CATTLE

Code of practice for cattle in Western Australia

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PREFACE

The **Code of practice for cattle in Western Australia** is based on *The Australian Model Code of Practice for the Welfare of Animals - Cattle* and has been adapted for use in Western Australia. The original *Model Code* was prepared for the Standing Committee on Agriculture and Resource Management (SCARM) and endorsed by the Agriculture and Resource Management Council of Australia and New Zealand (ARMCANZ) for use as a national code. It was prepared in consultation with the relevant industry organizations and state agencies.

This code has been prepared to assist all persons handling or using cattle in Western Australia, and reference to this code is made in Regulations provided under Section 25 of the *Animal Welfare Act 2002* for the purposes of a defence against cruelty. It is not intended to be used for either audit or compliance purposes.

This Western Australian version of the code is supported by the livestock industries and the Department of Agriculture. It is based on current knowledge and technology. It will be reviewed in the future on a needs basis, to take account of advances in the understanding of animal physiology and behaviour, technological changes in animal husbandry and their relationship to the welfare of animals.

For anyone using animals for scientific purposes, as defined in the *Animal Welfare Act 2002*, this code should be read and used in conjunction with the "scientific use code".

Further copies of this code are available from the Department of Local Government and Regional Development or from the internet at: http://www.dlgrd.wa.gov.au

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1. INTRODUCTION

The aims of this Code are:

- to promote humane and considerate treatment of cattle, and the use of good husbandry practices to improve the welfare of cattle in all types of cattle farming enterprises.
- to inform all people responsible for the care and management of cattle about their responsibilities.
- to set an industry standard by defining acceptable cattle management practices.

"Cattle" includes all domestic bovines eg. cows, bulls, steers, heifers, and calves. "Calves" are under 6 months of age.

Assistance with specific management or disease control problems is available from the Department of Agriculture, veterinarians in private practice and consultants.

2. BASIC WELFARE NEEDS

2.1 General

2.1.1 Cattle are kept in situations which vary from extensive grazing to close confinement and housing. Whatever the form of husbandry, owners and managers have a legal and moral responsibility to care for the welfare of the animals under their control.

2.1.2 The basic needs of cattle for adequate food, water, air, shelter, comfort, and freedom to move and express normal behaviour patterns must be met, irrespective of the nature of husbandry or farming system.

2.1.3 The people managing and handling cattle must be competent. The skills for managing and handling cattle include the ability to:

- work so that stress to cattle is minimised;
- use the natural behaviour of cattle;
- recognise the early signs of distress or disease and to initiate prompt and appropriate preventive or remedial action.

Good stockpersons are flexible in their approach to cattle management and handling and adapt to the needs of differing cattle and circumstances.

2.1.4 The basic needs for the welfare of cattle are:

- Adequate quantity and quality of water, food and air to maintain good health.
- Social contact with other cattle. Cattle adapt to the familiar surroundings in which they live, including other cattle. Separation from familiar cattle may cause stress which may be worsened by mixing or crowding with unfamiliar stock. Individual cattle, such as house cows, may adapt to solitude, provided other welfare requirements are met.
- Sufficient space to stand, to lie down, stretch and groom, and to perform normal patterns of behaviour.
- Protection from predation.
- Protection from disease or injury, and appropriate treatment if they occur.
- Protection from adverse extremes of climate or unseasonal changes in weather conditions, where possible.
- Precautions against the effects of natural disasters (eg. storage of feed to protect against drought, provision of fire-breaks).
- Protection from unnecessary, unreasonable or unjustifiable pain, suffering or injury.

2.2 Water

2.2.1 Cattle must have access to an adequate supply of cool clean drinking water.

2.2.2 Cattle should not be deprived of access to water for periods longer than 24 hours - unless in transit, in which case the codes of practice for transport of livestock apply.

2.2.3 Water requirements depend on age, bodyweight, production level, air temperature, humidity, dry matter intake, and dry matter content of the feed eaten. (For approximate consumption rates of water for cattle see Appendix 1).

2.2.4 Cattle used to drinking salty water may need special consideration. If they refuse fresh water, they may need a gradual change from salty to fresh water.

2.2.5 Where water medications (eg bloat or facial eczema preventitives) are to be used they should be introduced gradually. Cattle should be observed to ensure they do not refuse to drink the medicated water.

2.3 Air

Cattle must not be kept in or exposed to any situation where the air is so contaminated with dust or noxious chemicals, as to be harmful to the long term welfare of those animals. Use of sprinklers or misters to settle dust should be considered in extremely dusty situations. Dust is not only a health hazard but may impede smooth, safe working of cattle in yards.

2.4 Food

2.4.1 Cattle should have access to or be provided with food that will maintain their well-being. They should not be deprived of access to food for periods longer than 48 hours. Animals in poor condition, in late pregnancy or early lactation, should not be deprived of access to food for periods longer than 24 hours.

2.4.2 Food available should meet the requirements of maintenance, growth, pregnancy and lactation, and provide for any extra demands, such as exercise or cold stress. In areas subject to drought or to seasonal feed shortages, arrangements should be made to ensure a continued supply of feed adequate for maintenance of cattle.

2.4.3 If the pasture is poor, in quality and/or quantity of feed, and no supplements are being fed, the stocking rate should be reduced accordingly.

