

Sheep & Beef Cattle

Animal Welfare (Sheep & Beef Cattle) Code of Welfare 2010

A code of welfare issued under the Animal Welfare Act 1999

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National Animal Welfare Advisory Committee

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Preface

The Animal Welfare Act 1999 came into force on 1 January 2000. It establishes the fundamental obligations relating to the care of animals. These obligations are written in general terms. The detail is found in codes of welfare. Codes set out minimum standards and recommendations relating to all aspects of the care of animals. They are developed following an extensive process of public consultation and are reviewed every 10 years, or sooner if necessary.

I recommend that all those who care for animals become familiar with the relevant codes. This is important because failure to meet a minimum standard in a code could lead to legal action being taken.

I issue codes on the recommendation of the National Animal Welfare Advisory Committee. The members of this committee collectively possess knowledge and experience in veterinary science; agricultural science; animal science; the commercial use of animals; the care, breeding and management of companion animals; ethical standards and conduct in respect of animals; animal welfare advocacy; the public interest in respect of animals; and environmental and conservation management.

The Animal Welfare (Sheep and Beef Cattle) Code of Welfare 2010 is issued by me, by a notice published in the *Gazette* on 24 June 2010, under section 75 of the Animal Welfare Act 1999. This code comes into force on 25 June 2010.

This code is deemed to be a regulation for the purposes of the Regulations (Disallowance) Act 1989 and is subject to the scrutiny of Parliament's Regulations Review Committee.

A handwritten signature in black ink, appearing to be 'David Carter', written in a cursive style.

Hon David Carter
Minister of Agriculture

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1. Introduction

1.1 What is the purpose of this code of welfare?

The farming of sheep and beef cattle requires both experience and the observance of high standards to ensure the welfare of the animals. The purpose of this code is to encourage all those responsible for its implementation to adopt the highest standards of husbandry.

This code sets minimum standards for the care and management of sheep and beef cattle. It also includes recommendations for best practice, to encourage standards of care over and above the minimum. Advice throughout this code is designed to encourage owners and operators to strive for a high level of welfare. Explanatory material is provided where appropriate.

1.2 Who does this code apply to?

This code applies to all persons responsible for the welfare of farmed sheep and beef cattle. Under the Act, the “owner” of an animal and/or the “person in charge” are responsible for meeting the legal obligations for animal welfare. In the case of farm animals, the owner of the animals may place the animals in the care of others.

Responsibility for meeting minimum standards relating to the provision, design and maintenance of the facilities and equipment, the allocation of operational responsibilities and the competence and supervision of performance of employees lies with the owner and/or the person in charge of the sheep or beef cattle.

Responsibility for meeting minimum standards during the operation of particular tasks lies with the person responsible for carrying out that particular task. The person “in charge” of the animals at that particular point in time is generally a stockhandler. In practice, the identification of the person in charge is determined by the minimum standard in question.

1.3 What animals does this code apply to?

This code applies to all sheep and beef cattle which are farmed principally for their meat, fibre and/or offspring rather than their milk. This includes those sheep or cattle of recognised dairy breeds, reared and farmed for meat production.

1.4 What happens if I do not follow the minimum standards in this code?

Failure to meet a minimum standard in this code may be used as evidence to support a prosecution for an offence under the Animal Welfare Act 1999. A person who is charged with such an offence can defend him or herself by showing that he or she has equalled or exceeded the minimum standards in this code.

The recommendations for best practice in this code have no legal effect and are included to encourage higher standards of animal welfare.

1.5 How does this code relate to other codes of welfare?

While this code is intended to cover most aspects of sheep and beef cattle farming, it should be read in conjunction with other relevant standards and information that are referred to throughout this code:

- painful husbandry procedures such as castration, tail docking, and disbudding and dehorning – see the *Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005* (note that

surgical mulesing of sheep or alternative procedures may be added when NAWAC has completed its investigation of the practice);

- the transport of animals – the *Code of Recommendations and Minimum Standards for the Welfare of Animals Transported in New Zealand*; and the *Code of Recommendations and Minimum Standards for the Welfare of Sea Transport of Sheep from New Zealand*;
- the killing of animals for commercial purposes – the *Animal Welfare (Commercial Slaughter) Code of Welfare*; and
- emergency humane destruction – the *Code of Recommendations and Minimum Standards for the Emergency Slaughter of Farm Livestock*.

Codes of welfare have been developed, or are being developed, for individual species of animals and for the transport of animals. Other codes of welfare should be consulted where appropriate (see Appendix V, “Codes of Welfare”, to this code and the Ministry of Agriculture and Forestry website at: www.biosecurity.govt.nz/animal-welfare/).

2. Stockmanship and Animal Handling

Introduction

Stockmanship and animal handling cover a wide range of skills and personal qualities. These include knowledge of animal needs, an understanding of the husbandry system and the skills to operate within it, a rapport with animals, an ability to observe them and interpret behaviours, as well as skill in the practical aspects of handling, care and manipulation of animals.

2.1 Stockmanship

Introduction

The care of animals requires competence, experience and the observance of high standards of animal husbandry. The importance of good stockmanship can not be over-emphasised. It is based on empathy with and proper care of the animals in the particular husbandry system along with knowledge of the constraints and opportunities provided by the local physical and climatic environment.

Individuals' knowledge and experience of livestock and their needs, local climates and weather patterns, topography and shelter, as well as management practices remain one of the prime means of ensuring that the welfare of sheep and beef cattle is maintained and enhanced.

Those responsible for the care of animals should be competent in the care of animals and understand how their actions can affect animal health and welfare. Knowledge of the normal appearance and behaviour of sheep and beef cattle is crucial. It is essential to be able to recognise early signs of distress or ill-health so that prompt remedial action is taken or advice sought.

Minimum Standard No. 1 – Stockmanship

Sheep and beef cattle must be cared for by a sufficient number of personnel, who, collectively, possess the ability, knowledge and competence necessary to maintain the health and welfare of the animals in accordance with this code.

General Information

Indicators that could demonstrate that this minimum standard has been complied with include:

- Staff are trained on the job by supervisors who have competence in the husbandry of the animals within the particular locale and circumstances.
- Stock handlers, owners and persons in charge of animals keep up to date with developments in animal husbandry designed to maintain or improve animal welfare. They also review existing systems and practices regularly to ensure that they are both necessary (justified) and whether there is scope for improvement.
- Accurate records are kept of the history and treatment of animals.

Good stockmanship, appropriate care and timely intervention can lead to positive outcomes for animal behaviour, health, welfare and production. The personal qualities of a good stockhandler include:

- knowledge of the animal's normal (and abnormal) behaviour and needs
- ability to recognise signs of good and poor animal health, disease and injury

- the ability to anticipate and/or recognise problems early
- a calm, efficient and competent approach
- knowing when to intervene and when to seek assistance
- working to optimise management systems, including for the benefit of animal welfare
- knowledge of and ability to identify the appropriate animals for a particular husbandry system.

More formal education-based training is a useful complement to practical experience. The New Zealand Qualifications Authority lists a number of training qualifications for stockhandlers.

Information on animal handling standards and accredited training providers is available from the Agriculture Industry Training Organisation, PO Box 10 383, Wellington 6143 or from the NZQA website www.nzqa.govt.nz/framework/

2.2 Animal Handling

Introduction

Competent handling of sheep and beef cattle is essential for their proper husbandry. Distress and risk to both the animals and their handlers are decreased when good handling practices are followed.

Grazing animals, such as sheep and beef cattle, are prey species and fear motivates them to escape from perceived danger. Reducing fear by keeping an animal calm makes it easier to handle. Careful and quiet handling will help improve animal welfare and productivity, reduce ill-health and risk of injury, and result in animals settling down and resuming normal behaviour (e.g. feeding) more quickly after handling.

Badly handled animals are less productive and the associated stresses are detrimental to immune, reproductive and rumen functions. Inappropriate handling may lead to metabolic diseases such as sleepy sickness (pregnancy toxæmia) and milk fever (hypocalcaemia) and can predispose an animal to injuries and infectious diseases.

The first time an animal is handled is important in determining its subsequent responses – quiet and calm procedures reduce the stress caused by fearful experiences, the results of which are difficult to eliminate. Training, adapting, conditioning or habituating animals to handling (e.g. walking quietly among livestock, introducing them to new situations), especially if undertaken gradually and for short periods, may reduce fear and improve the efficiency and safety of handling, and tolerance of new situations.

Minimum Standard No. 2 – Animal Handling

- (a) Sheep and beef cattle must be handled at all times in such a way as to minimise the risk of pain, injury or distress to the animals.**
- (b) Sheep and beef cattle must not be prodded in the most sensitive areas, including the udder, eyes, nose, anus, vulva or testicles.**
- (c) Only the minimum force required must be used when moving sheep or beef cattle.**
- (d) Electric prodders must not be used to drive sheep or calves.**

Recommended Best Practice

- (a) When encouraging animals to move, audible or visual measures (e.g. rattles, plastic bags, stones in a container) should be preferred to devices which rely on physical contact (e.g. waddys, alkathene hoses, stock whips, stock canes, and sticks).
- (b) The flow of animals should be monitored, and if necessary controlled, at gateways, in narrow laneways and corners, or at other pressure points so as to ensure animals, especially young animals unaccustomed to yarding, are not injured, trampled or smothered.
- (c) Sheep and beef cattle should be allowed a period of 20-30 minutes to calm down after mustering to ensure easier and safer handling and to reduce fear.
- (d) Time spent in the yards should be kept as short as possible.
- (e) Animals in pens or yards should not be overcrowded, but allowed to be able to move away from handlers or other animals, because crowding is likely to contribute to distress and injury.
- (f) Care should be taken not to induce sudden fear or panic in animals in confined spaces such as in pens, corners and gateways, because flight might increase the risk of injury.
- (g) If problems of aggressive behaviour occur, the animals should be separated into compatible groups.
- (h) Groups of horned and polled cattle, bulls and cows, and calves and unfamiliar older cattle should be held in separate pens when yarded.
- (i) Tails should not be lifted or twisted.
- (j) Sheep should not be dragged or lifted by the wool or horns.
- (k) Sheep should not be held on their side or back for more than a few minutes at a time especially if the rumen is full or if they are heavily pregnant.
- (l) Vehicles should not be used to push animals physically.
- (m) When dogs are used, they should be under control at all times.
- (n) Electric goads should not be used to move cattle other than stubborn or recalcitrant cattle. Electric goads should not be applied to any animal for more than one second at any one time. If the desired effect is not achieved after four or five attempts, their use should be discontinued.

General Information

Human-animal interactions can be enhanced by improving handling procedures and facilities, improving animal reactions to humans by selecting appropriate animals for the husbandry system and getting them used to human contact, and attending to the skill and training of the handlers.

Knowledge of animals' flight (or safety) zone, and the point of balance (the line through the animal's shoulders which determines whether the animal will move forwards or backwards in the presence of a handler) will help with moving animals and in reducing fear. Animals may become fearful and agitated when people invade this zone and the animal is confined or unable to move away. The size of the flight zone depends on an animal's genetics, its previous experience with people, and the quality of those experiences (i.e. whether negative or positive).

