are provided in the following sections.

Responsibilities and planning

All people involved in planning a journey, mustering, assembling, handling, selecting, loading and transporting livestock have a responsibility for livestock welfare. They should communicate effectively to support those with key responsibilities, and should ensure that management systems are in place to minimise risks to livestock welfare.

Records should be kept of all animal movements on and off properties. Livestock movements must be recorded on the NLIS database.

	<p>All farmed goats must be identified with an NLIS-approved ear tag before movement between properties. The movement of goats between properties must be reported to the NLIS database.</p> <p>For more information, visit https://www.integritysystems.com.au/identification-traceability/national-livestock-identification-system/</p>
	<p>In Australia, some states and territories have different requirements for the way the movements of goats are reported.</p> <p>For more information, visit or contact the relevant agency in your state or territory.</p>

Records should also be kept of any injuries or deaths as a result of transport. Take action to reduce these incidents.

Stock handling competency

People involved in handling goats during loading, transport and unloading, including selection and preparing goats for transport, should be competent in these tasks. Handlers should be provided with adequate training and supervision, if needed.

	<p>Guidance about how to handle goats is provided in the Handling guideline.</p>
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Transport vehicles and facilities for livestock

All vehicles and facilities used for transporting goats should be suitable to the class of animal and for the intended journey.

Pay particular attention to the flooring and ramps to prevent slips and falls. The slope of the ramp should ideally be 20 degrees. Inclines should be no more than 30 degrees for permanent ramps, and 45 degrees for portable or adjustable ramps. The sides of ramps should be high enough to prevent goats trying to escape.

Pre-transport selection of goats

An assessment should be made of each animal to determine whether it is able to go on the intended journey. The *Is the animal fit to load?* guide can be used to help with this assessment.

Some animals may need feed, water and/or rest before loading.

Loading, transporting and unloading

Goats should be handled to take advantage of their natural herding behaviour when mustering, yarding, loading and unloading animals.

Avoid sudden or loud noises that could cause stress or fear.

All physical contact between handlers and goats should be minimised because this requires the handler to move within the goats' flight zone and can cause stress.

Use livestock handling aids, such as rattles and flags designed to help moving livestock, rather than physical contact. Limit the use of such aids to the minimum needed to complete the task because overuse can cause stress to animals.

	Guidance about how to handle goats is provided in the Handling guideline.
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Goats are highly sensitive to electric goads and their use to move goats may be counterproductive. Electric goads should only be used in exceptional circumstances and when using electric goads, the handler should consider the welfare of the animal. Electric goads should be used sparingly and as a last resort. They should not be used repeatedly on a single animal, on does that are known or visually assessed as being pregnant, or on goats that are less than six months old.

	Guidance about the use of electric goads is provided in the Handling guideline.
	The Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock permit the use of electric goads (also called prodders or jiggers) under certain circumstances; however, this may not be the case for all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about the use of electric goads.

Limit the use of dogs whenever possible. Dogs should be appropriately trained to move livestock, and be responsive to commands. Handlers should be in control of dogs when moving and handling goats.

Dogs that habitually bite goats should be muzzled while working with goats.

	Guidance about the use of dogs is provided in the Handling guideline.
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Loading density should meet the specific requirements for land transport of goats, as summarised in the table below.

Mean live weight (kg)	Minimum floor area (m ² /head)	Maximum number of head per 12.5 m x 2.4 m deck
20	0.15	200
30	0.17	176
40	0.22	136
50	0.25	120
60	0.28	107



Loading densities are provided in the Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock (B7: Specific requirements for land transport of goats):

<http://www.animalwelfarestandards.net.au/land-transport/>

Where necessary, some classes of goats may need to be segregated. This includes animals that are not familiar with one another and aggressive livestock. It also may include separating does that are more than four months pregnant from other goats, and bucks from does and young stock.

Consider animal health and welfare when goats are received, particularly after a long journey when they may be tired and hungry. Ill, weak and injured goats should be provided with adequate care or euthanised, if necessary.

Humane destruction (euthanasia)

If goats are severely ill or badly injured before, during or as a result of transport, they should be euthanised to minimise suffering.



If a goat needs to be euthanised, handlers should refer to the Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock (B7: Specific requirements for land transport of goats):

<http://www.animalwelfarestandards.net.au/land-transport/>

Tools and resources



More information can be found in:

- Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock <http://www.animalwelfarestandards.net.au/land-transport/>
- Livestock Production Assurance (LPA) program – Requirement 4: Preparation of livestock for dispatch <https://www.integritysystems.com.au/on-farm-assurance/safe-and-responsible-animal-treatments/>
- Livestock Production Assurance (LPA) program – Requirement 5: Livestock transactions and movements <https://www.integritysystems.com.au/on-farm-assurance/safe-and-responsible-animal-treatments/>
- National Livestock Identification System (NLIS) <https://www.integritysystems.com.au/identification--traceability/national-livestock-identification-system/>

Economic resilience

Outcome: Improving productivity and profitability ensures the economic resilience of producers.

Sustainable productivity and profitability

Principle:

Long-term profitability underpinned by measurable productivity gains helps ensure economic resilience and guarantee long-term supply of quality product.