2.4.4 Cattle should be protected as far as possible from toxic plants or other substances harmful to their health. Where byproducts are fed to cattle, adequate treatments must be used to destroy potential toxins, and adequate monitoring for toxic substances should be carried out regularly.

2.4.5 Dusty feeds cause breathing and eye problems. Handfed rations should not be too finely processed. Dusty feeds should be dampened daily with a fine water spray.

2.4.6 If feed is fed in a form cattle are not accustomed to, appropriate measures such as "teacher" animals should be used to encourage animals to eat. If an animal does not commence eating the new feed within 24 hours, an alternative feed acceptable to the animal should be provided.

2.4.7 In many parts of Western Australia cattle should receive mineral supplementation, and the Department of Agriculture can provide advice.

2.5 Precautions Against Drought

2.5.1 Drought may be defined as a severe shortage of food and/or water, usually the result of prolonged periods of low rainfall. It is not a normal seasonal decline in the quantity and quality of food available.

2.5.2 Where minimal water and food requirements cannot be met (whether or not drought conditions prevail), cattle should be moved or agisted to a place where feed and water is adequate, sold or humanely slaughtered, as soon as possible.

2.5.3 Cattle being fed for survival should be attended to at least twice a week. Where possible they should be grouped appropriately, by sex, age & size, to reduce competition. Shy feeders require special attention and treatment, depending upon type of food, method of feeding and strength of competing cattle.

2.5.4 Weak cattle, or cattle in poor condition, which go down after limited exercise are not fit to travel, and should not be permitted to do so. They should be fed and watered until they are fit to travel or promptly and humanely destroyed.

2.5.5 Weakened cattle which are strong enough to travel should be transported to their destination by the shortest possible route. Weakened cattle should not be mixed with strong animals or subjected to the stress of sale through saleyards.

2.5.6 As far as possible, weakened cattle should be given special protection against exposure to extremes of weather, especially when in transit.

2.6 Protection from Climatic Extremes and Predation

2.6.1 As far as practicable cattle should be protected from adverse weather conditions, including climatic extremes, unseasonal changes and other factors causing cold stress or heat stress. The provision of shade, or alternative means of cooling, such as misters and sprays, is required where cattle would otherwise suffer from heat stress, particularly where summer feedlotting is practised - see 7.2.

2.6.2 Where cold stress is likely, shelter (eg. windbreaks) and additional fodder should be provided. Cold stress is worsened by wind chill and wetting of the coat. Calves are particularly at risk.

2.6.3 Plans should be made and reasonable steps should be taken to ensure protection from the effects of natural disasters. In areas subject to flooding, care is necessary in paddock and facility design to allow access to some safe high ground, or to plan for stock evacuation to high ground. Adequate fire breaks should be maintained. Cattle must be attended to after a natural disaster such as bushfire or flood. Animals should be assessed by a competent person. Immediate treatment or humane destruction may be required depending on the animal's condition.

2.6.4 All reasonable steps should be taken to protect stock from predators.

3. INTENSIVE CATTLE SYSTEMS - HOUSING, SPACE AND ACCOMMODATION

3.1
The Code of Practice of ALFA, the Australian Lot Feeders' Association, as shown in Appendix 2, should be followed. Additional provisions, not covered in that Code, follow. This Code does not include the appendices to the ALFA Code: the information contained in Appendices 3 and 4 of this Code largely parallels that contained in Appendices 2, 3 and 4 of the ALFA Code.

3.2
The design, location and construction of a feedlot and/or a feed pad should take account of topography, climate, age and size of animals to be fed, space and feed requirements, and labour and management skills available. Adequate provision should be made for cleansing, drainage and waste disposal. Areas should be of a soil type which does not bog in wet weather, and be adequately graded and drained to provide proper water run-off. All cattle should be provided with firm and dry footing. Effluent disposal should be arranged and monitored to ensure environmental safety.

3.3
Recommended minimum requirements for trough and yard space are shown in Appendix 3.

3.4
Laneways, races, entrances and exits should be designed to take advantage of the social behaviour and movement patterns of cattle.

3.5
Tethering is not acceptable as a routine husbandry practice. Where collars, ropes and similar materials are used to restrain cattle, they should be constructed and used so as to avoid inflicting injury and pain. Where tethering is used eg. to restrain cattle at shows, animals must be accustomed to tethering before they are kept tethered for long periods. Tethered animals need adequate exercise each day.

3.6
In the case of housed cattle, mechanical or natural ventilation should remove from the environment excessive heat, moisture, carbon dioxide, dust, other noxious gases and airborne infectious organisms, and ensure continual replacement with fresh air. The ventilation method used must be appropriate to the location of the cattle and the design of the building.

3.7
Feed troughs should not be allowed to be empty for more than 2-3 hours, if at all. The manager should always be on the lookout for shy feeders with any trough feeding system.

3.8
When using feed ingredients which carry a risk of disease outbreak due to infections, toxins or energy content if not correctly or consistently processed, such as poultry litter or brewers grain, safeguards must be put in place to ensure that processing is carried out correctly and consistently. Poultry litter must be treated and stored properly, should not contain any parts of dead birds and should not make up more than 10% of the total diet.