Sheep and cattle have sensitive hearing and vision that is sensitive to rapid movement and high contrasts (e.g. shadows). Nervous, agitated or excited animals are more aware of small changes in their environment. Handling procedures should be carried out slowly and calmly, with stock handlers speaking softly in a low tone of voice.

Tame and fearless animals, those which associate more with people than other animals, those reared in isolation, or breeding males can be less fearful and more aggressive and thus should be handled carefully.

2.3 Mustering and Droving

Introduction

Mustering and droving of sheep and beef cattle are essential for their husbandry. While the handler relies on the animals' wariness of dogs and humans, his or her skill lies in understanding the behaviour of the animals and adapting their behaviour (and that of any dogs) in such a way as to facilitate mustering whilst minimising stress to the animals. Mustering and droving of sheep and beef cattle are best undertaken both slowly and quietly.

Minimum Standard No. 3 – Mustering and Droving

Sheep and beef cattle being moved on foot must not be forced to proceed at a pace that will cause exhaustion, heat stress or injury.

General Information

Indicators that could demonstrate that this minimum standard has been complied with include:

- The pace of mustering or droving is that of the slowest animals in the mob, with particular attention given to lambs and calves, and those with illness or injury.
- On rough, uneven surfaces and difficult or steep terrain, stock are moved according to the distance and terrain to be covered, ambient temperature, and the mobility of any lame, sick or young animals.
- Mustering or droving in hot conditions has been avoided.
- Cattle and sheep being driven long distances on consecutive days have adequate opportunity for feeding and resting.
- Indications of being moved too quickly i.e. laboured breathing or panting, especially with the tongue extended, are not seen or at the least when seen the animals are then rested or allowed to slow down.
- After mustering or droving, animals are provided with suitable conditions and time to enable settling down, mothering up or shelter seeking before the onset of darkness.

2.4 Restraint and Facilities

Introduction

Facilities such as yards, races, crushes, loading ramps and head bails need to be adapted to suit the animals and the husbandry system. Properly managed facilities and restraint systems can greatly facilitate the undertaking of husbandry procedures resulting in reduced risk of injury and distress to animals and stock handlers.

Minimum Standard No. 4 – Restraint and Facilities

- (a) All facilities, including fences, yards, sheds, and housing, must be constructed, maintained and operated in a manner that minimises the likelihood of distress or injury to animals.
- (b) Methods of restraining animals must only be used:
 - (i) when they are suitable for those animals being handled;
 - (ii) where the operators are fully conversant with their safe operation;
 - (iii) if they are in good working order so as to minimise the risk of injury or unnecessary pain or distress;
 - (iv) only for as long as necessary to perform particular husbandry practices; and
 - (v) where they allow the animal to be released immediately if required.
- (c) Animals that are physically restrained must be kept under supervision.
- (d) Electroimmobilisation devices must be used only in a manner that allows animals to breathe normally, demonstrate normal responses to pain and must not be used in place of pain relief when undertaking painful husbandry procedures.
- (e) Sheep or beef cattle to be restrained by tether (e.g. pets or show animals) must have been habituated to being handled in that way.

Note: NAWAC has recommended that all electroimmobilisation devices be declared restricted devices under section 32 of the Act.

Recommended Best Practice

- (a) Yard, shed and raceway design should enable free flow of animals.
- (b) Yard and shed flooring surfaces should be constructed of material that minimises animals slipping.
- (c) The use of dusty yards should be avoided when livestock are predisposed to stress and ill-health (e.g. lambs susceptible to pneumonia).
- (d) Fences should be designed, maintained and used so that contact with them does not cause excessive pain or distress.
- (e) Electroimmobilisation devices should not be used on animals other than adult cattle.

General information

Generally sheep should be restrained by means of an arm under the neck and an arm around the rump. Propping the sheep on its rump so that it leans back on the handler's leg is a convenient method of restraint for many quick procedures such as foot trimming and shearing.

Electroimmobilisation devices do not block pain and may be aversive to animals.

3. Food and Water

Introduction

Sheep and beef cattle need daily food and water in adequate quantities and containing sufficient nutrients to meet their requirements for good health and welfare. A good diet provides the animal with sufficient energy and nutrients for metabolic and behavioural needs and does not harm the animal.

When considering the amount of food, nutrients and water animals require, a number of different factors need to be taken into account e.g. age, physiological state (growing, pregnant, lactating), and weather.

These factors, along with variation in requirements among individual animals, mean there is considerable variation in feeding practices in pastoral farming systems. Feed requirements vary throughout the year, but are generally greatest during lactation, late pregnancy, growth and during periods of excessive cold (especially after sheep are shorn). Requirements are best determined by monitoring body condition and liveweight.

Pasture generally provides a balanced diet though supplements may be required during periods of deficit. Similarly, trace elements (e.g. cobalt, selenium) may be required when soils and pasture are deficient.

Minimum Standard No. 5 – Food and Water

- (a) All animals must receive sufficient quantities of food and nutrients to enable them to:**
 - (i) maintain good health;**
 - (ii) meet their physiological requirements; and**
 - (iii) minimise metabolic and nutritional disorders.**
- (b) All sheep and beef cattle must have access to water, sufficient for their daily needs and that is not harmful to their health.**
- (c) If any beef animal shows signs of being very thin, or if the body condition score of any individual beef animal falls to 1 (on a scale of 0-5), urgent remedial action must be taken to improve condition or the animal must be destroyed humanely.**
- (d) If any sheep shows signs of being very thin, or if the body condition score of any sheep falls to 1 (on a scale of 0-5), urgent remedial action must be taken to improve condition or the animal must be destroyed humanely.**

Recommended Best Practice

- (a) Animals in ill health or poor condition, or in late pregnancy or early lactation, should not be deprived of food or water.
- (b) If animals are to be given feeds to which they are not accustomed (e.g. supplementary feeds and crops), they should be gradually introduced to those feeds to enable them to adapt and to prevent digestive problems associated with the change of diet (e.g. lactic acidosis or grain overload). Animals should be closely monitored during any change in feed.
- (c) Mould-contaminated or excessively dusty supplementary feeds should not be fed to livestock.

- (d) Care should be taken to ensure animals, particularly in late pregnancy, do not overfeed. Overfeeding resulting in a full rumen can contribute to difficult births and, in sheep in full wool, a greater risk of becoming cast.
- (e) The Body Condition Score (BCS) of all adult sheep should be between 3 and 4 at all times (on a scale of 0–5) (see Appendix I, “Condition Scoring of Sheep”, to this code).
- (f) The Body Condition Score (BCS) of all adult beef cattle should be between 3 and 4 at all times (on a scale of 0 – 5) (see Appendix II, “Condition Scoring of Beef Cattle”, to this code).
- (g) Automated food delivery and water reticulation systems without any storage capacity or other back up supply systems should be checked daily to ensure that they are in working order and any problems promptly rectified.
- (h) In controlled grazing systems where feed is rationed (e.g. break feeding, rotational grazing, and techno-systems) the amount of feed available on each area should be sufficient to meet the needs of all the animals during the time that they are on that area or the break.
- (i) There should be enough reserve feed to allow more frequent shifts if it is very wet and the fodder to be grazed becomes trampled and muddy.

General Information

In controlled grazing systems where feed is rationed (e.g. break feeding, rotational grazing, and techno-systems) the available pasture or crop is subdivided into small areas or breaks for grazing at relatively high stocking rates. This is managed by frequent shifts to fresh pasture or crops, often on a daily basis, and often behind temporary or electric fences. These grazing systems are often used to reduce pasture wastage and optimise animal intake and growth.

Water requirements are greater during lactation, hot weather and when feeds with high dry matter content are provided. Conversely, less water is required in cold weather and when food is very wet (e.g. fresh grass or grass silage).

Water contaminants (faeces, algae, pathogens, parasites, and excessive salinity, minerals and nutrients) can lead to livestock refusing to drink, reducing appetite, production and fertility, or even causing death.

4. Shelter

Introduction

The relationship between an animal and its environment is crucial to its welfare. Most sheep and beef cattle are required to cope with regularly changing climatic conditions and, occasionally, with more severe and extreme events. Persons in charge of animals have a fundamental obligation to ensure that animals in their care have adequate shelter or protection commensurate with their species, environment and circumstances.

New Zealand's temperate climate generally provides good conditions for sheep and beef cattle. However, extremes such as droughts, storms, floods, heavy rain and snow, strong winds, and even abnormal seasonal and daily changes in winter and summer, have implications for animal welfare.

Adverse events can affect the welfare of fit and normal livestock, but have a greater impact on those more vulnerable because of their age (e.g. newborn lambs and calves) or condition (e.g. newly-shorn sheep, animals suffering illness or disease). Severe or prolonged adverse weather conditions can also affect animal health, production and reproduction, as well as result in increased mortality.

Animals have a range of responses to cope with climatic conditions. Typically, warm conditions result in an increase in blood circulation through the skin, sweating and/or panting, postural changes such as lying down, increased water consumption and behavioural changes such as seeking shade during the warm part of the day and grazing during the night or during dawn and dusk. If the heat load continues to rise, animals will progress to open-mouth panting, and when severe their tongues will be extended. If relief cannot be achieved, core body temperature rises (hyperthermia) and they may die.

Mechanisms that help to retain or produce heat in cold conditions include reducing skin circulation, increasing metabolic rate and shivering, and postural and behavioural changes such as hunching up, facing away from the wind, or seeking shelter. Where animals are exposed to cold conditions with which they can not cope, their core body temperature drops below the normal range (hypothermia). As hypothermia progresses, animals become depressed and listless and may die. Such depression and listlessness indicate the need for urgent intervention.

Minimum Standard No. 6 – Shelter

- (a) All sheep and beef cattle must have access to shelter to reduce the risk to their health and welfare caused by exposure to cold.**
- (b) Sheep and beef cattle giving birth must be provided with an environment affording the newborn protection from any reasonably expected climatic conditions likely to compromise their welfare and survival.**
- (c) Sheep and beef cattle must be provided with means to minimise the effects of heat stress.**
- (d) Where animals develop health problems associated with exposure to adverse weather conditions, priority must be given to remedial action that will minimise the consequences of such exposure.**

Recommended Best Practice

General shelter

- (a) Activities such as mustering, prolonged yarding and transportation should be avoided in hot, sunny and humid conditions likely to result in heat stress.
- (b) Sheep and beef cattle should have access to areas free of surface water and excessive mud at all times, particularly where conditions can become very muddy such as on crops or small areas of pasture during wet weather.
- (c) Good shelter should be provided once young animals move from rearing houses to pasture and, if necessary, animals should be moved back to the rearing house in adverse weather conditions.