A focus on maintaining productivity and profitability is central to the economic sustainability of goat fibre production enterprises. For this to occur, it is important to first identify key influences of productivity and profitability, and measure business performance against those indicators.

An ongoing monitoring program can then be used to measure the impact of strategies designed and implemented to improve business performance against those indicators. This approach can help ensure ongoing business success in a highly variable and competitive environment.

Guidelines

Financial plan

A financial plan should be developed to document the monetary value of the enterprise's assets (including livestock), actual and projected income, and actual and projected expenses. This plan forms the basis of understanding the business's operating environment, its limitations and its opportunities. The financial plan should consider any fixed costs, such as rates and other land holding expenses, and variable costs, such as wages and consumable items.

A financial plan account for any costs associated with debts, such as interest, as well as tax. It should also consider the capacity of the business to invest more capital into the enterprise for growth strategies, such as buying more livestock, land and infrastructure.

Production plan

The income generated by a goat fibre enterprise is largely determined by the quantity and quality of the fibre produced. A production plan should be developed to document the production objectives of the goat fibre enterprise, including the quantity and quality of fibre to be produced each year. This plan may include strategies to increase quantity and improve the quality of fibre.



For more information about developing a production plan for goat fibre, see Going into Goats Module 10: Mohair production:

<https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>

Cost of production

The cost of production is the sum of all costs associated with producing and selling goat fibre. It includes variable and fixed (or overhead) costs. This sum can then be divided by the number of kilograms of fibre produced in the defined period.

The cost of production can be used to compare different enterprises and different production periods.

Investment strategies

Consider investment strategies to improve the quality and quantity of fibre, and overall productivity and profitability. They might include buying more land, investing in new goat genetics, and improving infrastructure.

Investment strategies should consider the forecast return on capital – in other words, the value of additional income compared to the cost of the investment.

Benchmarking

Comparing enterprise performance between production periods (usually years) can help producers to understand trends and the impact of management changes.

Some industry benchmarks for profitability and economic resilience include the capacity of the enterprise to:

- Fund all current operating expenses and operational capital expenditure through internally generated working capital
- Pay its owners adequately at least to the standard of the average wage earner
- Repay debt principal in a timely manner, suggested to be within 10 years
- Maintain a 'safe' level of equity of about 85% or greater
- Provide for independent retirement of existing earners if the owners have not been adequately paid through their working life.



For more information about assessing the performance of a goat fibre enterprise, see the MLA Factsheet 1: Profitability in goat production:

<https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/>

and Going into Goats Module 2: Financial analysis:

<https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/>

Risk management

Producers should identify potential risks that may threaten the enterprise's performance. Risks may be internal (within the producer's control) or external to the enterprise (out of the producer's control).

Both types of risk can reduce production volumes, fibre quality, or the value of the fibre.

While it is more difficult to control external risks, their impact can be reduced if appropriate mitigation strategies are adopted. For example, producers should develop a drought management plan that acknowledges the potential for lower fibre production in the short term, and identifies strategies to maintain an income-generating enterprise in the long term.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Going into Goats Module 1: Property planning https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 2: Financial analysis https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 8: Marketing https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 10: Mohair production https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• MLA Factsheet 1: Profitability in goat production https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• MLA Factsheet 2: Marketing goats https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/
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Environmental stewardship

Outcome: Producers are committed to maintaining a healthy natural environment, including soil, water, air and a thriving natural ecosystem.

Land management

Principle:

Grazing land is managed to improve or maintain soil, water, vegetation and biodiversity values.

Appropriate land use and management that matches the capacity of the land's resources can help to ensure long-term sustainable goat fibre production. In some situations, the condition of the land's resources, including soil, water, vegetation and biodiversity, may need to be improved to achieve sustainable production. In other situations, resource condition needs to be maintained.

Guidelines

Soil resources

Soils are important to fibre production because they support the establishment and growth of pastures, browse and crops that can then be fed to goats.

The type of soils available for on-farm agricultural production are largely determined by the parent material (bedrock) of the soils and the weathering processes that have broken down the parent material into soils. The type of parent material and key weathering processes have a strong influence on the inherent capacity of the land to support agricultural production – in other words, the soil's fertility.

While it is difficult to change a soil's inherent fertility, the 'condition' or 'health' of soils can be modified by humans. Some farming practices can lead to soil degradation, including water and wind erosion, waterlogging, salinity and acidification. Other farming practices can lead to soil improvements, such as increased soil organic matter and biological activity.

Soils can vary significantly across a farm and across a region. Understanding soil type and distribution, and their management is the first important step to maintain, and if necessary, improve soil health. All states and territories have natural resource management agencies with specific information and resources to help farmers manage soil sustainably.

Water resources

Without reliable sources of clean and safe water, fibre production is significantly limited.

On-farm water sources include surface supplies (rivers, creeks, dams, and overland flow) and groundwater resources (dams, wells, bores and springs).

Producers should ensure farming practices do not deteriorate the quality and quantity of water resources. Quality can be maintained by preventing contamination from farming inputs, such as fertilisers, pesticides and other chemicals, and from silting, also known as sedimentation.