4. ARTIFICIAL REARING OF CALVES

4.1
Housing for artificially reared calves should be hygienic, with adequate ventilation, climate control and lighting. Flooring should be well drained with adequate dry lying space for each calf. Flooring and internal surfaces should not cause injury and should allow easy cleaning.

4.2
Careful attention to group sizes, access to feed, milking shed location, ancillary accommodation, lighting, air inlets and outlets, handling facilities and stalls can alleviate problems of health, stress or aggression.

4.3
For multiple calf rearing systems, where individual calf pens are used, these should be so made and located to allow each calf to see and hear other cattle (ie. at least one other individual). 1.5 to 2.0 m^2 of floor area per calf should be provided to permit self-grooming and prevent overcrowding. The total shed volume should provide for at least 5.5 m^3 per calf.

4.4
In cold weather, adequate shelter or housing, and feeds with a high energy content should be provided.

4.5
Calves should receive at least two litres of fresh or preserved colostrum or an approved substitute within the first 12 hours following birth. Thereafter, they should be fed on liquid milk, commercial milk-replacer or colostrum, in sufficient quantities to provide essential requirements for maintenance and growth. High quality pasture, hay or pellets should be available to calves from no later than 3 weeks of age to help in development of their digestive tracts.

Hygienic calf feeding practices, including thorough daily cleansing of all equipment (feeding units, lines, bottles, nipples, troughs, etc.) are essential to protect calf health and welfare and to prevent diarrhoea.

4.6
Milk-replacers based on skim milk should not be fed to calves under three weeks of age, unless they are in a properly balanced formulated mixture of protein, fat and vitamins. Milk replacers should be reconstituted according to manufacturers instructions. Milk and milk-replacers should not be fed in excess of body temperature (39°C).

4.7
Calves should be weaned off milk, milk replacer or colostrum on to rations providing all essential requirements, only when their ruminant digestive systems have developed sufficiently to enable them to maintain growth and well-being, and not earlier than 6 weeks of age. Restricted rations of the "white veal" type ie. iron-free diets which cause anaemia, are unacceptable.

4.8
Where large numbers of calves are reared, they should be grouped by age and size to reduce competition for food and to allow closer observation and management.

5. CATTLE HANDLING FACILITIES, MUSTERING AND YARDING

5.1
Sheds, pens, yards, lanes, ramps and other areas where cattle come together should be constructed and maintained so as to minimise stress, injury and disease. The design and construction of such areas should enable dust and noise to be minimised.

Yard design should avoid sudden changes in levels, poor lighting, narrow passages and awkward or 90° turns. Well-designed yards will take advantage of the natural behaviour of cattle and encourage the free movement of animals through the facility. Effective use of visual barriers and visible passageways and gateways will assist easy working of cattle.

Objects such as water and feed troughs, gate hinges and latches should be designed and located so as to avoid injury to cattle. Yard pens should be calf-proof.

5.2
Floors of yards, sheds, pens and loading ramps should have a surface that minimises slipping and is easy to clean.

5.3
Holding yards should be designed to minimise stress or injury and to allow all animals held to lie down and to exercise.

5.4
Yards should be constructed and maintained to avoid development of boggy areas. Yards should have sufficient slope to provide effective drainage. Uneven or steeply sloping surfaces increase the risk of falling. Surfaces or gratings which upset the smooth movement of cattle should be modified.

5.5
Depending on management requirements, cattle should be confined on concrete surfaces as briefly as possible. Prolonged physical contact with concrete floors predisposes cattle to lameness, particularly in wet conditions when the horn of the hoof is softened. Artificial floors should be non-slip, non-abrasive, and easy to clean and dry.

Gravel tracks to and from paddocks, sheds or dairies should be maintained adequately to avoid excessive hoof wear and consequent lameness. Cattle with worn hooves should not be forced to walk on rough tracks.

5.6
Restraint facilities should allow for safe inspection and treatment of cattle. Races and crushes should be constructed to allow efficient handling of cattle without endangering animals or handlers. Head restraint facilities should allow for quick release and avoid choking. Walk-through bails are preferred; guillotine headbails are not recommended.

5.7
Cattle must not be driven to the point of collapse.

5.8
Cattle should be handled quietly. The use of goads and dogs for the handling and moving of cattle, should be limited to the minimum necessary to complete the procedures. Dogs that bite cattle should be muzzled when working.

5.9
The use of shotgun pellets on cattle as an aid to mustering (or for any other purpose) is not acceptable.

5.10
Goads should be made of cane, leather or plastic. "Flappers" (leather straps attached to a cane) are acceptable. Metal or wooden pickets, pipes, strikers and fencing wire are not acceptable for use on animals.

5.11
Electric goads should be powered only by battery or hand dynamo. Use of electric goads on animals with no room to move, or on young animals in mixed-age groups is unacceptable.

5.12
The use of unreasonable force in twisting an animal's tail to cause it to move is unacceptable. Force sufficient to cause breakage or dislocation of the tail is unreasonable.

5.13
Specific guidelines for the transportation of cattle are contained in the Code of practice for the transport of cattle in Western Australia.

5.14
Electric fences should be designed, maintained and used so that contact with them does not cause unnecessary pain or distress. When first exposed to electric fencing, cattle should have adequate time and space to become accustomed to it.