Storms, floods and droughts

- (a) Many districts are prone to heavy and un-seasonal rainfall and winter snowstorms, flooding and droughts which can cause livestock discomfort, distress and deaths. In these districts owners or persons in charge of sheep and beef cattle should:
 - (i) have contingency plans and make and implement decisions (such as destocking) at an early date
 - (ii) monitor weather forecasts and take heed of severe weather warnings
 - (iii) ensure ready access to livestock by keeping tracks clear
 - (iv) ensure threatened livestock have access to and, if necessary, can be and are moved quickly to safer terrain (e.g. higher ground in floods, lower or sheltered terrain in snowstorms)
 - (v) ensure emergency feed reserves are or will be available promptly to animals
 - (vi) ensure that provision is made for continued supply of water (i.e. from bore or dam, or from sources beyond the farm)
 - (vii) sell or slaughter early those animals which cannot be, or probably cannot be, provided with adequate feed and water
 - (viii) accustom livestock to eating alternative sources of food likely to be offered in severe weather or during periods of feed shortage
 - (ix) seek advice from veterinarians, local authorities, MAF, Federated Farmers, Rural Support Trusts or agricultural consultants
 - (x) seek advice from local farmers with greater experience of local conditions.

General information

There are two general approaches to preventing heat or cold stress. Firstly ensuring that the animal is suited to cope with its environment – it must have the necessary traits to adapt to changes.

Achieving this includes:

- selecting genotypes, strains or breeds of animals that are most suited to the local conditions and farming system
- ensuring that animals have the opportunity to acclimatise to their habitat or local environment before they are exposed to the risk of particularly adverse conditions

- ensuring that animals are fit and in good condition and therefore less vulnerable to ill-health and disease, and addressing any animal health issues that do arise.

Secondly ensuring that the physical environment provides the resources (e.g. food and water) and conditions (e.g. shelter, shade) in order for the animal to be able to cope. This is done by:

- ensuring the environment provides the animal with the opportunity for, or access to, shelter and/or shade afforded by vegetation (e.g. scrub, tussocks, trees, shelter belts, rushes), topography (e.g. rocks, ridges, gullies), or artificial structures (e.g. covers, windbreaks and shade cloths, housing)
- ensuring that livestock are in good physical condition enabling them to withstand climatic stresses, and/or providing additional feed and water to enable them to do so
- considering the effect that the diet has on the animal's ability to deal with climatic stresses e.g. roughage results in additional heat production during rumination thus exacerbating thermal stress in hot environments, or relieving it in cold
- mitigating the environmental factors causing stress
- having contingency plans to reduce the welfare impacts of heavy rainfall and flooding, unseasonal storms, and droughts, and to enhance recovery from them.

When signs of photosensitivity are present, and after shearing, there is a greater requirement for shade.

Cold stress is exacerbated by wind and rain; young and newborn animals are particularly at risk.

In some snow storms, wind can result in snow drifts in the lee of any shelter thus trapping livestock, especially sheep. However, sheep in good condition can survive for several days and can often be detected by looking for ventilation holes created by their breath, or by snow raking.

Further information on preparing for emergencies and adverse events may be obtained by referring to the MAF website at <http://www.maf.govt.nz/mafnet/rural-nz/assistance/> or Meat and Wool New Zealand at <http://www.meatnz.co.nz/>.

5. Behaviour

Introduction

Most sheep and beef cattle are farmed in extensive systems allowing them the opportunity to display normal patterns of behaviour. In situations such as mustering and yarding, behaviour is usually restricted for only short periods of time. Other restrictions may require the animals to adapt e.g. separation of dam and off-spring at weaning, and the relative confinement of some rotational and intensive systems especially feedlots.

Understanding the behavioural principles and requirements of sheep and beef cattle is essential for maintaining and enhancing their welfare and for efficient animal husbandry. Deviations from normal behaviour such as those that may occur at high stock densities, when different social groups are mixed or split, when animals are confined or restrained, or kept without companions, can cause stress. If prolonged and severe, distress and compromised health, welfare and production can result. Conversely, provision of an environment allowing normal behaviour (e.g. the freedom to choose food, find shelter and interact with companions) will help to ensure good welfare.

Adverse physical conditions that influence an animal's behaviour can, if severe and prolonged, cause distress. Examples include animals deprived by wet weather of acceptable surfaces on which to lie down, or those prevented from attaining a sense of isolation when giving birth.

Abnormal behaviour is often a sign of animals being unable to cope, or having difficulty in coping, with restrictions. Examples include:

- a series of repetitive movements with no obvious function (stereotypic behaviour)
- changes in the normal pattern and/or time spent undertaking specific behaviours e.g. increased aggression
- symptoms such as a lack of interest in feed or water, slow and lagging behind, lethargic or depressed, excessive time lying down and reluctance to move, restlessness, anxiety, abnormal appetite, vocalization, or rapid breathing.

Recommended Best Practice

- (a) Sheep and beef cattle should have sufficient space to enable them to behave and interact normally without excessive aggression.
- (b) Sheep and beef cattle should have company of their own kind.
- (c) Sheep and beef cattle should be kept in reasonably stable social groupings. Mixing groups of unfamiliar animals, or introducing new animals to a stable social group, should only occur when necessary, with plenty of space and under careful observation to minimise stress or injury.
- (d) Sheep and beef cattle should be given the opportunity to graze.

General Information

Sheep and beef cattle usually form stable social hierarchies within flocks and herds. These contribute to their sense of security or well-being. Apart from exceptional circumstances (e.g. pet lambs and calves raised by themselves, or dams seeking isolation for birth) animals prefer the company of their own kind. Sheep especially are very social animals requiring the presence or maintenance of a visual link with others. Cattle and especially sheep, show a marked flight reaction to disturbance by grouping or mobbing up and showing 'follower' behaviour.

6. Health, Injury and Disease

Introduction

Knowledge of the appearance and behaviour of healthy animals, and an awareness of the common diseases affecting sheep and/or beef cattle, are essential in being able to recognise signs of illness, disease or injury.

Injury and disease can contribute to poor animal welfare by causing discomfort, distress and/or pain. Injury and disease can also affect growth, reproduction and production.

Preventative measures include good facilities, an animal health programme, selection of stock with disease resistance traits (or culling of susceptible animals), good feeding (including avoiding trace element deficiencies), good stock management and an understanding of the animal's needs.

Animal health programmes need to include disease prevention strategies. Regular surveillance and early identification of ill-health in livestock is crucial for successful diagnosis and treatment.

Minimum Standard No. 7 – Injury and Disease

- (a) Signs of ill-health or injury must result in timely preventative or remedial action, as appropriate.**
- (b) Medication must only be used in accordance with registration conditions and manufacturer's instructions or professional advice.**

Recommended Best Practice

- (a) A documented animal health plan should be in place identifying the likely animal health challenges on a property along with a programme for addressing them. This should include a monitoring programme, with regular inspections, which allows early identification of disease and assessment of treatment success.
- (b) Owners and stockhandlers should keep up-to-date with diseases of livestock and the preventative strategies and remedial treatments available.
- (c) Care should be taken in the administration of oral solutions and rumen capsules to avoid damage to the mouth and throat by rough or excessive handling or by a nozzle with sharp or rough edges.
- (d) Veterinary or other professional advice should be sought where there is:
 - (i) significant injury or disease
 - (ii) persistent or chronic pain
 - (iii) persistent ill-thrift and poor performance that does not respond to treatment
 - (iv) to establish an appropriate health plan
 - (v) concern about the welfare of the animal.
- (e) The trace element status of soil and pasture and concentrations in the animals should be regularly monitored and as necessary supplements should be provided through fertilizers, the water supply, the provision of salt or multi-mineral blocks, or dosing or injecting of animals.

General Information

Animals in good health are generally bright and alert, move freely, actively graze and ruminate, and have no signs of wounds, abscesses or injuries.

Contagious diseases of sheep and beef cattle are caused by bacteria, viruses, fungi or parasites and are spread by direct contact with infected animals or via the environment, humans or machinery and vehicles, vectors such as possums, and via eating or drinking contaminated or poisonous food or water. Precautions should be taken to avoid and restrict the spread of diseases.

An integrated approach to health and parasite issues is the key to managing them effectively. This requires good pasture and stock management, monitoring techniques, selection of resistant genotypes and strategic use of anthelmintics and other treatments.

Veterinarians and other professionals, farm advisors and consultants and producer group organisations are good sources of information when developing animal health plans.

7. Husbandry Practices

Introduction

Sheep and beef cattle farming involves a range of animal husbandry procedures to maintain and enhance animal health, welfare and production. They include careful selection of animals for breeding and farming, using technologies to increase desirable characteristics and animal production, monitoring and managing animals during critical periods (e.g. during pregnancy and birth), artificially rearing new-born animals and managing them in more intensive systems. Procedures which cause pain, such as tail docking, castration, disbudding and dehorning, are addressed in the *Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005* and are not discussed below.

7.1 Selection and Breeding

Introduction

Selection of animals with desirable traits and culling those with deleterious ones is one of the foundations of animal husbandry. Selection objectives are inevitably a balance or compromise among animal traits and the ability of husbandry techniques to overcome any compromises. Increased production efficiency can be associated with a risk of behavioural, physiological and immunological problems and therefore compromises to animal welfare.

Recommended Best Practice

- (a) Selection practice should not include selection for increased productivity (e.g. increasing growth rate, fecundity) if it is known or thought to unreasonably compromise animal health or welfare.
- (b) Selection policies resulting in significant routine compromises to animal welfare (e.g. increased need for caesarean sections) should be avoided.
- (c) The animal welfare impacts of animal selection and breeding objectives should be monitored for favourable and unfavourable consequences, and the results incorporated into future objectives.
- (d) Selection for resistance to diseases should complement but not replace other means of ensuring animals are healthy (e.g. providing good nutrition to enable animals to mount good immune responses to pathogens).
- (e) To minimise the risk of dystocia and other health problems, the selection of sires for breeding (either natural or by artificial insemination) should take into account factors such as the dam's breed, size, age, and the sire's birthweight and birthing ease genetics, and the likely size of the offspring relative to the dam. This is especially important when hoggets or yearling heifers are mated before they have reached mature live weights.
- (f) Hoggets and heifers selected to be mated should be well grown, fed to allow for continued growth as well as pregnancy and carefully supervised around the time they give birth.
- (g) Animals, particularly males that are likely to lose condition during mating, should be healthy and in good condition (i.e. condition score 3 or more) at the start of the breeding season.

General Information

The susceptibility to many diseases may be partly hereditary and can therefore be reduced by selective breeding. This has the potential to enhance the welfare of sheep and beef cattle through

reducing disease and therefore the need for mustering and yarding for preventive treatments and remedies, while maintaining productivity.

Successfully implementing a policy for mating yearling hoggets and heifers depends on them being well-grown and having sufficient feed available for lambing/calving, lactation and subsequent breeding. At lambing and calving, dams should not be too fat (i.e. above condition score 4) as this can contribute to difficult births. During lactation, feed requirements need to take into account that the dam is still growing, as well as providing for the lamb or calf.