Buffer zones of vegetation that create a high level of soil cover (preferably indigenous) along riparian areas can help reduce sedimentation. Buffer zones can also help to filter out pesticides and fertilisers before they reach the watercourse.

Quantity (or supply) can be maintained through careful extraction and use of water resources. Only the water that is needed should be extracted through pumping or diversion. Take steps to limit evaporation and fix all leaks.

Natural wetlands should not be drained because these provide important biodiversity and ecosystem functions.

Producers should ensure they have all necessary water-use approvals and licences to extract and use water from shared resources, both surface and groundwater supplies.

Vegetation

Farm vegetation may include indigenous, native, introduced and naturalised plant species. All can play an important role in fibre production as a primary source of feed for goats.

Indigenous vegetation is the plants that naturally occur in a region, while native plants may come from anywhere in Australia. Introduced plants are those that have been brought into Australia, mostly as improved pasture species or garden plants. Some introduced plants are well adapted to Australian conditions and do not need to be regularly re-sown. These are known as naturalised plants; in some regions, some introduced plants are considered to be weeds.

Soil health can be strongly influenced by plant growth, mainly through the contribution plants make to soil organic matter as they decay and break down due to biological activity. This biological activity helps to increase the nutrients available for plants to take up through their roots, which, ultimately, improves the quantity and quality of feed available for goats. Organic matter in soils also helps to maintain their structure, further supporting good plant growth.

The term ‘riparian vegetation’ describes the plants that occur along watercourses. This vegetation is particularly important because it helps to stabilise the sides or banks of watercourses, preventing erosion and slumping. Indigenous riparian species are preferable to introduced species and even other native species because they are better adapted to the local conditions. Indigenous species are also more likely to support wildlife by providing habitat, protection and food.

Browse is particularly important for goats and should be provided at all times. Goats can be ‘hard’ on browse so the condition of the browse should be monitored and stocking rate adjusted to prevent

degradation of the resource. Wherever possible, goats should not be allowed to graze too heavily on indigenous vegetation. They should be prevented from climbing branches and chewing bark.

	Guidance about goat nutrition is provided in the Nutrition guideline.
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Vegetation can provide useful shelter and deliver multiple benefits, including habitat, protection and food for native wildlife. Indigenous species should be selected for this purpose, wherever possible.

While introduced, exotic vegetation can provide important pasture and browse resources, as well as function as shelter, it is important to avoid planting species that are declared weeds or that could become ‘weedy’.

	Land clearing or deforestation is subject to strict state and federal laws. Ensure all land clearing activities are permissible under the relevant legislation.
	Some export markets may not permit land clearing or deforestation. Producers are encouraged to familiarise themselves with their customers’ expectations about these activities.

Biodiversity

Biodiversity refers to the variety of plants and animals that exist in an area. It will be influenced by a range of factors, including soil type, position in the landscape, climate and water availability.

On-farm biodiversity may be enhanced by limiting agricultural practices in areas of high conservation or biodiversity value. In a goat enterprise, these areas might have to be fenced off to prevent or limit grazing. Limited grazing practices could include rest periods to coincide with flowering and seed set of grasses, herbs and forbs, or strategic grazing at high stocking rates for short periods.

Indigenous plants may be planted in areas of high biodiversity to provide habitat, protection and food sources for native wildlife. Over time, more species will populate and inhabit these areas without intervention although ongoing management may be necessary to control pest animals and weeds.

Wherever possible, minimise conflicts between wildlife and livestock. For example, if goats are seen to be climbing or grazing trees or shrubs that provide habitat for nesting birds, stop them accessing these trees during the nesting season.

Protected plant or animal species should not be hunted, fished or gathered.

A biodiversity management plan should be developed to identify areas of high biodiversity value and to document how these areas are to be managed. The plan may also identify action to improve biodiversity values across the property.

Grazing management

Grazing management is the key strategy livestock producers can use to achieve sustainable production. If goats are allowed to graze an area too heavily over a long period, they could reduce plant cover. Vegetation provides important cover to soil, which prevents soil erosion from wind and water. It also contributes to soil organic matter.

It is important to understand the long-term carrying capacity of the grazed area. Ensure that stocking rates, which may fluctuate year to year and season to season and at times exceed long-term carrying capacity, do not, on average, exceed this carrying capacity over the longer term.

	Guidance about carrying capacity and stocking rates is provided in the Nutrition guideline.
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A documented plan with key grazing management strategies should be developed and maintained.

If grazing on public land, the producer should be able to demonstrate that the conditions associated with this land use have been met.

Property planning

Sustainable land management and use should be supported by appropriate property planning, including the location and type of infrastructure and how different areas on the property are best used.

Grazing patterns of goats can be strongly influenced by the placement of fences and water points. Fencing can be used to prevent access by goats to some areas, particularly those of high environmental value, e.g. watercourses and indigenous bushland. Water points should also be placed away from areas that are more sensitive to trampling and grazing as goats move towards and away from water.

