Australian Animal Welfare Standards and Guidelines for Cattle

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This document forms part of the Australian Animal Welfare Standards and Guidelines for the Welfare of Animals.

This document will be reviewed regularly.

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Preface

The Australian Animal Welfare Standards and Guidelines for Cattle are an important component of the pre-existing Australian Animal Welfare Strategy (AAWS) — a previous Australian Government initiative that guides the development of new, nationally consistent policies to enhance animal welfare arrangements in all Australian states and territories. The development process is supported and funded by all Governments, Australian Dairy Farmers, Australian Lot Feeders Association and Cattle Council of Australia.

The standards provide a basis for developing and implementing consistent legislation and enforcement across Australia, and provide guidance for all people responsible for cattle. They are based on current scientific knowledge, recommended industry practice and community expectations.

The development of these standards is an important project in a comprehensive program under the AAWS to develop standards and guidelines for all commercial livestock species and at all points along the production supply chain.

The standards were developed in consultation with state and territory governments, livestock industry organisations, animal welfare groups and the general public under the auspices of the Animal Welfare Committee.

The standards were drafted by a small writing group comprising researchers, government and industry representatives, supported by a widely representative reference group and managed by Animal Health Australia. An important part of the process is the preparation of a regulation impact statement to assess the proposed standards and evaluate the costs resulting from changes to existing requirements.

An extensive consultation process was undertaken, with the final public consultation highlighting ethical and practical issues, which led to the development of more robust standards. The reference group carefully considered the views and comments of all stakeholders in developing the final standards and guidelines for recommendation to Animal Welfare Committee.

These standards and guidelines will replace the following model code of practice:


The preparation of these standards represents a significant investment by all parties, especially members of the writing and reference groups. Their efforts are gratefully acknowledged by Animal Health Australia.
Introduction

Purpose

The purpose of this document is to state standards and guidelines for the welfare of all cattle in Australia. The document informs all those with responsibilities for the care and management of cattle.

The standards provide the basis for developing and implementing consistent legislation and enforcement across Australia, and direction for people responsible for cattle. They reflect available scientific knowledge, current practice and community expectations.

The cattle standards and guidelines may be reflected in the industry-based quality-assurance programs that may include cattle welfare provisions.

In May 2009, primary industries ministers took the position that guidelines, regardless of their purpose in existing codes and the new standards and guidelines documents, will not be regulated. In particular agreement was reached that:

- All future revisions of Model Codes and ‘Australian Standards and Guidelines’ documents must provide a number of:
  - clear essential requirements (‘standards’) for animal welfare that can be verified and are transferable into legislation for effective regulation, and
  - guidelines, to be produced concurrently with the standards but not enforced in legislation, to be considered by industry for incorporation into national industry QA along with the standards.

This document has been prepared as part of the pre-existing Australian Animal Welfare Strategy. It is part of a series of standards and guidelines, each of which brings together welfare standards and guidelines for a particular species — in this case, cattle.

Scope

The standards will apply to all cattle-farming enterprises in Australia. ‘Cattle’ includes a single bovine animal.

The standards apply to all those responsible for the care and management of cattle.

These standards and guidelines should be considered in conjunction with other requirements for livestock, and related Commonwealth, state and territory legislation, including:

- for farming enterprises — model codes of practice or standards and guidelines for livestock species, saleyards, livestock processing (slaughter) establishments and the Australian Standards for the Export of Livestock
- for transport — the Australian Animal Welfare Standards and Guidelines – Land Transport of Livestock, Australian Standards for the Export of Livestock, livestock health and biosecurity requirements, and regulated livestock loading schemes and driver regulations

Where legislation requires a higher standard than these standards, the higher standard will apply. Where there is a conflict with another standard in meeting the livestock welfare standards, the welfare of livestock must be the first consideration unless there is a work health and safety requirement.

Cruelty and unacceptable animal welfare practices can be prosecuted under cruelty and aggravated cruelty offence clauses in animal welfare legislation. For example, ‘cattle must not be allowed to die from lack of feed or water’.

Advice or assistance with welfare management and disease control is available from state and territory departments of agriculture, locally based private consultants or veterinarians, as appropriate. These Australian standards and guidelines do not endeavour to describe ‘best practice’ because it is often too difficult to reflect known regional variation. There are other industry and government documents to better communicate these industry practices that also consider regional variations.

Development process

Each document in the series of Australian Animal Welfare Standards and Guidelines is produced following the same overall process. Production of the document is undertaken by a writing group and guided by a reference group that includes appropriate representation from industry, government and nongovernment organisations.

Standards are based on references identified through a review of relevant scientific literature, commissioned by the writing group, a process that helps to ensure that the standards are scientifically valid. A regulation impact statement (RIS) is also prepared for the standards in the document.

Through a public consultation process, the community, industry, government and any other relevant stakeholders are given opportunities to comment on drafts of the standards and guidelines document, and the RIS. Final documents are made available in print and on the internet at www.publish.csiro.au and www.animalwelfarestandards.net.au.

The final documents also provided to state and territory jurisdictions and industry bodies, for referencing in relevant legislation and to be available for incorporation into industry quality-assurance programs.

Interpretation

Each numbered section of the document covers a particular topic (water and feed, etc.) and contains the following information:

- Animal welfare objective — the intended outcome(s) for each section of the standards and guidelines.
- Standards — the animal welfare requirements designated in this document (i.e. the requirements that must be met under law for livestock welfare purposes) The standards are intended to be clear, essential and verifiable statements. However, not all issues are able to be well defined by scientific research or are able to be
quantified. Science cannot always provide an objective or precise assessment of an animal’s welfare and, consequently, where appropriate science is not available, the standards reflect a value judgement that has to be made for some circumstances. Standards use the word ‘must’. They are presented in a box and are numbered with the prefix ‘S’. The use of hyperlinks in the standards indicate a defined term.

- **Guidelines** — the recommended practices to achieve desirable animal welfare outcomes. Guidelines use the word ‘should’ and complement the standards. Noncompliance with one or more guidelines will not constitute an offence under law.

- **Notes** — explanations of the context of the standards and guidelines.

- **Definitions** – are described in the glossary. Jurisdictions may vary in their definition of specific terms under their animal welfare legislation. Every endeavour has been made to adopt terms that have nationwide application. Readers are urged to check the relevant definitions under the relevant legislation to their jurisdiction.