7.1.1 Testing to Aid Selection and Breeding

Introduction

The selection of animals for breeding has sometimes included testing for their likely performance. This can take the form of exposing some animals to pathogens and selecting those individuals displaying resistance to the disease (e.g. facial eczema and footrot). It can also involve assessing the soundness of breeding animals to ensure that they are fit for successful mating.

Minimum Standard No. 8 – Selection and Breeding Tests

- (a) Tests for animal performance which have the potential to compromise animal welfare must only be used:**
 - (i) where they are necessary (i.e. the outcomes cannot be derived in other, less-harmful ways);**
 - (ii) where the tests are likely to result in information appropriate to the selection and breeding objectives; and**
 - (iii) where any harm is minimised.**
- (b) Identifying animals resistant to disease by dosing or exposing them to the disease-causing organism or conditions must be carried out only in the immediate care of a veterinarian.**
- (c) Testing bulls for reproductive soundness by allowing mounting and servicing of a cow must only be conducted:**
 - (i) in the immediate care of a veterinarian; and**
 - (ii) where mount animals showing signs of distress or trauma are immediately withdrawn from testing and treated appropriately.**

Recommended Best Practice

- (a) Animals treated with sporodesmin toxin to assess their susceptibility to facial eczema are sensitive to sunlight and should be tested indoors or given access to shade; and the clinical disease should not be induced.
- (b) The reasons for and conduct of mating ability tests in bulls should be in accordance with recommended standards (see for example *Parkinson and Bruere 2007. Evaluation of bulls for breeding soundness. Foundation for Continuing Education Publication No. 262, Massey University, Palmerston North*).
- (c) The serving ability of bulls in yard tests should only be undertaken if the bull or line of bulls is suspected of being inferior.

- (d) The welfare of mount animals is of paramount importance. Mount animals should be of an appropriate size for the bulls being tested, mildly sedated before being restrained, adequately lubricated and the number of services should be minimised.

General Information

Breeding for resistance to some diseases may require the disease to express itself in animals. For example, selecting rams for resistance to facial eczema involves dosing with a specified amount of sporodesmin and measuring its effect on the liver by blood tests. Similarly, selecting sheep with resistance to footrot can involve holding them in a feedlot-like situation where susceptible animals readily show the disease.

The mating ability of bulls can be determined by assessing physical (e.g. scrotal circumference, semen examination) and behavioural soundness (e.g. locomotion and libido). The mating ability of bulls is assessed by observing mounting and serving and is designed to detect animals with pathological defects preventing mating. Libido testing of bulls by determining the number of times cows are served in a specified period has been shown to bear no relationship to fertility and is now rarely used.

7.1.2 Reproductive Technologies

Introduction

In addition to selecting animals with desirable genotypes, there are a number of established and developing technologies being used to facilitate genetic gains and better manage animals.

Minimum Standard No. 9 – Reproductive Technologies

- (a) Electroejaculation, and laparoscopic artificial insemination must be carried out only by veterinarians, or by trained and competent operators under veterinary supervision, using appropriate pain relief, sedatives or anaesthesia.**
- (b) Cervical artificial insemination and pregnancy diagnosis must only be carried out by persons trained and competent with the techniques.**

Note: NAWAC has recommended that surgical embryo transfer be listed as a significant surgical procedure, as defined by section 6 of the Act.

Recommended Best Practice

- (a) Less invasive procedures (e.g. semen collection using an artificial vagina) should be used in preference to more invasive ones (e.g. semen collection by electro-ejaculation).
- (b) Any procedure used to alter the pattern of seasonal breeding, or to increase fecundity, should only be used where the extra requirements to ensure good welfare (feed, farm labour, shelter and other inputs required before and after the animal gives birth) have been thoroughly assessed and are able to be provided.

General Information

Increasing fecundity means that animals may require more feed during the latter stages of pregnancy, gestation length may be shorter, there may be a higher level of malpresentations or difficult births (and losses if assistance is not provided), and poorer bonding between dam and offspring. These factors mean increased supervision is necessary to ensure newborn animals receive colostrum and survive.

Pregnancy testing by ultrasonic scanning or rectal palpation (cattle only) allows pregnant ewes and cows, especially those carrying more than one lamb or calf, or those giving birth earlier in the season, to be identified and separated for preferential treatment (e.g. extra feeding in late gestation).

7.2 Lambing and Calving

Introduction

Giving birth can be a challenging event for the dam, offspring and stockhandler, and, especially in sheep, can be associated with significant livestock mortality. Potential compromises to animal welfare at this time reflect a combination of factors as diverse as feeding levels during pregnancy, disturbance from other animals and humans, predisposition to dystocia, breed, weather and inadequate shelter.

Stockhandlers have to balance the natural tendencies of most animals to give birth undisturbed and often in isolation, with any requirements to assist with difficult births and tend to moribund animals.

Many strategies, from traditional intensive shepherding to minimal shepherding and easy-care lambing, have been developed to ensure that animals have an easy birth, are protected from environmental extremes, and allowed the opportunity to develop exclusive mother-offspring bonds in the period immediately after birth. The characteristics and advantages and disadvantages of these different systems vary, reflecting differences in environment, climate, breed, stocking density, and shepherding skills and expectations.

The major contributing factors and causes of mortality in newborn animals are hypothermia, either from exposure to cold or from impaired heat production (the result of, for example, a small placenta during pregnancy, or of a difficult birth); starvation (the result of maternal underfeeding or mis-mothering); infection; injuries and predation. As much as possible those in charge of the animals need to take actions to reduce the risks of such mortality.

Minimum Standard No. 10 – Lambing and Calving

- (a) Mechanical devices to assist in lambing or calving must only be used if necessary and then by a trained and experienced operator.**
- (b) A moving vehicle must not be used to provide traction to assist lambing or calving.**

Recommended Best Practice

- (a) In extensive systems, where animals are unaccustomed to daily supervision, breeds or strains suited to easy births and good maternal care should be used. In more intensive systems, where animals are well habituated to the presence of humans and management activities, assistance should be provided to animals experiencing difficulties without unduly disturbing others giving birth in the vicinity.

- (b) Lambing and calving paddocks should be chosen to mitigate animal welfare challenges such as adverse weather or natural hazards.
- (c) Lambing and calving sites should be disturbed as little as possible.
- (d) Where high numbers of multiple births are expected, ewes with two or more lambs should be identified at scanning, and priority given to those animals' supervision, feeding, shelter and management from the last 6 weeks of pregnancy through lambing.
- (e) If a dam is unlikely to successfully raise one or more of her offspring, the offspring should be fostered onto other dams if possible, hand-reared or killed humanely.
- (f) Shepherding strategies should be chosen to suit the sheep, the farm conditions and the ability of the shepherds.
- (g) Body condition score of ewes at lambing should be at least 3, and no more than 4 (on a scale of 0–5), to minimise lambing and metabolic problems.
- (h) Body condition score of beef cows at calving should be at least 3 for a cow and 3.5 for a heifer and no more than 4 for either (on a scale of 0–5), to minimise calving and metabolic problems.

General Information

The intensity of supervision during lambing and calving should reflect both how well the animals are habituated to human presence and handling, and the risk of difficult births and other problems requiring assistance. Genetic selection, use of appropriate sires (for lambing/ calving ease and birth weight) and keeping dams in good condition (not too thin and not too fat) is crucial for a good birth and bonding of dam and off-spring. Unnecessary disturbance and interference may disrupt and prolong birth, increasing the risk of dystocia, mismothering and neonatal deaths, and can be minimised by keeping stocking rates low and by keeping dogs under strict control.

Nutrition during pregnancy is especially important. Feeding well in early and mid pregnancy ensures good placental development and therefore good birthweight and survival. Appropriate feeding in late pregnancy minimises the risk of metabolic disorders (e.g. milk fever and sleepy sickness or pregnancy toxæmia) and promotes udder development, thus ensuring adequate colostrum and milk production.

Lambing

Heavily pregnant sheep in full wool are especially liable to become cast, particularly on flat country. Cast sheep become distressed and can die within a short time if not returned to their feet. When righted they need to be supported until they regain their strength and balance.

Bearings are most common just before lambing. Although the relationships between some of the causes have yet to be clearly established, the risk increases with higher foetal numbers, paddock slope near lambing and the ewe having had a previous bearing. Other factors which may predispose ewes to bearings may include bulky, low quality feed during pregnancy, milk fever, a rapid change in feed quantity or quality and lack of exercise. Further information on managing and treating bearings can be found in 'Coping with Bearings' Meat and Wool New Zealand R&D Brief at <http://www.meatnz.co.nz/>

Small lambs, particularly multiples, have lower body temperatures at birth and higher surface area to volume ratios. As they lose heat faster than larger lambs, they have a greater requirement for shelter.

Calving

The risks of milk fever, calving difficulties and poor milk production are increased in beef cows that are overweight. Animals with poor body condition at calving may be unable to produce sufficient milk. Bearings in beef cows are more common after rather than before calving.

7.3 Artificial Rearing

Introduction

There are a number of artificial rearing techniques. These include: bottle and bucket feeding of orphaned lambs and calves and fostering onto nurse animals.

Lambs and calves selected for artificial rearing may be distressed; they may have had difficult births, been abandoned or transported; and they may well have received insufficient colostrum. Such animals are susceptible to diseases and ill-health and therefore require vigilance and high quality management, correct feeding, good housing, hygiene and disease prevention and remediation.

7.3.1 Colostrum and General Health

Introduction

Colostrum is high in antibodies and its timely ingestion and absorption helps to protect newborn animals from infections. It is also an important source of nutrients, containing lactose (milk sugar), minerals, vitamins, fats and proteins. Colostrum is not only important for immunity but also for gastrointestinal function, as it helps newborn animals absorb their food better and improves their chance of surviving and growing well. The best colostrum is obtained from the first milk or milking of the ewe or cow after birth. Subsequent milk or milkings provide lower concentrations of antibodies.

Minimum Standard No. 11 – Colostrum

Artificially reared lambs and calves must receive sufficient colostrum or good quality commercial colostrum substitute to ensure their welfare.

Recommended Best Practice

- (a) When orphan animals are anticipated, a supply of colostrum should be available.
- (b) Every lamb or calf should receive colostrum, preferably from its dam or from another dam, as soon as possible after birth and within the first 6 hours.
- (c) Colostrum should be fed for the first 4 days of an animal's life, and ideally for a longer period, as it also provides local immunity in the gut.
- (d) Colostrum, milk or milk replacer should be fed at the rate of 150 to 250 ml per kg body weight for lambs and 10 - 12% of bodyweight per day for calves (i.e. about 2 – 4 litres per day), during the first week after birth, preferably divided into at least two feeds per day.
- (e) When feeding lambs and calves by stomach tube, care should be taken to avoid insertion of the tube into the windpipe. Stomach tubing of neonates should be carried out by or under the supervision of people skilled in the technique.
- (f) If any animal to be penned for fostering or artificial rearing is less than a few days old or with a non-healed navel it should have its navel sprayed with disinfectant to prevent bacterial infection.