	Guidance about infrastructure location and design is provided in the Infrastructure guideline.
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The placement and construction of infrastructure should also consider the impact it may have on native wildlife. In areas of largely undisturbed native vegetation, infrastructure should not be positioned in a way that could ‘break up’ the vegetation. Maintain connection with other areas of native vegetation because they can form important migration routes or wildlife corridors.

The type of fencing can also influence wildlife movement. Where possible, fencing materials should not cause injury to wildlife.

The property plan should include a map or series of maps with sufficient detail to show the distribution of natural resources (soils, water and vegetation), infrastructure, land use, biodiversity values and hazards such as contaminated land.

Regularly review the property plan (usually annually) and assess the outcomes. Responsive and adaptive management may be necessary if operating conditions change over time, so record them in the property plans.

Cultivation

If soil is cultivated to establish pastures and to grow forage and feed grain crops, take steps to minimise soil disturbance, erosion and compaction and to maintain soil structure. Methods that maintain or improve soil organic matter levels are preferable, including using conservation farming techniques such as minimum or no till and retaining stubble.

Moving towards more permanent pasture plantings rather than seasonal cultivation also supports good soil health and better soil carbon levels.

Pest management

Manage all declared pest species (insect, animal and plant) and do not knowingly introduce new pest species. Unintentional or accidental pest introductions should be prevented by adopting sound biosecurity measures.

Management of pest populations should consider methods that cause the least harm to non-target species. A combination of chemical, physical and biological control methods using an integrated pest management approach can be an effective way to reduce the long-term effects pests have on fibre production, ecosystems and biodiversity values. Review the integrated pest management plan annually.

A key risk of pesticide use is non-target poisoning as well as the potential for chemical residues to remain in fibre and meat. If pesticides are used, they should be specifically targeted, and used only if other control methods have proven to be ineffective.

	Guidance about the use of pesticides is provided in the Chemical guideline.
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Integrated pest management helps to reduce pesticide resistance and reduces the potential impact on non-target species. It can also help to maintain the health of soils, vegetation and biodiversity.

Grazing management is also a key strategy to manage pest populations. Maintaining a healthy pasture can reduce the ability of weeds to germinate and spread. It is also an important approach for parasite control in goats.

All methods used to control predators must be humane.

	<p>Australia has model codes of practice and/or standard operating procedures for the humane control of pest animals. Producers should follow them when controlling pest animals.</p> <p>https://pestsmart.org.au/pest-animal-species/</p>
	<p>Some control methods for pest animals may not be acceptable in all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about pest animal control.</p>

Monitoring

Monitoring of key indicators can help assess the condition of the farm's land and natural resources and to determine whether changes are needed to grazing strategies and other management plans.

Key indicators for soil health include:

- Physical properties, such as structure, compaction and erosion
- Chemical properties, including pH, sodicity and nutrient availability
- Biological activity indicated by soil organic matter and macro soil organisms.

Water quality can be assessed by monitoring supply volumes, oxygen levels, turbidity and biological activity.

Regularly monitor pasture and browse to assess the impact of grazing.

Regularly monitor pest species, particularly to ensure any new populations are quickly identified and controlled.

Monitor the condition of indigenous vegetation for biodiversity values. Biodiversity can also be monitored using wildlife monitoring cameras, if necessary.

	<p>Some export markets have specific requirements for monitoring. Producers are encouraged to familiarise themselves with their customers' expectations about monitoring.</p>
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Waste management

All wastes should be disposed of according to legislative requirements. Be especially careful when disposing of hazardous waste materials and carcasses.

	The National Farm Biosecurity Manual Grazing Livestock Production – Principle 3.2: Carcase, effluent and waste management, provides more information about how to manage carcasses, effluent and wastes.
	https://www.farmbiosecurity.com.au/toolkit/plans-manuals/

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Going into Goats Module 3: Property planning https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 4: Infrastructure https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• Going into Goats Module 7: Nutrition https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/• MLA Factsheet 4: Understanding goat behaviour and handling https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• MLA Factsheet 5: Infrastructure for goats https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• MLA Factsheet 6: Managing livestock numbers https://www.mla.com.au/extension-training-and-tools/going-into-goats/factsheets/• MLA Weed control using goats https://www.mla.com.au/CustomControls/PaymentGateway/ViewFile.aspx?Zcbi/sJXSGJLaSmLwP47791jSfV+NqLTfYp7HOx/1BjWgU7vSJIm2Y5IZA2bygFt3EYMKKAfsht7d1Tnt3BqiA==• National Farm Biosecurity Manual Grazing Livestock Production 3.2: Carcase, effluent and waste management https://www.farmbiosecurity.com.au/toolkit/plans-manuals/• National Farm Biosecurity Manual Grazing Livestock Production 4.1: Feral animals/wildlife/weed control https://www.farmbiosecurity.com.au/toolkit/plans-manuals/• Natural resource management https://nrmregionsaustralia.com.au/nrm-regions-map/• Land management agencies in states and territories
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Chemicals

Principle:

Chemicals are handled, used, and stored in a way that prevents environmental damage and limits exposure to people and animals.

Agricultural and veterinary chemicals, including fertilisers, can help improve productivity and maintain animal health.