Further detail on livestock management practices can be found in other industry and government publications.

Note the use of ‘a person’ or ‘a person in charge’ in the standards. ‘A person’ means anyone interacting directly with cattle. The reference can be to more than one person (plural) and not just a specific person. Use of ‘a person in charge’ is appropriate where responsibility is shared and may extend along a hierarchy of management to include all levels of management and ownership as appropriate. In contrast, the term ‘the person in charge’ usually relates to a single, specific person.

Some standards describe the required welfare outcome without prescribing the exact actions that must be done.

The ‘risk to welfare of cattle’ is the potential for a factor to affect the welfare of cattle in a way that causes pain, injury or distress to cattle. The outcome could include sunburn, hypothermia, heat stress, dehydration, exhaustion, abortion, injury, metabolic disease or death. Risks can be managed by undertaking reasonable actions to prevent or reduce them. ‘Cattle’ includes a single bovine animal.

A ‘reasonable action(s)’ are those actions regarded as reasonable to be done by an experienced person in the circumstances to address a problem, as determined by accepted practice and by other similarly experienced people. It is not intended that all reasonable actions are described in this document.

In the context of these standards, the term ‘at the first reasonable opportunity’ means within the time-frame that would be expected by a reasonable person with the relevant knowledge, skills and experience in the management of livestock given the urgency of the situation in relation to the welfare of the livestock.

**Principles for cattle welfare**

Cattle in Australia are managed in environments that vary from extensive rangelands to intensively managed systems. In all cases, the people in charge of cattle are responsible for the welfare of the animals under their control. In achieving improved welfare outcomes envisaged by the standards, it is important that people responsible for animals have the necessary knowledge, experience and
skills to undertake the various procedures and meet the requirements of the standards, in a manner that minimises the risk to cattle welfare.

Adherence to good animal husbandry principles is essential to meet the welfare requirements of animals. Good husbandry principles that also meet the basic physiological and behavioural needs of cattle include:

- a level of nutrition adequate to sustain good health and welfare
- access to sufficient water of suitable quality to meet physiological needs
- social contact with other cattle
- sufficient space to stand, lie and stretch their limbs and perform normal patterns of behaviour
- handling facilities, equipment and procedures that minimise stress to the cattle
- procedures to minimise the risk of pain, injury or disease
- provision of appropriate treatment including humane killing if necessary
- minimising the risk of predation
- provision of reasonable precautions against extremes of weather and the effects of natural disasters
- selection and breeding of cattle appropriate for the environment and the level of planned herd management to be provided
- assessment of the need to undertake any husbandry procedures that may result in significant short-term pain against alternative strategies for the long-term welfare of the cattle
- undertaking any husbandry procedures required for planned herd management in a manner that reduces the impact of these procedures and minimises risks to cattle welfare.

The term pain relief is used throughout this document to mean the reduction of behavioural and physiological responses by an animal to a painful stimulus to a level judged to be reasonable. Drugs are the common means by which pain relief is achieved; they act in various ways on the peripheral and central nervous systems and may be applied topically or by injection. The range of drugs available for use in cattle, and the effectiveness and duration of pain relief provided is often limited.

The assessment of pain is an inexact science. The types of pain and their perception are often not understood and are known to vary at different ages and between individuals. In considering the use of pain relief, cattle should be given the benefit of the doubt.
1 Responsibilities

Objective
A person knows their responsibilities for cattle welfare and is able to perform the required tasks to minimise the risk to the welfare of cattle.

Standards
S1.1 A person must take reasonable actions to ensure the welfare of cattle under their care.

Guidelines
G1.1 Elements of responsibility for cattle management should include:

• understanding the standards and guidelines for cattle welfare
• obtaining knowledge of relevant animal welfare laws
• understanding cattle behaviour and use of low stress stock handling techniques
• planning and undertaking actions for the enterprise to meet the welfare standards and address contingencies that may arise
• assessing the quantity, quality and continuity of feed and water supply
• handling to minimise stress, and using handling aids, facilities and other equipment appropriately
• undertaking hygienic practices for husbandry procedures in a manner that minimises the risks to cattle welfare
• understanding and following chemical and drug treatment instructions for cattle
• identifying distressed, weak, injured or diseased cattle, and taking appropriate action
• maintaining appropriate records
• knowledge of local patterns of disease and disease prevention
• humanely killing cattle by appropriate methods, or seeking the assistance of someone who is capable and equipped to kill them humanely.

G1.2 Agistment responsibilities should be documented, communicated and clearly understood by all parties involved.

G1.3 Owners, managers and stockpersons should have an appropriate staff induction program, periodically review existing practices, and be aware of new developments and training relevant to the welfare of cattle.
2 Feed and water

Objective
Cattle have access to feed and water to minimise the risk to their welfare.

Standards

| S2.1 | A person in charge must ensure cattle have reasonable access to adequate and appropriate feed and water. |

Guidelines

Feed

G2.1 Feed supply for cattle should minimise harmful metabolic and nutritional conditions, and be based on:
- body weight, and/or fat/body condition score
- extra demands associated with growth, pregnancy, lactation and exercise
- prevailing/predicted weather conditions.

G2.2 Regular assessment should be made of the needs of the cattle in relation to the quantity and quality of feed and water.

G2.3 Stocking rates and/or feed supplementation should be managed to maintain cattle in appropriate body condition.

G2.4 Feed supplements should be carefully assessed for suitability and safety.

G2.5 Major changes in diet should be introduced over an appropriate length of time and be closely monitored.

G2.6 Shy feeders should be identified and managed appropriately.

G2.7 Cattle access to contaminated and spoilt feed, toxic plants and harmful substances should be avoided or managed.

G2.8 Self feeders should be checked, cleaned and maintained regularly.

G2.9 An appropriate fat/body condition score system should be used as a guide for the monitoring and planned feeding of cattle.

Water

G2.10 Cattle should have reasonable access to water at least daily.

G2.11 Lactating cows, and all cattle in hot weather, should have access to water at least twice daily.

G2.12 Calves removed from cows should have access to water at all times.

G2.13 Where the water quality is known to be variable, it should be monitored regularly for harmful substances and managed to protect cattle welfare.
G2.14 Water infrastructure should be inspected and maintained to allow effective provision of water in a reasonable time.