General Information

Calves and lambs have an undeveloped rumen for the first few weeks of their life with milk bypassing the rumen to the stomach. It is therefore important to provide good quality milk or milk replacer (fed according to the manufacturer's instructions) until the rumen develops and the animal can digest solid foods.

Grass and hay aid in the development of the rumen (as well as helping to prevent feeding related disorders such as acidosis). Similarly, concentrate feed or meal enhances rumen development as the products of fermentation stimulate the development of rumen papillae.

Healthy lambs and calves have a moist and cool nose clear of discharges, are alert and have responsive ears, a good appetite and a temperature of around 38°C. The first sign of ill-health in artificially reared lambs and calves is usually scouring attributable most often to:

- stress resulting from a difficult birth, bad weather or poor transport
- overfeeding or a rapid change from colostrum or milk to a milk replacer diet
- infection (viral, bacterial or protozoan), especially in animals with inadequate immunity because of a lack of colostrum.

Stockhandlers need to be attentive to the possibility of navel infections and respiratory problems. Precautions, such as vaccination, should be taken to minimise the risk of clostridial infections.

7.3.2 Fostering and Artificial Rearing

Introduction

Dams vary in their willingness to accept offspring other than their own. There are several methods designed to help promote successful fostering. They include:

- restraining the dam at regular intervals in a small yard, stall, race or headbail, or by tethering, and introducing the foster animals
- modifying the smell of offspring (e.g. with sprays or where her own offspring has died, its skin) particularly where the recipient mother has had limited opportunity to bond with her own offspring
- linking a foster calf to the dam's own offspring allowing both calves to suckle at the same time.

Minimum Standard No. 12 – Fostering and Artificial Rearing

- (a) Where restraint is used to help a ewe or cow to adopt a foster lamb or calf, the animals must be inspected frequently to ensure the dam is not becoming distressed and the lamb or calf is sucking.**
- (b) Where young are rejected by the foster dam the lamb or calf must be removed and provided with adequate nourishment, or killed humanely.**
- (c) Artificially reared animals must be given suitable liquid feeds until the rumen has developed sufficiently to allow it to utilise pasture and other solids as the sole feed sources.**

Recommended Best Practice

- (a) When more than one calf is fostered onto a nurse cow the calves should be of a similar size, and age so that differences in vigour between animals do not contribute to excessive competition for milk. The cow should be able to supply milk for all the calves.
- (b) In artificial rearing systems, if milk is to be restricted to once-a-day feeding then:
 - (i) it should be preceded by a period of at least twice-daily feeding with an increasing concentration of milk replacer for a week, and
 - (ii) concentrated feeds or high quality pasture should be provided, and
 - (iii) roughage and fresh water should be available at all times.
- (c) Liquid feeds should be fed warm, but not above normal body temperature (38.5°C).
- (d) After a long journey animals should be given an opportunity to settle before feeding with milk. Feeding with electrolytes at the first feeding after transport should be considered.
- (e) All equipment used to provide milk in artificial rearing systems should be kept clean, and undergo regular and thorough disinfection.
- (f) Lambs and calves should receive sufficient liquid feed to meet their total nutrient requirements, until at least four weeks of age.
- (g) The transition from milk or milk replacer to pasture should be managed through progressive replacement with more meal or hay to aid development of the rumen, and providing quality pasture.

General Information

Lambs and calves will be healthier and more content if fed frequently: three or four times daily, for the first week of life, thereafter once or twice daily. However, care needs to be taken not to overfeed. To avoid overfeeding slow drinkers can be put together and lighter animals reared separately from heavier ones, or compartment feeders used.

Selection and retention of cows that are more amenable to readily accepting foster calves will make rearing more successful. Nurse cows may be particularly susceptible to sore and cracked teats which need to be treated if they occur. It is important to remember that a cow or ewe's feed requirements will increase with each additional calf or lamb suckled.

7.4 Weaning

Introduction

Weaning animals from their dams combines a number of factors with the potential to compromise animal welfare – the physical separation of dam and offspring, changing the offspring's feeding regime and the cessation of milking of the dam. In addition, on some properties weaning is carried out at the same time as other husbandry procedures, which coincides with changes in the environment and diet, mixing of social groups, and transport.

While weaning is stressful, animals generally appear to adapt within a few days without any long-lasting compromises to their health and welfare. In some situations (e.g. when feed quality or quantity is limited) weaning may be advantageous for welfare.

Recommended Best Practice

- (a) Lambs and calves should not be weaned from their dams until they have developed the ability to obtain most of their sustenance from pasture or other solids, usually around 6-8 weeks of age.

General Information

Weaning can be undertaken abruptly (with dams and off-spring kept out of sight and sound from each other) or progressively (gradually removed from each other but kept in adjacent paddocks). The latter method can result in less distress for livestock, but requires good fences and greater resources.

Gradual changes in feed supply may reduce stress and it may be beneficial to introduce new feeds prior to weaning.

7.5 Animal Identification

Introduction

Sheep and beef cattle are usually identified by earmarking (or notching), by ear tagging or less commonly by permanent identification such as freeze or hot branding. These procedures cause pain and the general principles outlined in the *Animal Welfare (Painful Husbandry Procedures) 2005 Code of Welfare* should be followed.

Minimum Standard No. 13 – Identification

- (a) All identification procedures must be applied by a competent operator.
- (b) Hot branding must only be used with pain relief.

Recommended Best Practice

- (a) If ear marking is performed, as little as possible and no more than 10% of ear tissue should be removed, using an implement that is clean and sharp.
- (b) Freeze branding should only be used with pain relief.
- (c) Care should be taken when applying an eartag to avoid hitting the cartilage ridges or major blood vessels.

7.6 Shearing, Dagging and Crutching

Introduction

Shearing is an important part of sheep husbandry. Animals need to be handled with care during the procedure and managed well afterwards to reduce the risk and consequences of exposure.

The timing of shearing can be a significant part of animal husbandry. Pre-lamb shearing, usually 4-6 weeks before lambing, can promote lamb survival because (1) the lambs have heavier birthweights and therefore are stronger, and (2) ewes are more likely to seek or use shelter in adverse conditions thereby protecting their lambs. However, if pre-lamb shearing is carried out without providing the necessary extra food and effective shelter, ewes may suffer cold stress and metabolic disease.

Separate parts of the fleece may also be removed to improve animal welfare. Prevention and removal of dags by crutching and dagging around the anus help to reduce discomfort and inflammation of the underlying skin and so reduce the risk of flystrike. Wool growing around the face can be trimmed to prevent vision being obscured, and trimming wool from around the belly, udder and vulva facilitates lambing, suckling and mating.

Minimum Standard No. 14 – Shearing, Dagging and Crutching

- (a) Sheep must have access to food and water as soon as possible after shearing.**
- (b) All severe cuts or injuries must be treated immediately.**

Recommended Best Practice

- (a) Sheep should be shorn as frequently as is necessary to mitigate animal health and welfare concerns. Usually this is at least once a year.
- (b) In winter in districts subject to very cold weather, in areas where there is minimal natural shelter, or where shearing is undertaken prior to lambing, sheep should be shorn using winter, snow or cover combs, lifters, or blade shears to ensure the sheep retain an insulating layer of wool.
- (c) Sheep should not be shorn if the forecast is for cold wet weather unless the animals are to be given additional feed after shearing and/or provided with suitable shelter to minimise the risk of exposure.
- (d) Shearing, dagging and crutching should be carried out skillfully and carefully to prevent shearing cuts, especially those to the teats, vulva and prepuce.
- (e) Freshly shorn sheep should not be kept in dusty yards for longer than necessary, as shearing cuts may become infected.
- (f) Provision should be made for extra feed, shade and shelter for sheep after shearing. There should be ready access to covered yards or effective shelter for several weeks after shearing where there is a risk of cold, wet weather.

General Information

Sheep are best fasted before shearing as sheep with a full rumen may suffer distress while being shorn. The time off feed should not be for more than a few hours in pregnant ewes.

Newly shorn sheep are especially vulnerable to adverse weather conditions and require more feed than normal for 3 weeks or more after shearing to sustain body temperature and maintain body condition. Maintenance requirements are usually increased for 6 to 8 weeks after shearing. These effects are more prevalent in winter when shearing increases a sheep's energy requirements by 50-70% compared to 20-30% in summer and autumn.

7.7 Managing Flystrike

Introduction

Sheep can be prone to flystrike (the feeding of blowfly maggots on the flesh) especially in warm and moist conditions and where sheep are daggy, or have wounds. Flystrike can cause pain, distress and extreme suffering through inflammation, infection, reduced appetite and weight loss. Badly affected sheep may die.

In some localities flystrike can occur at any time of year but the period of highest risk is generally summer/early autumn.

Minimum Standard No. 15 – Managing Flystrike

- (a) All reasonable steps must be taken to prevent, or identify and manage the risk of flystrike in sheep.**
- (b) Affected sheep must receive appropriate treatment at the earliest opportunity.**

General Information

Measures for preventing and managing flystrike in sheep include:

- frequent inspection of sheep to identify early strike cases
- prevention or early treatment of injured or diseased skin that might attract blowflies, e.g. lumpy wool (dermatophilosis), foot rot and ram fight injuries
- application of insecticide (e.g. dipping, pour-ons) at strategic intervals throughout the period of risk (long-acting insecticides can normally provide up to 12 weeks protection against flystrike). However, stock need to be monitored to ensure treatments remain effective throughout that time
- tail docking
- crutching, dagging, or shearing before and/or during the risk period
- control of pasture to prevent dag formation that can follow access to lush feed
- control of internal parasites that could contribute to faecal soiling of the breech
- grazing sheep on plants containing condensed tannins (e.g. birdsfoot trefoil, sulla); to reduce the incidence of dags and flystrike
- grazing sheep on ryegrass that contain safe endophytes can reduce the incidence of flystrike
- moving sheep to areas which are cool and windy or to relatively high altitude pastures where blowflies are not present or are less active.

The New Zealand Merino Industry has decided that surgical mulesing (the surgical removal of the breech and /or tail skin folds of merino or merino-dominant sheep) will cease by December 2010. Many growers have already ceased surgical mulesing.

7.8 Intensive Systems

There are many methods of intensifying sheep and beef cattle production. These include feeding pads, feedlots and housing. They may be employed for a variety of reasons from providing concentrated diets as part of livestock finishing to removing livestock from pasture to prevent pugging and environmental damage during winter.

While the principles of animal husbandry outlined in this code also apply in these situations (e.g. the provision of shade and shelter), intensive systems require additional skills of stockmanship and management. The environment, including surfaces and flooring, high stock density and the provision of concentrated feeds can create challenges to animal health and welfare, which may compromise the animals or amplify the effect of any existing problem.

While intensive systems can ensure that some of the animals' needs are more easily or more efficiently met (e.g. the provision of feed or shelter), increased stock density may be associated with restrictions on normal behaviour patterns, increased risk of aggressive interactions between animals and increased risk of transmission of infectious diseases. Frequent monitoring and good stockmanship are therefore required.

7.8.1 Feeding Pads

Feeding pads are specially built areas where, to minimise pasture damage animals can be temporarily held and provided with supplementary feed, while being withheld from grazing. Facilities may include a covered area or barn.