5.15
Cattle being moved should be kept in familiar groups. Unless the animals are normally run together, it is best to keep separate:

- horned and polled animals;
- bulls and cows;
- calves and unfamiliar older cattle.

6. MANAGEMENT PRACTICES

6.1 General

6.1.1 Restraint should be the minimum necessary to perform management procedures efficiently.

6.1.2 Procedures and practices that cause pain should not be carried out if painless and practical methods of husbandry can be adopted to achieve the same result.

6.1.3 Procedures and practices applied to cattle must be competently performed.

6.1.4 Any injury, illness or distress observed should be promptly treated.

6.1.5 Appropriate hygienic precautions should be undertaken for all operations.

6.2 Supervision

6.2.1 In any situation, supervision should be by competent stockpersons.

6.2.2 Frequency and level of inspection should be related to the potential risks to the welfare of the cattle and their handlers.

6.2.3 Cattle kept under intensive management in sheds, lots or yards should be inspected at least daily, fed daily and have ready access to water. Due attention should be given to shy feeders.

6.2.4 Grazing cattle require supervision, according to the class of cattle, density of stocking, availability of suitable feed, reliability of the water supply, age, pregnancy status, climatic conditions and management practices.

6.2.5 Absentee landowners have a responsibility to ensure that cattle grazing their land are inspected frequently enough to prevent welfare problems.

6.3 Milking Practices

6.3.1 Dairy cows should be milked at regular times each day. Cows in full milk should be milked at least twice daily.

6.3.2 Careful management of the milking procedure and proper milking machine function are essential to the welfare of dairy cattle. Milking machines should be checked and correctly adjusted by a competent technician at least annually. Milking technique must minimise the risks of discomfort or injury to the cow and the development or transmission of disease.

6.4 Castration

6.4.1 Castration by knife or burdizzo without local or general analgesics/anaesthetics should be confined to calves at their first muster and preferably under the age of six months. Only under exceptional circumstances (eg. range management of older, previously unmustered bulls) should castration of older bulls be performed, and then preferably by a veterinarian.

6.4.2 Castration with rubber rings is only recommended for calves up to 2 weeks of age.

6.5 Spaying

6.5.1 Spaying by vaccination is preferred to surgical spaying. Spaying can benefit animal welfare and production under extensive conditions where females cannot be segregated from males - particularly feral bulls (see Section 13) and in other limited circumstances.

It enables cull females to survive and achieve marketable condition by preventing the stress of unmanaged pregnancy, calving and lactation. It also assists in controlling the genetic quality of the herd.

Surgical spaying should be conducted as quickly as possible by a skilled operator, preferably a veterinarian, using hygienic materials and technique. Adequate restraint, such as a suitable squeeze crush, is essential. Spayed females should be rapidly returned to familiar and clean surroundings following the operation. Post-operative inspection (with or without mustering) is desirable.

6.6 Tail Docking

6.6.1 Tail docking of dairy cows should be performed only where necessary for udder health or when otherwise prescribed by a registered veterinarian. Docking should be undertaken only on young female cattle, under 6 months of age.

6.6.2 Animals over 3 months old should receive analgesia or anaesthesia.

6.6.3 The tail should be removed between, not through, the tail bones. Sufficient length of tail should remain to cover the vulva.

6.7 Identification

6.7.1 Ear-tagging, ear-marking, ear-notching, ear-tattooing, udder-tattooing, udder implanting, freeze-branding, electronic characterisation and photography are the preferred methods of identifying cattle, from a welfare viewpoint. In many situations however fire branding remains the only practical method of permanently identifying cattle.

6.7.2 Branding with corrosive chemicals is unacceptable.

6.8 Dehorning

6.8.1 To minimise injury all horned cattle should be dehorned as young as possible and prior to weaning and at a suitable time to reduce fly worry. After dehorning, cattle should be inspected regularly for the first 10 days, and any infected wounds treated.

6.8.2 Dehorning domesticated cattle without local analgesics should be confined to animals at the first muster and preferably under 6 months of age. Older animals may be "tipped" (ends of horns removed without cutting into sensitive horn tissue) without anaesthetic in order to reduce their potential to cause injury.

6.8.3 Dehorning by means of chemicals should only be performed by a competent operator and within the first few days after birth. Avoid getting wounds wet (eg. due to rain) for several days, as the chemical may nun and burn the skin.

6.8.4 The recommended methods for dehorning of calves are by heat cautery, scoop dehorners or gouging knife, as soon as the horn buds are detectable.

6.8.5 Breeding for polled cattle makes dehorning unnecessary and is therefore recommended.

6.9 Mating

6.9.1 Testing of bulls for serving capacity should only be performed using mature cows with normal reproductive organs; such cows should not be used for longer than two hours in any 24 hour period. Females which have had one calf may be used with 2-3 year old bulls; older cows should be used with adult bulls.

6.9.2 Female cattle should not be mated to bulls whose calves are likely to be too large to be born normally.

6.9.3 Artificial insemination of cattle should be only by an experienced veterinarian or trained artificial inseminators.

6.9.4 Trainee artificial inseminators should practise this procedure only under the direct supervision of an experienced veterinarian or a trained and experienced artificial inseminator.