The use of all chemicals should be carefully considered and where appropriate based on specialised advice and recommendations. Seek advice from veterinarians, agronomists and other agricultural professionals. Abide by withholding periods (WHP) and export slaughter intervals (ESI). Follow chemical labelling instructions at all times to protect people, livestock and the environment.

The misuse of chemicals may lead to harmful residues in meat, fibre and the environment. The detection of such residues can have severe ramifications for trade and for people found to have been involved with the use of the chemical.

Guidelines

Fertilisers and soil amendments

Many Australian soils and production systems benefit from the application of fertilisers. What and when to apply should be carefully considered, and based on soil testing and an understanding of plant needs.

Soil amendments, such as lime and gypsum, can improve overall soil health; their application should also be based on soil tests.

When applying fertilisers and soil amendments, take care to prevent contamination of watercourses and native vegetation. For example, fertilisers containing nitrogen and phosphorus can lead to toxic algal blooms in creeks, rivers and downstream estuaries.

Some fertilisers, including manures, may contain heavy metals and other contaminants. Producers should check the composition of all soil applications to ensure they do not contain unacceptable levels of these contaminants.

Pesticides

Pesticides are used to control pest animals, insects, parasites, weeds, harmful bacteria, viruses and fungi (mould and mildew). They may be applied to pastures, crops, weeds, stock feeds and animals, or used in and around buildings and storage facilities, such as grain silos and hay sheds.

A key risk of pesticide use is non-target poisoning as well as the potential for chemical residues to remain in fibre and meat. If pesticides are used, they should be specifically targeted and used only if other control methods have proven to be ineffective.



Some control methods for pest animals, including the use of chemical poisons, may not be acceptable in all export markets. Producers are encouraged to familiarise themselves with their customers' expectations about pest animal control.

Specific veterinary advice may be needed if pesticides are to be used to control and/or prevent internal and external parasites in goats. Don't assume that sheep or cattle veterinary products may be used on goats. Always follow label and/or veterinary advice.

Vaccines

Vaccines are used to prevent the development and spread of particular diseases in livestock and other domesticated animals. These should be administered in accordance with the manufacturer's label instructions or veterinary advice.

Goat fibre producers who sell cull and cast-for-age goats that may enter the food supply chain should adopt practices that prevent the potential contamination of goat meat, especially when using pesticides and vaccines to prevent and control pests and diseases.

Maintaining Livestock Production Assurance (LPA) accreditation can help producers demonstrate safe chemical use, and can help to maximise marketing opportunities and competition for their livestock and, therefore, the price they receive for their livestock. Pay attention to meat and fibre withholding periods, and follow labelling instructions.



For more information about the Livestock Production Assurance (LPA) program, visit <https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/>

Other hazardous substances

Fuels, propellants, paints, oils, batteries, and other hazardous and toxic substances and materials also present potential human and animal health and environmental risks.

There might also be areas on the property where chemicals were used or stored in the past, such as dips.

Animals should not have access to these areas.

Handling

Safe handling of all chemicals is vital. All people handling chemicals should be aware of the risks involved, and be provided with training, supervision and equipment to handle chemicals safely. This may include equipment to lift large and heavy amounts of chemical.

Take steps to prevent chemical spills during handling.

Follow the manufacturer's label instructions when handling chemicals.

	Some states and territories in Australia require users of pesticides and other chemicals to be formally trained in safe handling and use. Producers are encouraged to check the legal requirements for this training.
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Use

Safe use and application of chemicals should avoid direct contact with humans.

If chemicals are to be applied to pastures and crops, avoid sensitive areas, such as watercourses, native vegetation and areas of high biodiversity value.

Consider weather conditions, both prevailing and forecast, before and during chemical application to ensure the chemical performs as intended, and to avoid potential contamination, e.g. with runoff from heavy rain.

Over- or under-application of certain pesticides can result in chemical resistance in target species. This includes chemical resistance in livestock parasites. Carefully monitor the application of all chemicals to ensure correct rates are applied and that they are effective. Adjust the pest management plan as needed.

	Some export markets prohibit the prophylactic use of pesticides. Producers are encouraged to familiarise themselves with their customers' expectations about the prophylactic use of pesticides.
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Over-application of fertilisers can cause excess nutrients to enter watercourses, which can affect water quality, and should be avoided.

All equipment used to apply chemicals should be kept clean, in good working order, and regularly calibrated to check application rates are accurate.

Keep records of all applications of chemicals on the farm.

Follow the manufacturer's label instructions when using chemicals.

Storage

Storage facilities should be secure; take measures to prevent spills.

Follow the manufacturer's label instructions when storing chemicals..

Disposal

For disposal of unused and expired chemicals and empty containers, follow the manufacturer's label instructions.

Contaminated land

Some areas on properties may contain chemical residues left behind in the soil from past farming practices. Clearly identify areas such as old dip sites, and prevent all livestock from entering these areas.