Minimum Standard No. 16 – Feeding Pads

- (a) All animals must be able to lie down and rest comfortably for sufficient periods to meet their behavioural needs.**
- (b) Sufficient space must be provided to prevent undue competition for feed and water.**

Recommended Best Practice

- (a) Surfaces should be non-slippery and safe for stock.
- (b) Feeding pads should be located at sheltered sites with good drainage. They should be designed and constructed with the welfare of the animals in mind, and should take into account the climate, with adequate provision for cleaning, drainage and waste disposal.
- (c) Stale or spoiled feed should be removed regularly.

General Information

Livestock prefer comfortable or soft surfaces (e.g. well-drained woodchip, bark or post-peeling pads) and are reluctant to lie down on slippery and wet surfaces (e.g. concrete, sand or sacrifice paddocks). If harder surfaces are provided lameness, stiffness, abrasions, agitated behaviour and weight loss may result. Pads should be constructed with a base of free-draining material (e.g. soft rock mix and cinder blocks) then covered by a soft material such as sawdust, bark, or woodchips which can be readily scraped clean and new material applied if it becomes badly soiled or wet.

7.8.2 Feedlots

Introduction

Feedlots are one of the more intensive systems of sheep and beef cattle production, requiring high standards of husbandry and constant surveillance in order to safeguard animal health and welfare.

Minimum Standard No. 17 – Feedlots

- (a) All animals must be able to lie down and rest comfortably for sufficient periods to meet their behavioural needs.**
- (b) Stock must be inspected by experienced stock handlers at least once daily for signs of ill-health or failure to adapt to either the feed or the environment.**

- (c) Animals failing to adapt must be immediately removed from the situation and provided with alternative feed.**
- (d) Sufficient space must be provided to prevent undue competition for feed and water.**
- (e) Horned cattle and animals known to be aggressive must be penned separately if there is insufficient space for pen-mates to escape injury.**

Recommended Best Practice

- (a) Food should be kept in dry and clean troughs, and troughs should be located and managed so as to reduce mud and pugging around them. Fresh feed should be provided regularly and at least once daily.
- (b) Feedlots should be located at sheltered sites with good drainage. They should be designed and constructed with the welfare of the animals in mind and with a base of free-draining material covered by softer bedding material which can be replaced or replenished if required. They should take into account the climate, with adequate provision for cleaning, drainage and waste disposal.
- (c) Surfaces should be safe for stock i.e. not slippery. Concrete should be limited to aprons around feed and water troughs, or a bedding area with dry comfortable material should be provided.
- (d) New arrivals should be grouped according to size, age, and class, and any health treatment needs upon their arrival should be considered e.g. parasite treatment or vaccination programme. They should have access to easily identifiable sources of water and feed and be introduced gradually to concentrates and supplementary rations.
- (e) Stale or spoiled feed should be removed regularly. Changes to the diet or feed ration should be introduced gradually.
- (f) Feedlots should have isolation or hospital pens to which sick animals are moved.
- (g) Excessive build-up of wet manure should be avoided, especially in feeding and watering areas. Where dung and urine or wet weather create slippery and muddy conditions, stock should be shifted to dry pens or the manure removed. Animals should have an area free of wet manure for resting and this area should dry quickly after rain.
- (h) Consideration should be given to enriching barren environments through the provision of scratching posts or mounds to encourage normal behaviour.
- (i) Animals about to give birth should not be kept in feedlots.
- (j) Animals that persist in riding other animals should be removed from their group. Animals that are ridden excessively should be isolated from other animals.
- (k) Those responsible for the welfare of sheep and beef cattle in feedlots should keep up-to-date with relevant information or maintain regular contact with professionals (e.g. veterinarians, animal scientists) with experience in feedlot nutrition, animal health and welfare, behaviour and handling, and this should be an integral part of the management of the feedlot.
- (l) Sheep should be provided with sufficient fibre in the diet to prevent wool and pen chewing.

General Information

The most common animal welfare issues associated with feedlots are:

- failure to adapt to the feeding regime, and shy-feeders
- eating disorders such as grain overload or acidosis
- heat or cold stress
- wet and muddy conditions associated with poor drainage
- boredom from being held in a relatively barren environment
- animals bullying others, especially cattle riding subordinates.

The appropriate space allowance per animal will vary with the environment, particularly its drainage, group size, age, gender and liveweight, the provision of feed and water, and behaviour of the stock e.g. shy-feeders, aggressive animals.

Before processing new arrivals that have been transported long distances, a period of rest with access to high quality feed and water can be beneficial.

Together with regular individual inspection, keeping records of each pen's feed consumption, and identifying the cause of any adverse events or deaths, will help to alert stock handlers to the early signs of ill-health or disease, or welfare problems.

Special care needs to be taken with the diet of animals in feedlots, especially where the feed is concentrated. To ensure good health and welfare and keep digestive disorders to a minimum, diets need to be nutritionally balanced, provide sufficient nutrients and roughage, and be palatable. As supplementary feeds are very dry compared with pasture, the continuous provision of drinking water is critical. Keeping food in dry and clean troughs will help stock adapt to changing rations and reduces wastage.

7.8.3 Housing

Introduction

While few sheep and beef cattle are housed routinely in New Zealand, calves sourced from the dairy industry for beef production systems are often kept indoors during rearing, and a small number of sheep are housed to enhance wool quality by ensuring the fleece is kept clean.

Minimum Standard No. 18 – Housing

- (a) All animals must be able to lie down and rest comfortably for sufficient periods each day to meet their behavioural needs.**
- (b) When housed, sheep and beef cattle must be penned in groups, with individual confinement restricted to those under treatment for ill-health, injury or disease for the minimum period possible.**
- (c) Notwithstanding (b), horned cattle and animals known to be aggressive must be penned separately if there is insufficient space for pen-mates to escape injury.**
- (d) All fittings and internal surfaces, including entry races and adjoining yards that may be used by the housed animals, must be constructed and maintained to ensure there are no hazards likely to cause injury to the animals.**

- (e) **Building design, or ventilation must be sufficient to prevent the build-up of harmful concentrations of gases such as ammonia and carbon dioxide.**
- (f) **If ammonia levels of 25 ppm or more are detected at animal level within the housing, immediate action must be taken to reduce the ammonia levels.**
- (g) **Natural or comparable artificial lighting must be available during daylight hours.**

Recommended Best Practice

- (a) Housing should be constructed with the wellbeing of the animals in mind. It should provide accommodation that is dry, well ventilated and draught free with shelter from prevailing weather.
- (b) Housing should be constructed and maintained to ensure stress to animals from dust, noise, air temperature and relative humidity is minimised.
- (c) The bedding area should be well drained and covered with dry material suitable to avoid animal discomfort.
- (d) Animals penned individually for health reasons should be housed next to others of the same species unless their condition precludes this.
- (e) Lighting that is sufficient to enable inspection of all animals kept indoors (20–50 lux) should be available but should not be so intense as to cause discomfort to the animals.
- (f) Soiled bedding should not be allowed to accumulate to a level that poses a threat to the health and welfare of the animals.
- (g) Ammonia levels should not consistently exceed levels of 10 – 15 ppm.

General information

As a guide, a level of 10 –15 ppm of ammonia in the air can be detected by smell. An ammonia level over 25 ppm may cause eye and nasal irritation in people. In general, if the level of ammonia within a housing facility is uncomfortable for people, it is also uncomfortable for stock. Such levels compromise animal welfare and may predispose stock to respiratory disease and reduced performance.

As a guide 50 lux is sufficient light to read a newspaper at arm's length.

7.9 Pre-transport Selection and Management

Introduction

Appropriate preparation of animals before transport can help them cope with the stress of transport.

When selecting animals for transport, other industry standards and/or codes for transport need to be considered. Information and requirements that owners need to be aware of when selecting animals for transport can be found in the *Code of Recommendations and Minimum Standards for the Welfare of Animals Transported within New Zealand* or any code which replaces it, and the *Animal Welfare (Commercial Slaughter) Code of Welfare 2010*.

In cases of doubt about the condition of the animal a veterinarian needs to be consulted. A veterinarian can certify an animal as fit for transport, in which case the appropriate documentation accompanies the animal on its journey.

Minimum Standard No. 19 – Pre-transport Selection and Management

- (a) The person in charge must examine the selected sheep or beef cattle prior to transport, to ensure that all animals are fit and healthy for transportation.**
- (b) Animals must be able to stand and be able to bear weight on all four limbs and be fit enough to withstand the journey without suffering unreasonable or unnecessary pain or distress.**
- (c) Animals likely to give birth during the journey must not be selected for transport.**

Recommended Best Practice

- (a) Stock handlers should seek veterinary advice before transporting animals with conditions that may deteriorate during transport and result in significant welfare compromise to the animal.
- (b) Before transportation sheep and beef cattle should be held off green-feed for a minimum of 4 to 6 hours but for no more than 12 hours. Clean water should be available from a familiar source during this time.
- (c) Pregnant cattle should not be selected for transport in the last 5 weeks before the expected date of calving.
- (d) Horned cattle and animals known to be aggressive should not be presented for transport.
- (e) The maximum slope of ramps should not exceed 20° for all animals except calves. The maximum slope of ramps should not exceed 12° for calves.
- (f) Dogs should be under control at all times and should not be used to move young lambs or calves.

General Information

Indicators that could demonstrate that this minimum standard has been complied with include:

- Any animal showing signs of moderate to severe lameness, psychological stress, clinical signs of dehydration, serious scouring or systemic disease, distress or pain as a result of clinical abnormality, weakness, emaciation, fever, infectious disease, breathing difficulties, depression, ataxia, abnormal posture or excessive aggression is not selected for transport.

Good husbandry practices during the transport period include:

- avoiding mustering over long distances in the days prior to transport
- ensuring a readily accessible supply of drinking water and allowing animals to settle down after mustering and before transport
- ensuring animals have emptied out before transport, but fasting should be limited and dehydration avoided
- familiarising animals to yards, handling and people
- avoiding mixing of unfamiliar animals (cattle may require up to seven days of social familiarity before transport to reduce transport stress, loading problems and aggressive behaviour)
- transporting stock for the shortest possible time.

7.10 Humane Destruction

Introduction

The humane destruction of sheep and beef cattle may occasionally be required because of injury, disease, emergency or for other reasons. Humane killing depends on rapidly inducing insensibility. This can be achieved by causing sufficient brain damage to render the animal insensible and then cutting the major blood vessels of the neck to cause heart failure and death. However, in some emergency situations it may be more appropriate to kill the animal as quickly as possible by a throat cut to prevent or minimise further pain or distress. The overriding consideration during killing is to prevent the animal from suffering further pain or distress.

Humane killing requires that brain activity ceases as rapidly and as painlessly as possible, and that death ensues as soon as possible. This is usually undertaken either by directly damaging the brain (a blow or shot to the head, with a firearm or captive bolt) or stopping the blood supply to the brain (cutting both carotid arteries in the throat or sticking the major blood vessels in the chest and the heart).