6.9.5 Semen collection, artificial insemination, embryo collection, embryo transfer, and associated operations should be performed only by or under the direct supervision of qualified operators.

6.10 Calving and Weaning Practices

6.10.1 Care should be taken to minimise calving difficulties, by the adoption of proper management practices, such as:

- select heifers for mating only when they have reached the minimum target weight for the breed
- avoid over- or under-feeding pregnant cows and heifers
- avoid mating heifers to large bulls, or British breed heifers to European breed bulls
- cows close to calving should be supervised, and veterinary help summoned early if needed.

6.10.2 The diet of the pregnant or lactating cow should be maintained at a level that will minimise calving difficulties, and favour calf survival.

6.10.3 Calving cows should be checked frequently, where possible, but with minimal disturbance. Difficult calvings should be promptly detected and attended by a competent operator.

6.10.4 Manual removal of retained foetal membranes is seldom helpful. It should only be carried out by a competent operator, and only once separation of cotyledons is complete.

6.10.5 Calves should be weaned only when their ruminant digestive systems have developed sufficiently to enable them to maintain growth and well-being, and not earlier than 3 months of age for naturally fed calves, or 6 weeks of age for artificially reared calves.

6.10.6 Cattle handlers should use weaning time to familiarise weaners with routine management practices. This will make handling easier and reduce stress in later life. These practices may include handling in yards and facilities; feeding from troughs or feeders; working through

yards; trucking, even if only over short distances; and working with horses, dogs or motor bikes.

6.10.7 The dam's condition should be taken into account when deciding when to wean.

6.10.8 Cows with cancer eye should be culled or treated as soon as possible after cancer is noticed. Cancers must not be allowed to progress untreated simply to permit the cow to complete raising a calf.

6.11 Marketing of Bobby Calves

6.11.1 Young calves are very susceptible to stress and disease and should not be exposed to management procedures which aggravate this situation.

6.11.2 All calves should have access to food within 12 hours before transportation. Animals held awaiting transport, sale or slaughter, or being transported, should not be kept without food for more than 24 hours.

6.11.3 Young calves for slaughter should be transported directly to the abattoir, without exposure to cold or heat stress.

6.11.4 The minimum recommended liveweight for a calf presented for sale is 23 kg (50 lb). Heavier calves can better withstand the rigours of handling and transportation.

6.11.5 The navel should be dry, and the umbilical cord at the junction with the skin should be dry, wrinkled, withered or shrivelled. Calves which do not meet these criteria should not leave the farm.

6.11.6 Lethargic, listless or immature calves should not be presented for transport or sale. Calves should be bright and alert, robust and able to rise unassisted.

Calves presented for sale should have firm hooves which are worn down flat and not bulbous or soft.

6.11.7 Sick or injured calves should be treated appropriately or humanely destroyed. They should not be presented for transport, sale or slaughter.

6.11.8 Calves should be handled in ways that avoid injury and unnecessary suffering. They should not be kicked, beaten, thrown, "dumped", or prodded with any sharp instrument. It is not acceptable to use electrical goading devices or unmuzzled dogs which are prone

to bite, when handling, driving, drafting, weighing, loading or unloading calves.

6.11.9 Transportation of calves from farms to abattoirs should take no longer than 10 hours. Calves should be slaughtered, or fed, on the day they arrive at abattoirs.

6.11.10 Facilities must be available for the safe handling, loading and unloading of calves.

6.11.11 Holding pens should be easily cleaned, well drained, have non-slip floors and should provide adequate shelter for calves at all times.

6.11.12 Calf-scales and calf pick-up points should be operated efficiently and humanely.

6.11.13 The operation of calf-scales and calf pick-up points and the transport of calves to saleyards or direct to an abattoir should be coordinated to permit slaughter with the least possible delay.

6.11.14 Calves not collected from pick-up points on the day of presentation are the responsibility of the person owning them at that time, who should ensure they are cared for and fed. Thereafter they should be either slaughtered, or fed at least once every 24 hours if slaughter is delayed.

7. Health

7.1
Appropriate preventive measures should be used for diseases that are common in a district or are likely to occur in the herd. A suitable vaccination, internal and external parasite control plan should be devised and followed for each farm.

7.2
Internal medications, such as vaccines and drenches, and external medications, such as dips and pour-on formulations, should be stored and given in strict accordance with the manufacturer's instructions and recommended methods of administration. Overdosing may harm cattle and underdosing may result in failure to reach the required effect. Expiry dates should be strictly observed.

7.3
Sick, injured or diseased cattle should be treated promptly and appropriately, or humanely slaughtered. Separation from other cattle is recommended while the condition persists. Where emergency killing is indicated, it should be performed promptly and humanely.

8. AGISTMENT

8.1
The responsibility for the welfare of agisted cattle must be defined by agreement between the owner of the land and the owner of the cattle.

9. FERAL CATTLE

9.1
Feral cattle control poses special welfare problems and while these are addressed in other welfare codes, there are aspects of feral stock control which affect welfare of domestic cattle.

9.2
Control of feral cattle is essential to the welfare of the domestic herd, because:
feral cattle cause difficulties in mustering, handling, population control and disease control in domestic cattle herds.