	<p>LPA includes an on-farm risk assessment for persistent chemicals.</p> <p>For more information about LPA, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/</p>
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Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Livestock Production Assurance (LPA) program – Requirement 1: Property risk assessments https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/• Livestock Production Assurance (LPA) program – Requirement 2: Safe and responsible animal treatments https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/• Livestock Production Assurance (LPA) program – Requirement 3: Stock foods, fodder crops, grain and pasture treatments https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/• Going into Goats, Module 9: Parasite control https://www.mla.com.au/extension-training-and-tools/going-into-goats/the-going-into-goats-guide/
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Climate variability

Principle:

Action is taken to adapt to increased climate variability.

Australia's climate is highly variable across regions and over time. Climate variability makes agricultural production less predictable and subject to risks, such as drought, fire, flood and pestilence.

Climate variability is predicted to increase under a range climate change scenarios. Extreme climatic events are also likely to be more frequent and more severe.

Primary producers can take steps to reduce the impact of climate change by adapting to a more variable climate.

Guideline

Adaptation

Adaptation or management changes can help producers respond to a more variable climate. They must be specific to each farming operation and the region, but may include adjusting stocking rates, improving genetics and more supplementary feeding.

Importantly, producers should develop and regularly review contingency plans for drought management and emergency response. This is to ensure animal welfare, profitability and environmental values are not harmed due to greater climate variability.

In most cases, a combination of adaptations is required to increase environmental and economic resilience. These should be based on regional and industry best practice for animal and land management.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Southern Livestock Adaptation 2030 http://sla2030.net.au/• Climate Kelpie http://www.climatekelpie.com.au/index.php/climate-change-fact-sheets/• MLA https://www.mla.com.au/research-and-development/Environment-sustainability/climate-change-and-variability/• Climate change in Australia https://www.climatechangeinaustralia.gov.au/en/impacts-and-adaptation/nrm-regions/
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People and community

Outcome: A safe, healthy and capable workforce, together with the provision of a safe product to our customers, is essential to the sustainability of the goat fibre industry.

Employment

Principle:

Employment conditions are fair and equitable.

Providing fair and equitable employment conditions helps to maintain good employee wellbeing. Good wellbeing drives employee satisfaction and commitment to farm productivity and safety.

All people employed on the property should be appropriately compensated for their work. The terms of employment should be clearly explained to employees, and recruitment policies should be fair and equitable.

Australia has a well-developed employment system that is subject to Commonwealth, state and territory legislative requirements that employers must adhere to. Three key elements of the system are the national standards for employment for all Australian employees, work health and safety regulations, and superannuation (pension) payments.

Guidelines

National employment standards

All employees in Australia are entitled by law to the terms and conditions defined by national employment standards. Certain entitlements apply to casual employees.

These standards cover entitlements such as:

- Maximum number of hours worked per week
- Flexible working arrangements
- Parental leave and related entitlements
- Annual leave
- Person/carer's leave, compassionate leave, and family and domestic violence leave
- Community service leave
- Long service leave
- Public holidays
- Notice of termination and redundancy pay
- Provision of a Fair Work Information Statement.

Employment agreements

All employees have a common law contract of employment that specifies the terms and conditions of their employment with their employer. It should be a written contract for all employees on the farm.

The employment contract may be based on an industry award that sets out the employment conditions for a specific industry or occupation. These conditions apply on top of the minimum conditions of the national employment standards.

Alternatively, the employment contract may be a workplace agreement between an employer and a group of employees. This is a statement of the reciprocal rights and responsibilities agreed between the two parties. The conditions of a workplace agreement also apply on top of the minimum conditions of the national employment standards.

Industry awards and workplace agreements both specify how much employees will be paid, and other conditions such as the length and timing of breaks.

Contract labour

People engaged as independent contractors for work on the farm should enter into a clear, written contract for this work. It should cover the type of work to be done, the responsibilities of the contractor and of the farm owner/manager, and the payment to be made.

If independent contractors are repeatedly and consecutively engaged to work under short-term contracts, consider employing or engaging them on a more permanent basis to ensure legislative requirements, such as leave entitlements, can be better met.

Working conditions

All employees, including independent contractors, should be provided with safe and clean facilities for their work.

Employees should be suitably instructed, trained and supervised as required so that they can do their work safely and efficiently.

Recruitment policies

Recruitment, engagement and promotion decisions should be fair and based on merit. These decisions should consider the skills, experience, and relative capacity of candidates to complete relevant duties.

The employer should act fairly and transparently throughout recruitment, engagement and promotion processes.

As part of the induction process, give new employees an employment contract, all relevant policies, codes of conduct and other information relevant to their employment conditions, and to enable them to do their work safely and effectively. The contract should be in a format and language that can be understood by employees and employer.

There should be a process to record, track and document all legal requirements for migrant workers. No person working on the farm should be in a situation of forced labour or slavery.

	<p>Australia is a party to seven core international human rights treaties. The right to freedom from slavery and forced labour is contained in Article 8 of the International Covenant on Civil and Political Rights (ICCPR).</p>
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Anti-discrimination, diversity and workplace bullying

In Australia, it is unlawful to discriminate on the basis of personal attributes, including age, disability, race, culture, sex, intersex status, gender identity and sexual orientation, in certain areas of public life, including employment.

Share anti-discrimination codes of conduct with employees, and make them aware of their rights.