G2.15 Medicated water systems should be closely monitored to ensure cattle are not overdosed.

G2.16 Assessment of water requirements for construction of cattle-watering facilities should consider:
- daily requirements and total annual requirement
- flow rates needed for peak, short-term demand
- constructed to prevent temperature build-up.

Calves and weaners

G2.17 Calves should receive adequate colostrum within 12 hours of birth, with the first feed occurring as soon as possible.

G2.18 Weaned calves should be provided with appropriate energy and protein supplements.
3 Risk management of extreme weather, natural disasters, disease, injury and predation

Objective
Cattle are managed to minimise the impact of threats to their welfare including, extremes of weather, natural disasters, disease, injury and predation.

Standards

| S3.1 | A person in charge must take reasonable actions to ensure the welfare of cattle from threats, including extremes of weather, drought, fires, floods, disease, injury and predation. |
| S3.2 | A person in charge must ensure the inspection of cattle at intervals, and at a level appropriate to the production system and the risk to the welfare of cattle. |
| S3.3 | A person in charge must ensure appropriate treatment for sick, injured or diseased cattle at the first reasonable opportunity. |

Guidelines

Weather and natural disasters

G3.1 Plans to minimise risks to cattle welfare should include:
- emergency contact details
- breakdown or mechanical failure affecting feed, water, ventilation or milking
- adverse weather — specifically, conditions that predispose cattle to heat or cold stress
- flood and fire
- insufficient supply of feed or water
- disease outbreak or injury
- emergency killing and disposal
- other issues specific to the enterprise or cattle being managed.

G3.2 Drought strategies should be prepared in advance and then progressively implemented before paddock feed runs out, and may include:
- relocation
- supplementary feeding
- use of stock containment areas
- sale or agistment
- segregation according to risk
- early weaning
- humane killing.

G3.3 If practical, cattle should be provided with adequate shelter to minimise risks to welfare during inclement weather.

G3.4 Cattle handling should be minimised during extremely hot weather.

**Disease and injury**

G3.5 Unexplained disease and deaths should be investigated to formulate appropriate remedial and preventive actions.

G3.6 Appropriate veterinary advice on cattle disease diagnosis, prevention or treatment should be sought as required.

G3.7 Cattle should be vaccinated to protect against likely infectious diseases if there is a significant risk to the welfare of cattle.

G3.8 Treatments and vaccines should be administered in accordance with directions. Records of treatments should be kept.

G3.9 Consideration should be given to selecting cattle that are suitable for and adapted to the production environment, and that are resistant to parasites and specific diseases relevant to the environment.

G3.10 Internal and external parasites should be monitored and controlled.

G3.11 Downer cattle should be assessed and treated without delay.

**Predators**

G3.12 Predator control programs should be implemented where predation is a significant risk to the welfare of cattle.
4 Facilities and equipment

Objective
Facilities and equipment are appropriate to minimise the risk to the welfare of cattle.

Standards

G4.1 A person in charge must take reasonable actions in the construction, maintenance and operation of facilities and equipment to ensure the welfare of cattle.

Guidelines

G4.1 Facility construction or modification should take into account:
- cattle behaviour
- topography (location and drainage)
- flood and fire risk
- climate
- purpose/length of confinement
- space
- feed and water space requirements
- shade/shelter
- surface materials
- cleaning and waste disposal.

G4.2 Passage ways, races and entrances should be designed to take advantage of cattle behaviour and to reduce stress during movement through facilities. Visual barriers should be used as appropriate. Changes in levels, poor lighting, narrow or uneven passages, and awkward turns should be avoided.

G4.3 The surfaces of yards, pens, tracks and laneways should be constructed and maintained to minimise the risk of lameness, slips and falls.

G4.4 Facilities should be free of protrusions and obstacles that may cause injury.

G4.5 Water sprinklers should be used to reduce dust levels and provide cooling during handling in yards as appropriate.

Housed cattle
Note: Includes relatively low numbers of show cattle, bulls in preparation, cattle housed for research and dairy cattle housed in loose housing systems or free stalls, and at breeding establishments in single pens or small groups.

G4.6 Faeces and urine accumulations should be removed regularly.
G4.7 Housed systems should have hospital pens with a comfortable lying surface for sick or injured cattle, and the means to move downer cows to the hospital pen.

G4.8 A normal diurnal pattern of lighting should be provided for indoor cattle.

G4.9 Cattle should have the opportunity for appropriate exercise each day.

G4.10 Air should be of acceptable quality with respect to dust, chemicals and smells. Continuous periods of detectable smoke should be avoided.

G4.11 Concrete flooring in rest areas should be covered by an appropriate depth of bedding material.

G4.12 Fire alarms and adequate fire fighting equipment should be fitted and maintained in all indoor housing systems.
## 5 Handling and management

### Objective
Handling and management practices are appropriate and minimise the risk to the welfare of cattle.

### Standards

| S5.1 | A person must handle **cattle** in a reasonable manner. |
| S5.2 | A person handling **cattle** must not: |
|      | 1) **lift cattle** off the ground by only the head, ears, horns, neck or tail unless in an **emergency**; or |
|      | 2) drop **cattle** except to land and stand on their feet; or |
|      | 3) strike, punch or kick, **cattle** in an unreasonable manner; or |
|      | 4) drag **cattle** that are not standing, except in an **emergency** for the minimum distance to allow safe handling, lifting, treatment or humane killing; or |
|      | 5) deliberately dislocate or break the tail of **cattle**; or |
|      | 6) use metal pellets to wound **cattle** as an aid for mustering. |
| S5.3 | A person must not drive **cattle** to the point of collapse. |
| S5.4 | A person must consider the welfare of **cattle** when using an electric prodder, and must not use it: |
|      | 1) on genital, anal, or udder areas of **cattle**; or |
|      | 1b) on facial areas, unless **cattle** welfare is at risk; or |
|      | 2) on calves less than three months old, unless their welfare is at risk; or |
|      | 3) on **cattle** that are unable to move away; or |
|      | 4) in an unreasonable manner on **cattle**. |
| S5.5 | A person in charge of a dog, must have the dog under **effective control** at all times during the handling of **cattle**. |
| S5.6 | A person in charge must ensure a dog is muzzled when moving calves less than 30 days old that are without **cows**. |
| S5.7 | A person in charge must ensure **tethered cattle** are able to exercise daily. |

### Electro-immobilisation

| S5.8 | A person must only use **electro-immobilisation** on **cattle** if: |
|      | 1) the device is approved for use in the jurisdiction; and |
|      | 2) the **cattle** are more than six months old; and |
S5.9 A person must not use electro-immobilisation on cattle as an alternative to pain relief.