- the presence of feral cattle makes it difficult to assess stocking rates in specific areas.
- feral cattle compete for feed and can cause nutritional deficiencies.
- feral cattle contribute to land degradation, which worsens the above problems.
- feral cattle can act as reservoirs of disease-causing organisms and impede disease control in domestic herds.
- feral bulls may fight with, injure or kill domestic bulls and unnecessarily stress the female cattle.
- feral cattle upset controlled breeding programs and prevent controlled genetic improvement.

9.3
Where physical, economic or welfare constraints prevent adequate control of feral stock and the health and welfare of controllable stock is threatened, removal or humane destruction of feral stock is necessary.

9.4
Following capture of feral cattle, surgical procedures (eg. dehorning) outside the normal guidelines, may help to minimise stress and injury to the group into which feral animals are released.

10. HUMANE DESTRUCTION OF CATTLE

10.1
The preferred methods of euthanasia are:

- overdose of anaesthetic under veterinary supervision
- euthanasia using gunshot or captive-bolt pistol by the frontal method. The captive-bolt pistol or firearm should be directed at the point of intersection of lines taken from the base of each ear to the opposite eye (See Figure 1).

Use of shotguns is not recommended for destruction of cattle.

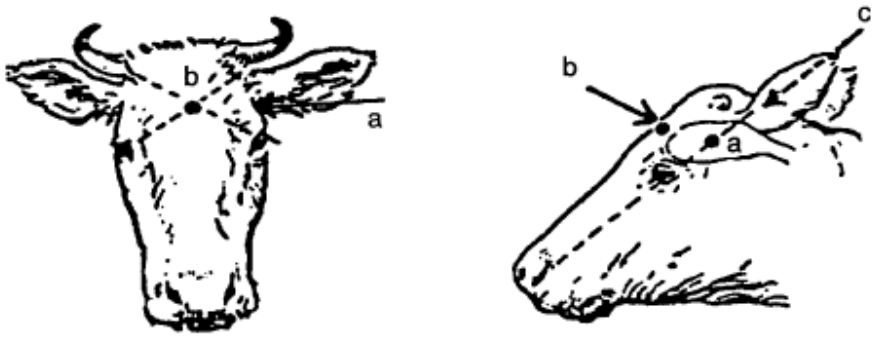

Figure 1: Humane destruction of cattle

"a" Position for temporal method (suitable for firearms only)
"b" Position for frontal method (firearm or captive-bolt pistol)
"c" Position for poll method (firearms only)

10.2
An animal stunned with a captive-bolt pistol must be bled out by severing the major vessels of the neck as soon as it collapses to the ground. To avoid injury due to the animal's involuntary leg movements, the operator should stand behind the neck.

10.3
Killing may also be by gunshot using the temporal or poll methods. All other methods of killing are unacceptable.

10.4
Exceptions to the recommended practice may occur under extreme conditions. In these circumstances common sense and genuine concern for animal and human welfare should prevail.

APPENDIX 1 - WATER FOR LIVESTOCK

1. Guidelines to Consumption

(Note - these are average figures and there will be wide variation in practice depending on climate and the water content of feed.)

Body weight (kg)	Average Water Consumption (litres per day)
50	6–7
70	7–9
90	10–11
120	14–16
150	18–20
190	20–25
350	25–35
450	35–45
540 to 730 (dry cows)	20–40
540 to 730 (lactating cows)	45–110

2. Mineral Salts

2.1 This assessment of quality for cattle consumption is made on the basis of mineral content (salinity) only and does not consider other possible contaminants or harmful organisms.

2.2 Salty water can cause gastrointestinal symptoms, wasting and sometimes death. The severity of the symptoms can depend on other factors which must be taken into account with a knowledge of local conditions.

Factors to consider:

Tolerance to salinity varies from high to low in: sheep, cattle and buffalo, horses, pigs, poultry.

Climate - e.g. animals are less tolerant to salty waters during hot, dry periods.

Age and condition - lactating, growing and weak animals require better quality water.

Composition of pastures - higher salinity water is tolerated better if cattle are on green pastures.

Habituation - stock not accustomed to salty water can suffer ill effects or refuse to drink, but adjust if introduced gradually.

Composition of feed - salt content of prepared feed should be reduced if water is salty. In summer and during dry periods, the salinity of water in dams, rivers and troughs increases due to evaporation, and drinking troughs should be flushed regularly.

3. Current Recommendations

Where salinity of water may be high, it should be tested for its suitability as stock drinking water. Testing services are available through the Department of Agriculture.

APPENDIX 2 - AUSTRALIAN LOT FEEDERS' ASSOCIATION CODE OF PRACTICE: CATTLE WELFARE IN FEEDLOTS

1. Introduction

1.1 This code is designed to provide a standard for the handling and care of animals. It is very important that cattle are handled correctly and with care to minimise any stress, both for the animals' wellbeing and economic reasons. It is the concern of
all feedlot managers that the cattle are healthy and contented. Animals that are healthy and contented will always perform better than animals under stress.

1.2 This code is divided into three basic management requirements: Livestock Management, Feeding Management and General In-Yard Management.

2. Livestock Management Practices

2.1 To ensure animals are well treated, the following practices are to be followed. They are the responsibility of the owner and the manager.