The blood supply to the brain in cattle is markedly different from other livestock and this difference can result in prolonged consciousness when only the carotid arteries and jugular veins are severed (the throat cut). Killing any beef cattle by cutting the throat may not produce rapid death and therefore is not humane, unless the animal has first been rendered insensible.

Minimum Standard No. 20 – Humane Destruction

- (a) Sheep and beef cattle must be handled, restrained and killed in such a manner as to minimise unnecessary pain and distress prior to death.**
- (b) Persons undertaking destruction must be competent in the handling and killing of sheep and/or beef cattle.**
- (c) Beef cattle must be rapidly rendered insensible and remain in that state, until death.**
- (d) The spinal cord must not be severed or broken in any animal, until after death.**
- (e) Animals rendered insensible by a blow or shot to the brain must be bled out immediately to ensure death occurs before recovery from stunning.**

Recommended Best Practice

- (a) Sheep should be rapidly rendered insensible and remain in that state, until death.
- (b) Devices for slaughtering sheep and beef cattle should be in good condition (e.g. knives should be sharp) and appropriate for the animal (e.g. captive bolt device cartridge strength or firearm calibre).
- (c) Free-bullet firearms should never be used at point blank range. Instead shotguns and rifles should be used between 5 and 25 cm from the head.
- (d) Shotguns should not be used to destroy adult beef cattle, only calves.
- (e) Captive bolt firearms, of a suitable design and calibre, should be used to render animals insensible.

General Information

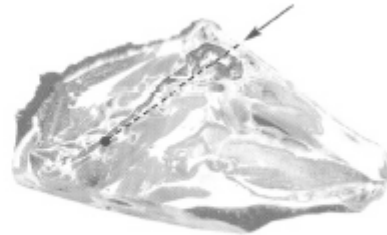
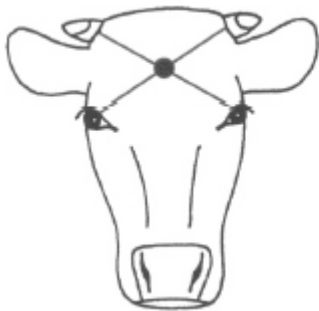
Bleeding an animal should be carried out using a sharp knife with the incision cutting both carotid arteries and jugular veins in one swift stroke. Breaking the neck or severing the spinal cord immediately after cutting the throat only produces paralysis, does not affect the time it takes for the animal to become unconscious and adds to the potential pain and distress of the procedure.

Whenever a firearm is used, it is very important that the operator is competent to use the gun and takes care to ensure their safety and that of other animals.

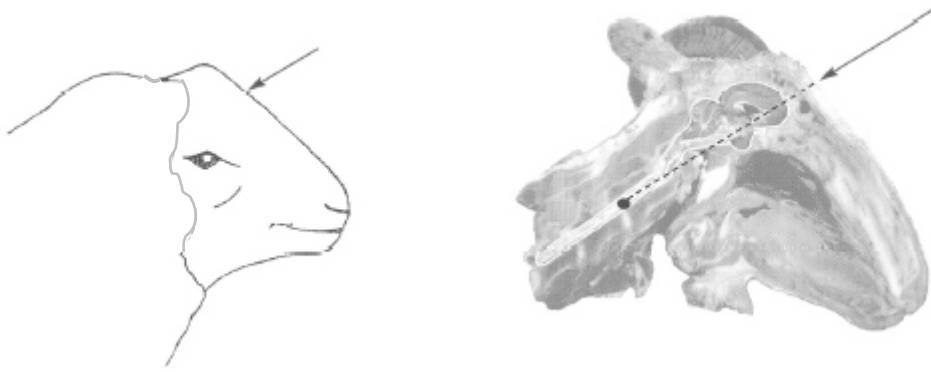
There are two types of captive bolt firearm – penetrating and non-penetrating. A penetrating captive bolt enters the skull and comes into contact with brain tissue; a non-penetrative captive bolt employs a “mushroom” percussive head. Both methods provide a concussive blow to the skull, resulting in insensibility because of brain tissue damage, although the damage caused by the penetrating captive bolt will result in less chance of the animal regaining sensibility. The captive bolt firearm must be applied directly against the head of the animal at the position shown below.

Correct position is critical for the humane and effective slaughter of animals.

The optimum position for beef cattle is at the intersection of two imaginary lines drawn from the rear of the eyes to the opposite horn buds (both free bullet and captive bolt).



The optimum free-bullet firearm position for hornless sheep is on the midline.



The optimum position for captive bolt stunning of hornless sheep is on the highest point of the head, and on the mid-line, aiming straight down.



The optimum position for heavily horned sheep is behind the poll, aiming towards the angle of the jaw (both free bullet and captive bolt).

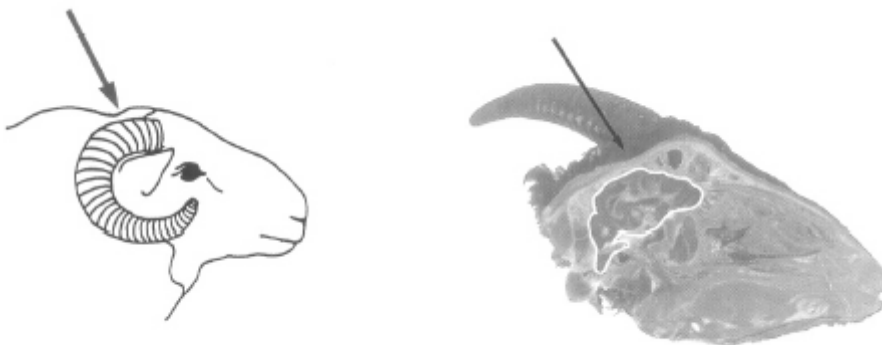


Figure source: Based on Humane Slaughter Association (2005) Guidance Notes No. 3: Humane Killing of Livestock Using Firearms. Published by the Humane Slaughter Association, The Old School, Brewhouse Hill, Wheathampstead, Hertfordshire AL4 8AN, UK. www.hsa.org.uk.

For further information on emergency humane destruction see '*Code of Recommendations and Minimum Standards for the Emergency Slaughter of Farm Livestock*'. Handlers who are inexperienced with the procedure should consult a veterinarian.

Appendix I: Body Condition Scoring for Sheep

Condition scoring assesses the amount of muscle and fat on the sheep. If there is too much wool on the sheep it is difficult to score body condition accurately by eye. Place the palm of your hand on the lumbar spine (loin) and use fingers on one side and thumb on other side to feel transverse processes.

Use 0–5 scale to score sheep using the following descriptors:

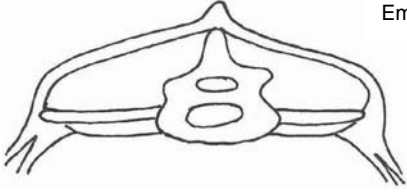
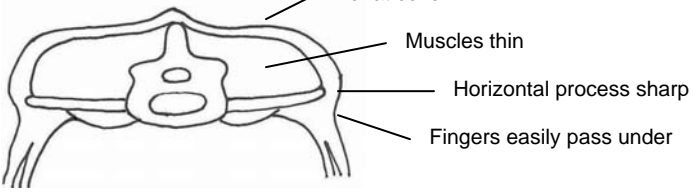
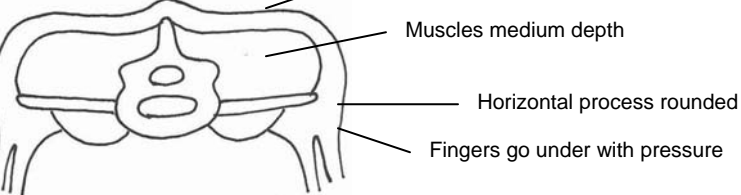
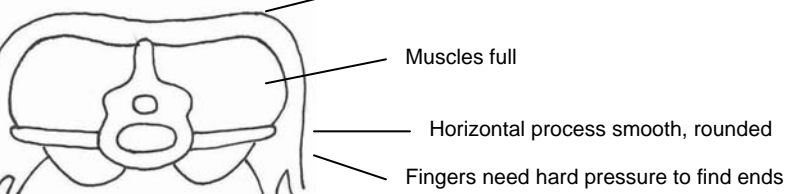
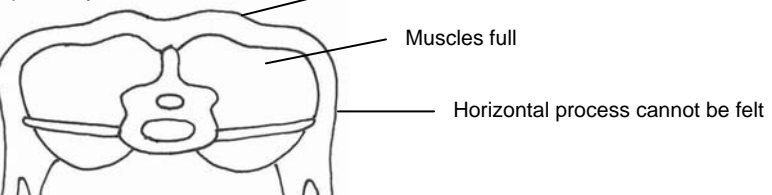
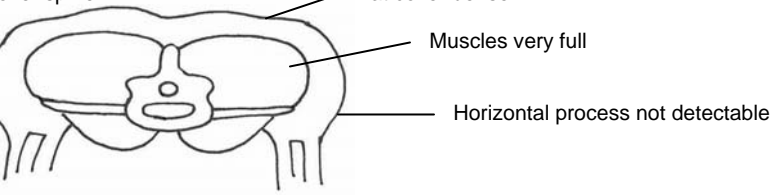
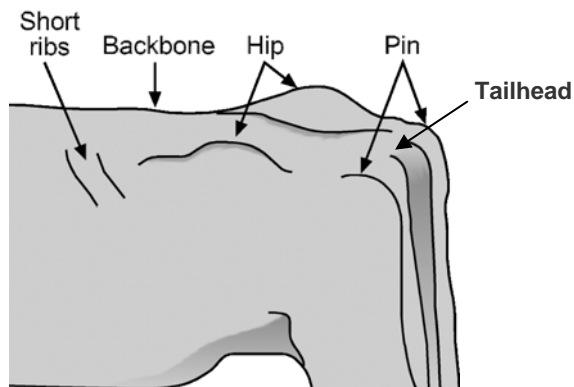
 <p>Emaciated, and on the point of death</p>	<p>Condition Score = 0</p>
 <p>Spine prominent and sharp</p> <ul style="list-style-type: none"> No fat cover Muscles thin Horizontal process sharp Fingers easily pass under 	<p>Condition Score = 1</p>
 <p>Spine prominent and smooth</p> <ul style="list-style-type: none"> Thin fat cover Muscles medium depth Horizontal process rounded Fingers go under with pressure 	<p>Condition Score = 2</p>
 <p>Spine smooth, rounded</p> <ul style="list-style-type: none"> Moderate fat cover Muscles full Horizontal process smooth, rounded Fingers need hard pressure to find ends 	<p>Condition Score = 3</p>
 <p>Spine only detected as a line</p> <ul style="list-style-type: none"> Fat cover thick Muscles full Horizontal process cannot be felt 	<p>Condition Score = 4</p>
 <p>Spine not detectable; fat dimpled over spine</p> <ul style="list-style-type: none"> Fat cover dense Muscles very full Horizontal process not detectable 	<p>Condition Score = 5</p>

Figure adapted from various sources.