Identification

S5.10 A person must use the most appropriate and least painful method to identify cattle that is applicable to the jurisdiction and the production system.

S5.11 A person must not place a permanent brand on the head of cattle.

Guidelines

Handling and management

G5.1 Cattle should be handled quietly and calmly, taking into account their flight zone and natural herding instinct to minimise stress during handling. Allowances should be made for cattle with special needs such as young calves, lame cattle and bulls.

G5.2 Calves should be weaned in an appropriate and secure area. Calves should be trained to become accustomed to regular handling practices.

G5.3 Under paddock or extensive systems, the frequency of inspection should take into consideration:

- feed availability
- water supply
- age
- class
- pregnancy status
- weather
- disease risk
- predator risk
- recent management procedures.

G5.4 The degree and duration of restraint for cattle should be the minimum necessary to allow a procedure to be done efficiently and safely.

G5.5 Handling aids such as drafting canes, flappers, flags, rattles or other noise makers should be used in preference to other strike objects to move cattle.

G5.6 Use of dogs and electric prodders should be limited to the minimum necessary.

G5.7 Cattle being moved should be rested or allowed to slow if they show signs of exhaustion.

G5.8 Calves less than 30 days old should be handled with care because they may not have developed following behaviours, and may also become easily fatigued.
Cattle should be returned to feed and water as soon as possible after holding in yards.

Wounds should be treated as soon as practicable to prevent infection and flystrike.

Cattle should be closely supervised when dipping to prevent drowning.

Care should be taken when drenching cattle to avoid inhalation of the drench or bolus, and damage to the mouth and throat.

Hoof paring should be limited to avoid damage to soft tissue.

Permanent or long term tethering should be avoided.

A person tethering cattle should:
- ensure the tether is long enough to allow adequate exercise and grazing
- ensure cattle have adequate shelter
- ensure the tether does not become entangled
- inspect the cattle a minimum of once per day
- not tether cattle by the leg or foot.

Instruments should be maintained and in good working order.

Post-operative herd management should ensure effective mothering-up of calves at foot after the procedure is completed.

Unnecessary cattle handling should be avoided during extreme weather.

Cattle should have sufficient time to become aware of electric fences, and space to move away.

Insect worry should be managed by implementing control measures where appropriate.

**Electro-immobilisation**

Any benefits from using electro-immobilisation on cattle should be judged against its aversive effects.

The lowest setting of current for electro-immobilisation that produces restraint should be selected.

Operators using electro-immobilisation should undertake formal training and assessment to a high level of competency.

Electro-immobilisation should not be used for routine procedures as a substitute for feasible upgrading of handling facilities.

**Identification**

Hot-iron branding of wet cattle should be avoided.

The correct time period of application and temperature of the iron should be used when hot-iron branding.

Hot-iron branding of weak or extremely thin cattle should be avoided.
G5.28 Care should be taken with the concurrent application of volatile pour-on treatments when hot-iron branding or applying the electric prodder.

G5.29 Ear tagging and tattooing should be done in a way that minimises the risk of infection and tearing of the ear.

G5.30 Ear marking and tattooing instruments should be sharp and clean, with relevant hygienic techniques followed.
6  Castration, dehorning and spaying

Objective
Castration, dehorning and spaying are done only when necessary and in a manner that minimises the risk to the welfare of cattle, particularly pain and distress.

Standards

S6.1  A person castrating or dehorning cattle must have the relevant knowledge, experience and skills, or be under the direct supervision of a person who has the relevant knowledge, experience and skills.

Castration
S6.2  A person in charge must ensure the use of appropriate pain relief when castrating cattle, unless cattle are:

1) less than six months old; or
2) less than 12 months old if at their first yarding and where the later age is approved in the jurisdiction.

S6.3  A person must use appropriate tools and methods to castrate cattle.

Disbudding and dehorning
S6.4  A person in charge must ensure the use of appropriate pain relief when dehorning cattle, unless cattle are:

1) less than six months old; or
2) less than 12 months old if at their first yarding and where the later age is approved in the jurisdiction.

S6.5  A person must consider the welfare of the calf when using caustic chemicals for disbudding the calf, and must only use it if the calf:

1) is less than fourteen days old; and
2) can be segregated from its mother for four hours after treatment; and
3) can be kept dry for 12 hours after treatment; and
4) is not wet.

S6.6  A person must use appropriate tools and methods to dehorn cattle and disbud calves.

Spaying
S6.7  A person spaying a cow must be a veterinarian or, if permitted in the jurisdiction, be accredited or be under the direct supervision of a veterinarian or a person who is accredited.
S6.8  A person in charge must ensure the use of appropriate pain relief when performing the flank approach for spaying or webbing of cattle.

S6.9  A person must not use vaginal spreaders to spay small or immature cattle.

**Guidelines**

G6.1  Surgical procedures should only be done if there are no alternatives and the procedure results in either:

- life-time benefits to cattle welfare, or
- better herd management, or
- a reduced work health and safety risk.

G6.2  Surgical procedures should be done with pain relief. Operators should seek advice on current pain minimisation strategies.

G6.3  Surgical procedures should be planned with consideration of the health and age of cattle, weather, staff availability and facilities, including the use of temporary or permanent yards.

G6.4  Good hygiene practices should be implemented in relation to facilities, hands, handling and instruments. Disinfectant should be used and changed frequently.

G6.5  Effective but not excessive restraint should be used to minimise movement, and to enable the procedure to be done quickly and efficiently.

G6.6  Equipment for restraining cattle should only be used:

- for the minimum time necessary, and
- with the minimum restraint necessary, and
- if it is in good working order.

G6.7  Calves should be separated from their mothers for the shortest possible time unless they are to be hand-reared or weaned onto a solid diet.

G6.8  Bleeding from surgical wounds should be minimised by selecting an appropriate method, preventing overheating of calves and allowing them to settle after mustering.

G6.9  Infection should be minimised by avoiding muddy or dusty yards, and wet weather.