2.2 Each feedlot should, in consultation with an experienced Veterinarian and in accordance with State laws, develop and operate its own specific health management programme which will provide for the particular needs of the
feeding programmes proposed at each site. The programme will include policy on arrival procedures, drug use, feeding, general handling and record keeping.

2.3 Livestock personnel should be thoroughly familiar with the management programme and trained accordingly. Feedlots are to maintain sufficient numbers of trained and experienced staff to adequately cater for all provisions of the established health management programme on a 7 day a week basis.

2.4 The emphasis of the health management programme from the time cattle first arrive will be constant surveillance, particularly in the first 3 or 4 weeks after introduction, early detection of health problems and prompt appropriate treatment.

Sick cattle are to be immediately removed from the feeding group and placed in appropriate sick bay facilities for treatment using approved and proven protocols. The treatment area should be away from but adjacent to the main feedlot capacity.

2.5 Adequate records should be kept to monitor the incidence of disease and response to treatment.

A record of mortality should also be maintained including necropsy reports to be used as a basis for refinement of health management programmes, feed management, and to assist in selecting cattle for purchasing and processing.

Wherever practical, records should also detail the origin of feeder cattle and location of the feedlot.

2.6 The transportation of cattle to and from the feedlot should be carried out in accordance with the State code. Special attention should be paid to recommendations relating to the standard of transport equipment, loading densities and rest stops for long distances.

2.7 If an illness or death is encountered without the cause being known or reasonably anticipated, it is the responsibility of management to carry out an appropriate investigation and in the case of notifiable diseases, act in accordance with State regulations.

2.8 Cattle should always be handled quietly, and to the extent possible, in the cool of the day, especially during shipment.
With new arrivals it is often better to rest cattle overnight with access to palatable hay and water before processing the next day. The rate at which cattle are delivered to the feedlot should never exceed the capability of handling facilities or staff. When handling cattle avoid the use of excessive noise, whips, canes etc.

2.9 Newly arrived cattle should be closely inspected for signs of illness or injury and treated as required. Access to quality hay and clean water should be provided on entry, and to the extent possible arrival groups should be kept separately until processing is complete.

2.10 At processing, radical dehorning, particularly with mature cattle is not recommended. Tipping ie. the removal of the sharp point of the horn (4 to 5 cm) where no bleeding occurs, is acceptable provided provision is made in the allowance of feed trough space and transportation density.

2.11 With respect to injured or sick cattle, firstly an assessment of condition should be made after which animals are to be moved promptly to the hospital area for treatment in accordance with the established protocol or by the consulting veterinarian:

- when prognosis for recovery is poor, immediate salvage should be undertaken or where this is not possible, humane destruction must be effected immediately.
- where doubt exists a veterinarian's advice should be sought and followed.

2.12 Special facilities must be provided for the handling and proper care of cattle calving in the feedlot. Facilities should be appropriate for both cows and calves while either are held in confinement.

3. Regular Health Inspection

3.1 All cattle should be closely inspected on arrival, to assess health status, and treated as required.

3.2 Entry processing treatments should be designed as far as possible to treat and/or prevent disease and parasite conditions which are known to occur in the area or particular cattle group. If the background of a group of feeder cattle is not known cattle should be treated on arrival using a worst case situation as regards transport stress and disease exposure.

3.3 Once cattle are penned out all animals should be checked daily, and in the case of new arrivals, unweaned calves in particular, twice daily inspections are advised for the first few weeks of environmental adjustment, and feed adaptation.

Trained and experienced stock handlers must ride or walk all pens looking for any signs of poor health or injury using an established surveillance method. All cattle should be seen standing and moving.

Surveillance should include water trough inspections and general features of the fencing and pen surface which may predispose cattle to injury.
Sick cattle are to be promptly removed to the hospital area for closer attention by health staff or consulting veterinarian.

Signs of feeding disorders should immediately be reported to the feeding supervisor and the feedlot manager.

3.4 When cattle are being loaded onto trucks, great care must be taken to handle them as quietly as possible. They should be left on feed until loading commences.

4. Feeding Management

4.1 All diets formulated for use in cattle feedlots are to be nutritionally balanced and designed to provide sufficient nutrients and palatability for the production, maintenance and health of cattle and to ensure that digestive upsets are minimised.

4.2 All cattle excluding those fed by self feeders, must be fed with the feed being added to the troughs at least once daily and preferably twice to maintain feed freshness. Stale or spoiled feed must be removed from troughs. In wet weather more frequent feeding may have to be carried out to prevent spoilage.

4.3 The use of any ingredient must be limited to acknowledged nutritionally safe levels in the ration. When grain is used in the diet it should be gradually introduced to avoid digestive problems. The first feeding should always be done early in the morning as this is when cattle start looking for food.

4.4 Ration changes must be made in gradual, safe steps to guard against digestive disorders. All cattle should be closely observed during a ration change and changes should not be made concurrently with other environmental changes such as weather or cattle movement.

4.5 Water must be clean, fresh and readily available with troughs cleaned regularly.

4.6 The feed consumption of all pens of cattle should be monitored each day as any variation in consumption is an indication of their wellbeing.

4.7 The feeding of the feed commonly known as "Chicken Litter" or "Dehydrated Chicken Litter" is excluded as a recommended feed ingredient and is prohibited for use as such by members of the Australian Lot Feeders Association.