	<p>There may be lower limits to the age of children who can work, and there may be associated work restrictions. There may also be exemptions for children working in family businesses.</p> <p>These limits may vary between states and territories. Producers are encouraged to familiarise themselves with these limits.</p>
	<p>Some export markets may not permit child labour, or have certain restrictions for children working on farms. Producers are encouraged to familiarise themselves with their customers' expectations about these activities.</p>

Greater workplace diversity can help build business productivity, resilience and intelligence because employees with different backgrounds can provide a wider range of skills and problem-solving abilities.

Workplace bullying is repeated and unreasonable behaviour directed towards a worker or a group of workers that creates a risk to their health, safety and emotional wellbeing. It may include corruption, extortion and bribery of employees and their families. Workplace bullying should be identified and addressed as soon as possible.

Share codes of conduct to address and prevent workplace bullying with employees, and make them aware of their rights.

Education and training

Offer ongoing education and training opportunities to employees to ensure they have the knowledge and skills to maintain good animal welfare, economic profitability, sound environmental management and a safe and productive workplace. Training is particularly important if new practices are adopted.

Education and training can be provided in many ways, including through formal and on-the-job training.

Maintain records of completed training.

Superannuation

Employers pay superannuation on behalf of their employees into a superannuation account that employees can access when they retire from work.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• Australian employment conditions https://www.austrade.gov.au/International/Invest/Guide-to-investing/Running-a-business/Employing-people-in-Australia/Australian-employment-conditions• Fair Work Ombudsman https://www.fairwork.gov.au/• National Employment Standards https://www.fairwork.gov.au/employee-entitlements/national-employment-standards
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Work health and safety

Principle:

Work practices, facilities and equipment are safe.

Agriculture is one of the most dangerous industries to work in due to the combination of hazards, e.g. working with heavy machinery, riding motorbikes and quad bikes, handling and using chemicals, and exposure to dust and sun. People working on farms are often alone and in remote locations, which can create other risks.

Working with animals creates risks including injury and potential exposure to zoonotic diseases, such as Q fever and leptospirosis.

Providing a safe workplace for employees helps to reduce the risk of injury and disease that can cause significant harm and loss to individuals. If employees are not able to work because of a workplace injury or illness, farm productivity can be affected significantly.

Guidelines

Legislative requirements

Employers in Australia are required to maintain a safe workplace and to maintain workers' compensation insurance to cover workplace incidents.

Employees also have a responsibility to do their work in a safe manner, and to report risks and hazards to employers.

All Commonwealth, state and territory legislation relating to work health and safety must be adhered to.

Hazard identification and assessment

All people on the farm should carry out a hazard identification and assessment to determine the potential health and safety risks. Consider all infrastructure, equipment and facilities and all operational activities during this assessment. Involving everyone in this process helps to ensure all activities and hazards are identified, and can provide a range of perspectives about safety.

When the assessment has been completed, take steps to address the risks. These steps might include changing the way a work practice is done, modifying infrastructure and equipment, or using personal protective equipment. Consider more training and instruction to help employees adjust to safer work practices or if new infrastructure and equipment is to be used.

A particular risk associated with working with livestock is the potential transmission of zoonotic diseases from animals to humans. All workers should be vaccinated for identified risk diseases where a vaccine is available.

Make and record regular hazard assessments and inspections.

Work practices

Safe work practices should always be adopted. Work practices should not put employees and other people at undue risk of injury or illness.

If some work practices are particularly complicated or present a greater risk to health and safety, give employees clear written and diagrammatic instructions.

Work areas

All infrastructure, equipment and facilities in work areas should be kept clean, tidy and in good working order. Regularly inspect all work areas.

Sharp edges and protrusions on metal and wooden structures such as yards pose a particular risk of injury to workers and goats. To prevent slips and falls, flooring should be non-slip and non-trip. Good flooring can also improve the movement of goats in yards and other handling infrastructure.

Where necessary, provide signage to draw attention to potential hazards and to the location of emergency equipment.

Machinery and equipment

All machinery and equipment should be in good working order. Some items may require safety guards, safety switches and instructional signage.

Provide employees with appropriate instruction and training about how to use machinery and equipment safely. Provide refresher training from time to time.

Personal protective equipment

In situations where work practices cannot be changed or modified to reduce the risk of injury or illness, provide personal protective equipment (PPE). In most situations, PPE does not eliminate the hazard but it can help to reduce worker exposure to the risk.

Examples of PPE include helmets, boots, gloves and masks. PPE is particularly important when handling and using chemicals.

It is important that workers know how to use PPE properly, that it is stored correctly and its condition is regularly checked. Replace damaged PPE.

Amenities

Amenities such as kitchens, eating areas and bathrooms should be provided to make working conditions more comfortable and help employees to maintain good hygiene. They should be kept clean, tidy and functional.

Clean, potable water should be available at convenient locations. If employees are working remotely, they should be provided with temporary facilities, equipment (including communication equipment) and adequate supplies of food and water.

Induction, training and competency

Before beginning work, all new employees should be inducted to ensure they are aware of and understand the work health and safety risks and precautions associated with the job.

Induction refreshers for all employees may be necessary from time to time, particularly if new work practices are adopted.