G6.10  Surgical procedures should not be undertaken during extreme weather.

G6.11  Cattle should be inspected regularly and with minimal disturbance for signs of post-operative complications during the healing process, and appropriate action taken.

**Castration**

G6.12  A person should use the most appropriate tools and least painful method to castrate cattle that is applicable to the production system.

G6.13  Cattle to be castrated or made cryptorchid should be as young as possible (less than 12 weeks old) and the procedure should be done before the cattle are weaned.

G6.14  Calves should be more than 24 hours old when castrated.
G6.15 Calves less than two weeks old should be castrated by the rubber-ring method in preference to the cutting method.

G6.16 Calves more than two weeks old should be castrated by the cutting method in preference to the rubber-ring and tension-band methods.

G6.17 Use of rubber rings or tension bands on calves should ensure that the correct position and tension is achieved to block the arterial blood flow.

G6.18 The incision for surgical castration should be of sufficient size, and extend to the base of the scrotum, to allow effective drainage and reduce the risk of infection.

**Disbudding and dehorning**

G6.19 Preference should be given for breeding of naturally polled cattle.

G6.20 Disbudding should be done in preference to dehorning.

G6.21 Hot-iron cautery should be used in preference to excision methods for disbudding calves.

G6.22 Calves should be disbudded or dehorned as young as possible.

G6.23 The hair around horn buds should be clipped before using caustic chemicals for disbudding.

G6.24 Tipping should only remove a solid, nonvascular portion of the horn, and result in a blunt horn end.

G6.25 Horn regrowth or a scur that has a blunt horn end should not be dehorned or tipped.

**Spaying**

G6.26 Passage webbing or the dropped ovary technique (DOT) should be used in preference to other surgical methods for cattle spaying, where possible.

G6.27 In mature cows where it is considered there is a greater risk of haemorrhage, webbing by the passage approach should be used where possible.
7 Breeding management

Objective
Breeding and management practices are appropriate to minimise the risk to the welfare of cattle.

Standards

| S7.1 | A person performing artificial breeding procedures on cattle must have the relevant knowledge, experience and skills, or be under the direct supervision of a person who has the relevant knowledge, experience and skills. |
| S7.2 | A person performing artificial breeding procedures on cattle must take reasonable actions to minimise pain, distress or injury. |
| S7.3 | A person in charge must ensure the inspection of calving cattle at intervals appropriate to the production system and the level of risk to the welfare of cattle. |
| S7.4 | A person in charge must ensure calving induction is done under veterinary advice. |
| S7.5 | A person in charge must ensure that induced calves receive adequate colostrum or be humanely killed at the first reasonable opportunity, and before they are 12 hours old. |

Guidelines

G7.1 Persons responsible for breeding management should have an understanding of the reproduction and behaviour of both the cow and the bull.

Cows and calves

G7.2 In the last 4–6 weeks of pregnancy, management practices should minimise stress on cows and reduce metabolic diseases.

G7.3 Calving should occur in a sheltered and well-drained area where surveillance is possible. Unless birthing assistance is required, disturbance of cows should be avoided.

G7.4 Care should be taken to minimise calving difficulties by adopting suitable management practices, which may include:
  - selecting heifers for mating only when they have reached the minimum target weight for the breed
  - avoiding overfeeding or underfeeding pregnant cows and heifers
  - avoiding mating heifers to bulls known to sire large birth weight calves
  - supervising cows and heifers close to calving, where possible, and early intervention if required
  - selecting bulls rated for calving ease.

G7.5 Cows that receive severe injuries during calving or that are affected by a severe adverse outcome (prolapsed uterus, unable to remove calf) should receive urgent treatment, or be humanely killed without delay.
G7.6 Weak or orphaned calves with very little chance of survival should be humanely killed without delay.

G7.7 A cow’s body condition should be considered when deciding when to wean the calf.

**Induction of calving**

G7.8 Herd management strategies should be adopted to minimise or eliminate the need to induce calving.

G7.9 Cows subject to an induction program should be inspected twice daily. Any cow requiring calving assistance or treatment should receive this intervention without delay.

G7.10 Calving induction should only be done when necessary for the welfare of the individual cow or calf.

**Bulls**

G7.11 Bulls should be checked at regular intervals for injuries and disease.

G7.12 The welfare of teaser cattle used in bull-serving ability tests should be closely monitored.
8 Calf-rearing systems

Objective
Calf-rearing systems are appropriate to minimise the risk to their welfare.

Standards

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S8.1</td>
<td>A person in charge must ensure the feeding and inspection of calves in calf rearing systems are performed daily.</td>
</tr>
<tr>
<td>S8.2</td>
<td>A person in charge must ensure that calves housed in pens can turn around, lie down and fully stretch their limbs.</td>
</tr>
<tr>
<td>S8.3</td>
<td>A person in charge must ensure sufficient iron in the diet to prevent anaemia in calves in veal production systems.</td>
</tr>
<tr>
<td>S8.4</td>
<td>A person in charge must not allow the faeces and urine of calves housed in indoor systems to accumulate to the stage that compromises calf health and welfare.</td>
</tr>
</tbody>
</table>

Notes:

1. Calves may be housed individually for disease control purposes.
2. Sheds are not enclosed to the extent that ventilation or temperature control is an issue.

Guidelines

<table>
<thead>
<tr>
<th>Guideline</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>G8.1</td>
<td>Calves removed from cows should receive adequate colostrum within 12 hours of birth, with the first administration occurring as soon as possible.</td>
</tr>
<tr>
<td>G8.2</td>
<td>The quality of colostrum should be checked.</td>
</tr>
<tr>
<td>G8.3</td>
<td>If artificial feeding of new-born calves is required, the calves should be supervised until they are successfully trained to self-feed.</td>
</tr>
<tr>
<td>G8.4</td>
<td>Where a cow is being restrained to suckle or adopt an orphaned calf, the cow should be observed to ensure that the cow is not becoming distressed and that the calf is suckling.</td>
</tr>
<tr>
<td>G8.5</td>
<td>Calves should be grouped by size and age to reduce competition, and facilitate observation and management.</td>
</tr>
<tr>
<td>G8.6</td>
<td>Where there are two or more calves on a property, calves housed in single pens should be able to see neighbouring calves.</td>
</tr>
<tr>
<td>G8.7</td>
<td>Calves should be kept in the company of other calves from three weeks old.</td>
</tr>
<tr>
<td>G8.8</td>
<td>Liquid feed should be fed at the appropriate temperature.</td>
</tr>
<tr>
<td>G8.9</td>
<td>Solid feeds should be gradually introduced. Roughage should be provided to encourage the development of the rumen function from three weeks old.</td>
</tr>
<tr>
<td>G8.10</td>
<td>Feeding equipment should be hygienically maintained.</td>
</tr>
</tbody>
</table>
G8.11 Calves that become sick should be segregated and treated immediately.