5. General Yard Management

5.1 Feedlot measurements will vary widely according to the type, age, sex, and weight of cattle, ration composition, soil type, climate and season prevailing at each feedlot and for each cattle group.

5.2 The handling yards are to provide for efficient, quiet handling of cattle with non-slippery surfaces, and no projections into the yards or races which may bruise or injure cattle. There must be adequate holding yards with water available within the handling area. Handling is best done in the cool of the day.

5.3 The pens themselves should be well drained with plenty of area for the cattle to move around.

5.4 Fences and troughs must be maintained in good order.

5.5 Water troughs should be large enough and designed in such a way that the cattle have easy access. Feed troughs should be designed with the same basic parameters in mind allowing sufficient space for all cattle to eat without competition. Actual space needed will vary with rations, cattle size and feeding frequency. The fences should be made from materials which cannot injure animals, and allow plenty of fresh air circulation.

5.6 A very important consideration is removal of manure from cattle pens and handling areas. The ALFA Environmental Code of Practice contains recommendations for the maintenance of the pen surface however, the frequency of cleaning must be such that cattle have sufficient area free of wet manure build-up for resting. Manure should not be allowed to accumulate to the point where reasonable surface drying is delayed after rainfall events.

Pressure areas close to feed and water troughs, fence lines and drainage lines are to be maintained such that excessive manure accumulation is avoided.

In some feedlots mounds can be used effectively to provide dry resting areas. If a section of the pen area is used for the stockpiling of manure, stocking density should be adjusted accordingly.

Dry surface manure should be removed in accordance with the environmental guidelines to minimise dust in periods of still atmospheric conditions. Dust can be controlled by increased frequency of removal, and moisture application by way of increased stocking pressure or water sprays.

5.7 Shade in hot, dry climatic areas may be a requirement. Shade should be considered in such areas where the temperature exceeds 30°C for an annual period in excess of 750 hours.

Recommendations for construction in high temperature areas.

- 30 sq ft (2.76 sqm) per animal. 2. Height at least 10 ft (3.04 m).
- Orientated east and west for maximum Cooling - north and south if sanitation is a problem (wetness under shade).
- Use of solid construction material.
- Shade materials should where possible have radiation characteristics of white on top, black on underneath.
- For sloping shade high side is south.

5.8 The first and most important consideration for any feedlot manager is the wellbeing of all cattle under his control whether on the feedlot or in transit.

A feeding exercise should not be attempted unless the operator has the resources to comply with both ALFA and State operating codes.

Initial design, facility maintenance, cattle acquisition, health management and feeding control must all be co-ordinated and organised around cattle welfare requirements.

APPENDIX 3 - MINIMUM REQUIREMENTS FOR TROUGH AND YARD SPACE IN INTENSIVE ANIMAL SYSTEMS

Feed Troughs:

yearlings	250-300 mm/head
15 months to 2 y.o.	300-380 mm/head
bullocks	380460 mm/head

Self Feeders:

75-100 mm/head minimum ie. 1 metre/10-12 head. Recommended space 1 metre/6 head.

Yard Space:

minimum 9 m^2/head, recommended 15 m^2/head - cattle with horns should be dehorned or allowed more space.
Space for shedded animals may be less. In cool climates, and with sufficient attention to management, 5.5 m^2 may be sufficient.

In the design phase, an allowance 10% greater than the estimated need should be included to provide for flexibility in feed type and ration and to minimise bullying.

APPENDIX 4 - FEED REQUIREMENT GUIDELINES

1. General Statement

1.1 Cattle should have their appetites satisfied, which requires about 2.5% of their bodyweight per day on a dry matter basis. Dry feeds normally contain about 10% moisture. Feed mixtures should contain sufficient digestible energy, protein and minerals to allow for the healthy growth of different classes of stock. Requirements vary with age, growth rate, pregnancy and lactation, so the quality and digestibility of the ration must be adjusted to supply the needs of the animals within the limits of appetite. Diets should be formulated with reference to tables of nutritional data on feeds and tables showing the requirements of different classes of livestock.

1.2 Advice should be sought from various publications on the subject, from Department of Agriculture advisers, or private consultants. Computer programs are available to assist in feed formulation.

1.3 The most important feed characteristic is its energy content, which must be matched to the needs of the particular class of animals. Various units are used to measure digestible energy values in formulating feeds, for example, megajoules (MJ) of metabolisable (usable) energy (ME) per kg of feed.

2. Dry Cattle

2.1 For young cattle under 300 kg liveweight at maintenance, the ration should contain not less than 7.5 MJ ME/kg DM and be fed at the rate of 2.5 kg DM/100 kg liveweight/day.

2.2 For older cattle over 300 kg liveweight the ration should contain not less than 6.3 MJ ME/kg DM and be fed at the rate of 2 kg DM/100 kg liveweight/day, up to 500 kg liveweight, reducing to 1 kg/DM/100 kg liveweight for cattle over 500 kg liveweight.

3. Breeding Cows

3.1 For pregnant cows in the last third of pregnancy, the ration should contain not less than 9.6 MJ ME/kg DM and be fed at the rate of 1.5 kg DM/100 kg liveweight.