Competency can be achieved through training and experience. Training may include on-the-job training as well as other formal training activities.

First aid

Provide first aid equipment and training to all employees. It is important that all employees know where first aid equipment is stored and how to use it.

For each new employee, first aid training should be provided unless they can demonstrate current competency. Provide regular refresher training for all employees.

Workers' compensation

Employers in Australia are required to maintain workers' compensation insurance to cover workplace incidents. This system is administered by the Australian Government.

In addition to Australian Government legislation, state and territory laws govern workers' compensation. A workplace authority in each state or territory provides advice on business' obligations and the relevant policy.

Employees should be made aware of the provision of workers' compensation insurance.

Tools and resources

	<p>More information can be found in:</p> <ul style="list-style-type: none">• AgHealth Australia https://aghealth.sydney.edu.au/resources/resources-for-farmers/• Safe Work Australia https://www.safeworkaustralia.gov.au/agriculture• Model Codes of Practice https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice• Guidance materials https://www.safeworkaustralia.gov.au/resources-publications/guidance-materials• Farmsafe Australia https://www.farmsafe.org.au/
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Communities

Principle:

The production of goat fibre ensures the provision of a safe product to customers.

In Australia, well-enforced laws and regulations govern human rights, fair work, cultural heritage protection and land rights of Indigenous peoples. This priority area focuses on the provision of a safe product to customers.

Guidelines

Product safety

Producers should ensure that on-farm procedures and activities guarantee the safety and quality of Australian goat fibre because it is critical for maintaining customer confidence.

This can be achieved through accreditation with the Livestock Production Assurance (LPA) program.

	For more information about the LPA program, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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Antimicrobial stewardship

Antimicrobials, including antibiotics, are a valuable shared resource. It is critically important to maintain their efficacy so that infections in humans and animals remain treatable.

Producers should ensure that antimicrobials are used to treat only infected animals, and only under the direction of a veterinarian. Antimicrobials should not be used for prophylactic purposes.

All treatments that include the use of antimicrobials should follow the requirements of LPA.

	For more information about the LPA program, visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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Tools and resources

	More information can be found in: <ul style="list-style-type: none">• Livestock Production Assurance (LPA), visit https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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Management system

Outcome: Producers comply with legal and other requirements and continually improve their performance.

Compliance and improvement

Principle:

Goat fibre producers maintain a management system to demonstrate compliance with legal and other requirements, and to allow for continual improvement of performance.

By maintaining a management system, producers can demonstrate compliance with legal and other requirements. The management system will include a series of policies, procedures, records and documents. It also allows for practices and procedures to be reviewed and, consequently, to be continually improved.

Wherever possible, producers should use existing systems where these meet their legal and other requirements. For example, records of veterinary chemical use required under LPA can be used to demonstrate compliance with some legislative requirements for biosecurity.

Guidelines

Legal and other requirements

Legal requirements are those that are required under legislation and regulations. Key legislation covering goat fibre production includes animal health and welfare, biosecurity, resource use and management, employment, and safety laws.

Other requirements may include national and industry standards, codes of practice and quality assurance programs. Some of these must be followed if required by legislation. For example, the national employment standards identify the minimum employment entitlements that must be provided to all employees as required by the *Fair Work Act 2009*.

Parallel production

Parallel production describes the situation where more than one enterprise is undertaken on a farm.

Under some certification programs, a minimum standard may be required for all production or management systems on a farm, not just the production system directly associated with the certified product.

Other livestock and animals

All other livestock and animals on the farm should be treated humanely and with consideration of their health and welfare.

No animals should be continuously confined because it can significantly affect their health and welfare.

Records

Records should be kept for the length of time specified by legislation and other requirements (if applicable). If not specified, records should be kept for a minimum of five years.

Records should include the details of all animal welfare incidents and mortalities.

Emergency preparedness and response

Producers should develop emergency response plans to prepare for emergencies. These plans should focus on protecting human life and maintaining animal welfare ahead of infrastructure and other assets.

These plans should be reviewed and tested regularly.

Best practice

Producers should be knowledgeable on current and best practices about animal health and welfare, business profitability, environmental stewardship, and working with people and communities in relation to goat fibre production.

Competency and awareness

Make all employees aware of their responsibilities to animal health and welfare, business profitability, environmental stewardship, and working with people and communities. Provide them with opportunities to develop their competency in these areas.

Contractors



Some export markets may require external handlers and contractors to be aware of their responsibilities when handling goats and to sign a declaration that demonstrates they understand these obligations. Producers are encouraged to familiarise themselves with their customers' expectations about the requirement for contractor declarations.

Regular review

An important aspect of maintaining a management system is the ability for producers to regularly review their records, practices and procedures, and to identify areas that could be improved.

A review every six months or annually enables producers to learn from past performance and to continually improve their outcomes for welfare and management of livestock, economic resilience, social welfare, and environmental stewardship.

Tools and resources

	<ul style="list-style-type: none">• Livestock Production Assurance (LPA) provides a range of record-keeping templates that can be used as a basis for a management system: https://www.integritysystems.com.au/on-farm-assurance/livestock-product-assurance/
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