G8.12 Floor area of 1.5–2.0 m² should be provided for each calf in group pens to permit self-grooming and prevent overcrowding. An area of 2.0 m² should be provided for calves in individual pens.

G8.13 Calves should be raised in an environment that is:

- clean
- dry
- well drained
- provided with sufficient bedding
- draught free and well ventilated
- free of projections that may cause injury.

G8.14 Action to protect against extremes of hot or cold weather should begin as soon as it is expected that conditions will deteriorate.

G8.15 Very early weaning of calves should be supported by a high protein diet.
Dairy management

Objective
Dairy cattle are managed to minimise the risk to their welfare.

Standards

| S9.1 | A person in charge must ensure the daily inspection of lactating dairy cows. |
| S9.2 | A person in charge must implement appropriate actions to minimise heat stress of cattle. |
| S9.3 | A person must tail dock cattle only on veterinary advice and only to treat injury or disease. |
| S9.4 | A person in charge must ensure dairy cattle that are kept on feed pads for extended periods have access to a well-drained area for resting. |

Notes:
1. The Australian dairy production system is almost entirely outdoors and pasture based.
2. Bobby calf transport is covered in the *Australian Animal Welfare Standards and Guidelines — Land Transport of Livestock*.

Guidelines

| G9.1 | Milking machinery and equipment should be regularly tested and maintained. |
| G9.2 | The milking technique should minimise the risk of discomfort, injury and disease. |
| G9.3 | A lameness management strategy should be implemented and should include practices for prevention, early detection and effective treatment. |
| G9.4 | Lameness assessment and/or hoof inspections should be conducted regularly and hoof trimming carried out when necessary. |
| G9.5 | A mastitis management strategy should be implemented and should include practices for prevention, early detection and effective treatment. |
| G9.6 | During hot weather, access to drinking water should be available at all times. |
| G9.7 | Dairy operators should develop, document and implement routine management procedures to reduce the excessive heat load risks identified before they occur. |
| G9.8 | If it is deemed necessary to remove extra teats, the procedure should be done expertly and hygienically as soon as they can be identified. |
| G9.9 | Calving in free stalls should be avoided. |
10 Beef feedlots

Objective

Cattle in feedlots are managed in a way that minimises the risk to cattle welfare.

Standards

<table>
<thead>
<tr>
<th>S10.1</th>
<th>A person in charge must ensure a minimum area of 9 m$^2$ per Standard Cattle Unit for cattle held in external pens.</th>
</tr>
</thead>
<tbody>
<tr>
<td>S10.2</td>
<td>A person in charge must ensure that the diet composition and quantities fed are recorded, and that records are maintained for the duration of the feeding period of each group of cattle.</td>
</tr>
<tr>
<td>S10.3</td>
<td>A person in charge must ensure feed is available daily to cattle in the beef feedlot.</td>
</tr>
<tr>
<td>S10.4</td>
<td>A person in charge must do a risk assessment each year for the heat load risk at the feedlot, and implement appropriate actions to manage ongoing heat load risk.</td>
</tr>
<tr>
<td>S10.5</td>
<td>A person in charge must have a documented Excessive Heat Load Action Plan, and must implement appropriate actions in the event of a heat load emergency.</td>
</tr>
<tr>
<td>S10.6</td>
<td>A person in charge must have a documented contingency plan in case of failure of feed or water supply, and must implement appropriate actions in the event of feed or water supply failure.</td>
</tr>
<tr>
<td>S10.7</td>
<td>A person in charge must have a documented contingency plan in case of an emergency animal disease, and must implement appropriate actions in the event of an emergency animal disease.</td>
</tr>
<tr>
<td>S10.8</td>
<td>A person in charge must ensure the daily inspection of all cattle within the feedlot.</td>
</tr>
<tr>
<td>S10.9</td>
<td>A person in charge must ensure the appropriate management of calves born in the feed yards, to ensure the welfare of the calves.</td>
</tr>
<tr>
<td>S10.10</td>
<td>A person in charge must ensure the cleaning of feed yards and maintenance of surfaces on a planned basis, to ensure that pen surfaces can drain freely.</td>
</tr>
</tbody>
</table>

Note: Indoor feedlot systems are not generally used in Australia. Shade or cover is provided in some feedlots.

Guidelines

G10.1 Feedlots should be accredited under a third party, audited quality-assurance system.

G10.2 Feedlot operators should document aspects of a beef feedlot management plan that is not already required to be documented in the standards, including:

- frequency of cleaning
  - feed yards
  - water troughs
  - feed troughs
drains, sedimentation and holding ponds

- details of the records maintained and practices employed to manage the health of cattle held within the feedlot, including:
  - receipt and induction
  - monitoring/inspection
  - disease or injury diagnosis and all treatments of cattle, including the method and records used to ensure the observance of withholding periods and/or export slaughter intervals for any chemical used
  - mortality and post mortems
  - biosecurity/disease risk mitigation measures.

*Note:* The requirements are fulfilled by the National Feedlot Accreditation Scheme.

**G10.3** All cattle should be observed standing and moving during daily inspections.

**G10.4** Mixing of cattle should be minimised and bulling behaviour should be managed by segregation.

**G10.5** Cattle should be subjected to programs that improve their capacity to adapt before entering the feedlot.

**G10.6** New arrivals to a feedlot should be closely inspected for injury and illness.

**G10.7** Horned cattle in the feedlot should only be tipped if horns are dangerous.

**G10.8** Heavily pregnant cattle should be transferred to a pen with lower stocking density or to a paddock before calving.

**G10.9** Calves born in feed yards should be segregated with their mothers or humanely killed.

**G10.10** Feed yard facilities should comply with the requirements of the National Beef Cattle Feedlot Environmental Code of Practice, 2nd edition, as amended or superseded.

**Feed and water**

**G10.11** Stale or spoilt feed should be removed daily.

**G10.12** Changes in diet should be managed to minimise digestive upset to cattle.

**G10.13** Daily feed consumption should be monitored.

**G10.14** Water troughs should be inspected daily and cleaned regularly.

**G10.15** Shy feeders should be removed to pens with a lower stocking density and / or fed a higher roughage diet.

**Heat load**

**G10.16** Feedlot operators should manage heat load risk by observing the excessive heat load specific standards of the National Feedlot Accreditation Scheme.

**G10.17** Heat load risk assessments should be documented and include:

- site climatic factors for the feedlot location
animal factors including genotype, coat colour, days on feed and health status
management factors, which may include the provision of shade, provision of additional water troughs, water temperature, ration type and manure management practices
each class of cattle at the feedlot.

G10.18 Feedlot operators should develop, document and implement routine management procedures to reduce the excessive heat load risks identified before they occur. These proactive strategies should include:

- identification of at-risk cattle source regions and groups of cattle
- specific selection of cattle for summer feeding programs
- establishment and maintenance of facilities such as shade, sprinklers, weather stations and emergency watering troughs
- implementation of summer diet and feeding programs
- implementation of strategic pen-cleaning programs
- excessive heat load training and management of personnel
- implementation of monitoring programs of weather, cattle behaviour, heat load index (HLI) and accumulated heat load units (AHLU) Index.

G10.19 The Excessive Heat Load Action Plan should include the following minimum information / actions:

- name of the feedlot
- name and contact details of the person responsible at the feedlot
- name and contact details of the consulting veterinarian and nutritionist
- allocation of responsibilities to relevant personnel
- threshold for activation of the Excessive Heat Load Action Plan
- actions to manage the excessive heat load event and the welfare of animals at that time, which may include
  - monitoring of cattle, weather conditions, pen conditions, water and feed
  - operational practices to be implemented for the management of cattle, pens, feed, water and personnel.
11 Humane killing

Objective
Where it is necessary to kill cattle, it is done promptly, safely and humanely.

Standards

| S11.1  | A person in charge must ensure killing methods for cattle result in rapid loss of consciousness, followed by death while unconscious. |
| S11.2  | A person must have the relevant knowledge, experience and skills to be able to humanely kill cattle, or be under the direct supervision of a person who has the relevant knowledge, experience and skills, unless: |
|        | 1) the cattle are suffering and need to be killed to prevent undue suffering; and |
|        | 2) there is an unreasonable delay until direct supervision by a person who has the relevant knowledge, experience and skills becomes available. |
| S11.3  | A person in charge of cattle suffering from severe distress, disease or injury that cannot be reasonably treated must ensure that the cattle are killed at the first reasonable opportunity. |
| S11.4  | A person killing cattle must take reasonable action to confirm the animal is dead. |
| S11.5  | A person killing a calf by a blow to the forehead must first ensure that the calf is less than 24 hours old and only use this method when no other humane killing methods are reasonably available. |

Guidelines

Recommended humane killing methods for cattle

G11.1 The recommended methods for humane killing of adult cattle and calves is use of close-range firearm to the brain or a captive bolt to the brain (see figure 11.1).
Figure 11.1 Recommended position and direction of fire for the humane killing of cattle

Notes:
1. (A) indicates the frontal method, (B) indicates the poll method. For blunt trauma in calves less than 24 hours old, use position A.

In general, firearms are the most acceptable method of humane killing for cattle. The distance between the end of the firearm barrel and the cattle is expected to be between 10 and 100 cm. The only approved target organ is the brain. Before firing, the cattle’s head must be still.

There are two effective aiming points at the head: frontal (A) and poll (B). The frontal method is the preferred target site.

For the frontal method (A), in polled cattle, the firearm or captive bolt should be directed at a point midway across the forehead where two imaginary lines from the topside of the base of the ears and top of the eyes intersect, or slightly above this point.
In horned cattle, aim at a point midway across the forehead at the intersection of imaginary lines that join from the top of each eye with the opposite horn. The line of fire should be aimed into the skull towards the centre of the brain or spinal cord to target the brainstem which is midway along an imaginary line drawn between the base of the ears.

For the poll method (B), cattle are shot through the skull just behind the base of the horns. The line of fire should be directed slightly forward of the angle of the jaw of the cow, depending on the point of impact, to target the brainstem.

2. The diagrams are representative and individual anatomical differences in cattle to be killed must be taken into account.

G11.2 The preferred option for humane killing should be a firearm directed to the frontal position of the head. The brainstem should be targeted and it lies midway along an imaginary line drawn between the base of the ears.

*Note:* For adult cattle, a rifle should deliver at least the muzzle energy of a standard 0.22 magnum cartridge. For larger animals and bulls, 0.30 calibre high-power cartridges are recommended. For calves, a rifle should deliver at least the muzzle energy of a standard 0.22-long rifle cartridge.

**Confirming death in cattle after humane killing**

G11.3 Three or more signs should be observed to determine whether the method used for humane killing has caused death.

*Note:* Signs of death include:

- loss of consciousness and deliberate movement including eye movement
- absence of a corneal ‘blink’ reflex when the eyeball is touched, or
- maximum dilation of the pupil
- absence of rhythmic respiratory movements for at least five minutes

**Firearms**

*Note:* Firearms energy specifications are as follows:

- The standard 0.22-long rifle cartridge means the use of any 0.22 rim-fire cartridge that produces in excess of 100 foot pounds of energy at the muzzle.
- The standard 0.22 magnum cartridge means the use of any 0.22 rim-fire magnum cartridge that produces in excess of 300 foot pounds of energy at the muzzle.
- The centre-fire cartridge means the use of any centre-fire cartridge that produces in excess of 1000 foot pounds of energy at the muzzle.

**Captive bolt devices**

*Note:* Captive bolt use on cattle should be in the frontal or poll positions and be accompanied by appropriate restraint followed by an effective procedure, if necessary, to ensure death.
The captive bolt stunner should be pressed firmly on the head before being discharged, and should be positioned as described in the approved positions for cattle. The temporal position should be avoided.

For penetrating captive bolt stunners, the cartridge power should be appropriate to the class of cattle. Non-penetrating captive bolt stunners are not recommended.

Operators should make sure that charges intended for use are appropriate for the class of cattle.

Captive bolts should be regularly cleaned and maintained in optimal working condition according to the manufacturer’s instructions.

**Bleeding out (exsanguination)**

G11.4  Bleeding out of unconscious cattle should be done using a suitable, sharp knife

*Note:*  
Bleeding out (exsanguination) is done by cutting the main blood vessels at the top of the heart via the thoracic inlet (chest stick) or in the neck (neck cut).
access to water A reasonable opportunity for cattle to be able to drink water of a suitable quality and quantity to maintain their hydration.

animal welfare The state of an animal and how well it is coping with the conditions in which it lives.

artificial breeding procedures Includes artificial insemination, oocyte collection, embryo transfer, semen collection including by artificial vagina or electro-ejaculation, and pregnancy diagnosis on cattle.

beef feedlot A confined yard area with watering and feeding facilities where cattle are completely hand or mechanically fed for the purpose of beef production.

bleeding out Loss of blood caused by cutting the major blood vessels, usually in the neck or at the base of the heart via the thoracic inlet.

calf A bovine animal less than six months old.

castration The removal or disruption of the function of the testes by excision, or by constriction and / or crushing of the testicular blood supply (using a rubber ring, tension band or burdizzo clamp) or by dysfunction created by the cryptorchid method.

Notes:
1. Immuno-castration is not included in this definition but is not considered a welfare concern.
2. For the purpose of this document, cryptorchidism is effectively considered to be castration.

cattle All members of the genus Bos.

cautitious chemicals Chemicals that when applied will burn or denature undamaged skin. Does not include veterinary treatments.

class A group of a livestock species defined by age, size or sex. Lactating livestock with young at foot are considered as a single class.

construction Nature of facilities or equipment including the design, layout, installation, assembly of the facilities and the materials of which they are made.

cow An individual female of the genus Bos.
**dehorning**  The removal of attached horns.

**direct supervision**  A person (the supervised person) is acting under the direct supervision of another person (the supervisor) if the supervisor:

(a) provides instructions and guidance to the supervised person in relation to the subject activity; and

(b) oversees and evaluates the performance of the activity by the supervised person; and

(c) is contactable by the supervised person; and

(d) is supervising the person in accordance with paragraphs (a), (b) and (c) above; and

(e) is on the same premises as the supervised person while the subject activity is being undertaken; and

(f) is able to immediately render assistance to the supervised person, if required, at any time during which the subject activity is being undertaken.

**disbudding**  Removal of an area of skin including the horn bud in a young calf prior to solid attachment of the horn bud to the skull.

**dropped ovary technique (DOT)**  A technique for spaying cattle that involves dropping ovaries into the abdomen by using a prescribed instrument to:

(a) enter the abdomen by piercing the wall of the vagina with the instrument’s spearhead; and

(b) place each ovary, by rectal manipulation, in the oval hole in the instrument’s spearhead; and

(c) sever the ovaries with the sharp edge of the slit in the instrument’s spearhead by retracting the instrument.

**drought**  A severe feed and/or water shortage following prolonged periods of abnormally low rainfall not expected in the seasonal cycles.

**earmarking**  The removal by cutting of a registered, shaped portion of the ear with earmarking pliers.

**effective control**  In relation to working dogs, ‘under control’ means that they are fully responsive to the commands of a stockperson at all times while mustering or handling livestock.

**electro-immobilisation**  The use of pulsed, low-frequency electrical current to restrain an animal. The process produces tetanic contractions of skeletal muscles and therefore voluntary movement is not possible. The process does not produce pain relief.

**emergency**  Where animal welfare or human safety may otherwise be compromised.

**excessive heat load**  A written contingency plan to address excessive heat load conditions for
action plan (EHLAP) a feedlot operation.

Note: These are audited every year for NFAS feedlots.

extremes of weather Temperature and climatic conditions (e.g. rain, hail, snow, wind, humidity and heat) that individually or in combination are likely to predispose cattle to heat or cold stress.

facilities Any yard, raceway, ramp, crush, building or enclosure used for the purposes of housing or handling cattle, including portable facilities and equipment.

Does not include a paddock or laneway with conventional wire fencing.

Fences yards, sheds, raceways, feed and water troughs, portable yards, ramps, and equipment including dips and sprays.

flank approach The incision of the skin and tissue layers on the left side of the cow to gain access to the abdominal cavity.

free stalls Can be open-air, partially or fully enclosed structures in which dairy cattle are housed and provided with feed and water. They can be used to house dairy cattle for extended periods and include a bedding area for cattle to lie down, and possibly a loafing area for cattle to stand. The term 'free stall' refers to the bedding area where cattle are allocated specific cubicles (stalls), which they may enter to lie down.

heat stress When the response by animals to hot conditions above their thermo-neutral limit (heat load) exceeds the ability of their behavioural, physiological or psychological coping mechanisms.

inspection The visual check of the health and welfare of cattle on an individual or herd basis.

lift 'Lifting off the ground'. Handling of the head, neck, horns, ears or tail to control or steady an animal in a supported lift or other manoeuvre, is permitted where the major effort is whole body support, and not using one or a combination of the above body parts for the major effort.

pain relief The administration of drugs that reduce the intensity and duration of a pain response.

shy feeder Cattle in a feedlot that do not eat and drink enough.

spaying The removal of the ovaries by excision, or disruption of the function of the ovaries by removal of part of the fallopian tubes.

Note: Immuno-spaying is not included in this definition and is not considered a welfare concern.

supervision A person (the supervised person) is acting under the supervision of another person (the supervisor) if the supervisor:

(a) provides instructions and guidance to the supervised person in relation to the subject activity; and
(b) oversees and evaluates the performance of the activity by the supervised person; and

(c) is contactable by the supervised person.

See ‘direct supervision’.

tail dock or docking  The removal of a portion of a cow’s tail, or actions that cause the loss of a section of the tail. It does not include any trimming of the switch hairs (the bush).

tether or tethering  The securing of an animal to an anchor point to confine it to a desired area. It is not short term tying up or hobbling.

weaning  When liquid feed is no longer provided to the calf.

webbing  Spaying by removing a short length of the fallopian tubes. The ovaries are not affected. Existing pregnancy is usually maintained.

yarding  The process of putting cattle into a cattle yard.