Appendix II: Body Condition Scoring for Beef Cattle

The table below provides a guide on how to assess body condition score in beef cows. The condition scoring system is simply based on the amount of fat cover over an animal's bones. Note the focus on observing the rear half of the animal. Further information on body condition scoring is available from Meat and Wool NZ.



BCS	Description
0	Emaciated, and on the point of death
1	Very thin with no fat detectable over spine, hips, or ribs. Tailhead and ribs project prominently.
2	Borderline condition, ribs still identifiable but not as sharp to the touch. The spine is still prominent but feels round rather than sharp. Some fat over the hip bones and tailhead.
3	Good overall appearance. Firm pressure must be applied to feel the spine. Fat cover over the ribs feels spongy and areas on either side of the tailhead have fat cover.
4	Good, beef cattle appears fleshy and carries some fat. Spongy fat cover over the ribs and around the tailhead. Fat patches are becoming obvious.
5	Fat. Spine almost impossible to palpate. Large fat deposits over ribs, around tailhead, and below vulva. Bone structure no longer visible.

Appendix III: Interpretation and Definitions

Act	The Animal Welfare Act 1999.
ad libitum / ad lib feeding	Provision of an unrestricted amount of feed.
adverse weather	Unfavourable weather conditions that may pose harm or risk to the animals.
animal	<p>As defined in the Act:</p> <p>“(a) Means any live member of the animal kingdom that is –</p> <ul style="list-style-type: none">(i) A mammal; or(ii) A bird; or(iii) A reptile; or(iv) An amphibian; or(v) A fish (bony or cartilaginous); or(vi) Any octopus, squid, crab, lobster, or crayfish (including freshwater crayfish); or(vii) Any other member of the animal kingdom which is declared from time to time by the Governor-General, by Order in Council, to be an animal for the purposes of the Act; and <p>(b) Includes any mammalian foetus, or any avian or reptilian pre-hatched young, that is in the last half of its period of gestation or development; and</p> <p>(c) Includes any marsupial pouch young; but</p> <p>(d) Does not include –</p> <ul style="list-style-type: none">(i) A human being; or(ii) Except as provided in paragraph above, any animal in the pre-natal, pre-hatched, larval, or other such developmental stage.”
available technology	NAWAC takes to mean technologies which are used practically to care for and manage animals, for example, existing chemicals, drugs, instruments, devices and facilities.
bearing	A prolapse of the vagina with closed cervix, caused by abdominal pressure being greater than the strength of the tissues supporting the vagina.
body condition score	A 0–5 scoring system used to classify the condition of animals, based on the assessed amount of fat and/or muscle covering they have (see Appendices I and II “Body Condition Scoring”, to this code).
beef cattle	All cattle which are farmed principally for their meat and/or offspring.

brand	To mark indelibly the skin of an animal by burning, usually with hot or very cold irons, for the purpose of identification of ownership, age or other purpose.
break-feeding	Providing access to a set amount or area of fresh pasture or crop on a frequent, often daily, basis.
breeding soundness	A measure of a male's ability to breed, usually determined by assessing the animal's physical health, scrotal and semen status and ability to mate.
calf	A young bovine until it is weaned.
cast	An animal that is lying down but unable to right itself into a sternal recumbency position so that it can rise.
controlled grazing / rotational grazing	Management of livestock and pasture involving frequent shifts, often daily, of animals onto set areas of fresh pasture.
crutching	Shearing of wool from the hindquarters of a sheep.
dag	A clot of matted wool and excrement found on the hindquarters of a sheep.
dagging	Removal of dags from a sheep's hindquarters.
drought	A prolonged period of very low rainfall resulting in a severe shortage of feed and water available from the environment.
droving	Moving animals from one place to another by driving them on foot along roadways or stock routes.
dystocia	Difficult birth.
easy-care	Sheep selected to be able to adapt and survive in adverse or difficult conditions with relatively little human assistance.
farm or farmed animals	Any animals bred and/or reared for food, fibre, and/or offspring.
feeding pad	An enclosure used for providing supplementary feed in troughs.
feedlot	A confined outdoor area with watering and feeding facilities where livestock are completely hand or mechanically fed for the purpose of production.
feral animal	An animal of a domestic species now living in a wild state.
flight zone	The space surrounding an animal in which it will move, or take flight, when entered for example by a stock handler.
genotype	The genetic makeup of an animal, as opposed to its physical appearance.
goad/prodder	An object used to stimulate or prod an animal to make it move.
good practice	NAWAC takes to mean a standard of care that has a general level of acceptance among knowledgeable practitioners and experts in the field; is based on good sense and sound judgement; is practical and thorough; has robust experiential or scientific foundations; and prevents unreasonable or unnecessary harm to, or promotes the interests of, the animals to which it is applied. Good practice also takes account of the evolution of attitudes about animals and their care.

heifer	A young female bovine under 3 years of age.
hogget	A young female ovine that is weaned and is reproductively mature until eruption of the two central incisor teeth.
hyperthermia	Abnormally high body temperature.
hypothermia	Abnormally low body temperature.
ill-treat	As defined in the Act: “in relation to an animal, means causing the animal to suffer, by any act or omission, pain or distress that in its kind or degree, or in its object, or in the circumstances in which it is inflicted, is unreasonable or unnecessary.”
inflammation	Localised physical condition with heat, swelling, redness and usually pain, especially as a reaction to injury or infection.
insecticide	A registered animal remedy to deter or destroy insects and external parasites.
lamb	A young ovine until it is weaned.
lifter	A plate with sleds that is screwed underneath a conventional shearing comb raising it by 2.5 mm ensuring a greater layer of wool is left providing insulation for the shorn sheep.
lux	International measure of light intensity (not to be confused with watts).
minimum standards	Minimum standards provide the details of specific actions people need to take in order to meet the obligations in the Act. They are identified in the text by a heading, and generally use the word “must” or similar. They are highlighted in boxes within the text.
mount animal	An animal, restrained and used for libido testing.
neonate	Newborn animal.
owner	As defined in the Act: “in relation to an animal, includes the parent or guardian of a person under the age of 16 years who – <ul style="list-style-type: none"> (a) Owns the animal; and (b) Is a member of the parent’s or guardian’s household living with and dependent on the parent or guardian.”
painful husbandry procedures	Means any procedure carried out with or without instruments which involves physical interference with the sensitive soft tissue or bone structure of an animal and is carried out for non-therapeutic reasons. It does not apply to those procedures used to treat animals with existing injuries or disease.
pasture	A mix of grass species that provides nourishment to livestock generally directly consumed or mechanically harvested for consumption at a later time.
person in charge	As defined in the Act: “in relation to an animal, includes a person who has an animal in that person’s possession or custody, or under that person’s care, control, or supervision.”

pest	<p>As defined in the Act: “means –</p> <ul style="list-style-type: none"> (a) Any animal in a wild state that, subject to subsection (2), the Minister of Conservation declares, by notice in the Gazette, to be a pest for the purposes of this Act: (b) Any member of the family Mustelidae (except where held under a licence under regulations made under the Wildlife Act 1953): (c) Any feral cat: (d) Any feral dog: (e) Any feral rodent: (f) Any feral rabbit: (g) Any feral hare: (h) Any grass carp: (i) Any Koi or European carp: (j) Any silver carp: (k) Any mosquito fish: (l) Any animal in a wild state that is a pest or unwanted organism within the meaning of the Biosecurity Act 1993.”
photosensitive	Exhibiting abnormally heightened sensitivity to sunlight.
physiological state	Relates to the functioning of the body, its organs and body systems.
recommended best practice	<p>NAWAC takes to mean the best practice agreed at a particular time, following consideration of scientific information, accumulated experience and public submissions on this code. It is usually a higher standard of practice than the minimum standard, except where the minimum standard is best practice. It is a practice that can be varied as new information comes to light. Recommendations for best practice will be particularly appropriate where it is desirable to promote or encourage better care for animals than is provided as a minimum standard.</p> <p>Recommended best practices are identified in the text by a heading, and generally use the word “should”.</p>
scientific knowledge	<p>NAWAC takes to mean knowledge within animal-based scientific disciplines, especially those that deal with nutritional, environmental, health, behavioural and cognitive/neural functions, which are relevant to understanding the physical, health and behavioural needs of animals. Such knowledge is not haphazard or anecdotal; it is generated by rigorous and systematic application of the scientific method, and the results are objectively and critically reviewed before acceptance.</p>
service	The physical act of mating.
sheep	All sheep which are farmed principally for their meat, fibre and/or offspring.
shelter	Cover or protection from weather including sun, rain, wind and snow.

short scrotum or cryptorchid males	Males rendered infertile by forcing the testes against the abdominal wall by removing the scrotum through the application of a rubber ring to the scrotum below (distal to) the testes.
shy-feeder	An animal which is reluctant or slow to adapt to a new feed, usually encountered in a feedlot.
snow-raking	Rescue of livestock trapped by snow.
sporodesmin	The toxin contained in the spores of the fungus <i>Pithomyces chartarum</i> which causes facial eczema when ingested.
stockhandler	A person who undertakes the immediate day-to-day husbandry tasks associated with management and care of sheep and beef cattle.
stockmanship	Putting into practice the skills, knowledge, experience, attributes and empathy necessary to manage stock.
waddy	A stick or similar device for directing the movement of livestock.
winter or “cover” comb	A shearing comb with a wider than conventional comb throat between its teeth and with a rail under every second tooth that ensures a greater layer of wool is left on the shorn sheep.

Appendix IV: Legislative Requirements

The Animal Welfare Act 1999 (the Act) imposes obligations on every person who owns or is in charge of an animal. This code has been issued pursuant to section 75 of the Act and will provide guidance on how to comply with the legislative requirements. However, this code does not provide an exhaustive list of the Act's requirements, and owners and those in charge of animals should note that they must comply with the minimum standards in this code *and* the general provisions in the Act. A copy of the Act is accessible at: <http://www.legislation.govt.nz>.

Contents of Codes

Section 69 of the Act provides that a code of welfare may relate to one or more of the following:

- a species of animal
- animals used for purposes specified in the code
- animal establishments of a kind specified in the code
- types of entertainment specified in the code (being types of entertainment in which animals are used)
- the transport of animals
- the procedures and equipment used in the management, care or killing of animals or in the carrying out of surgical procedures on animals.

In deciding to issue a code of welfare, the Minister must be satisfied as to the following matters set out in section 73(1) of the Act:

- that the proposed standards are the minimum necessary to ensure that the purposes of the Act will be met
- that the recommendations for best practice (if any) are appropriate.

Despite the provisions of section 73(1), section 73(3) of the Act allows NAWAC, in exceptional circumstances, to recommend minimum standards and recommendations for best practice that do not fully meet the obligations of:

- sections 10 and 11 – obligations in relation to physical, health and behavioural needs of animals
- section 12(c) – killing an animal
- section 21(1)(b) – restriction on performance of surgical procedures
- section 22(2) – providing comfortable and secure accommodation for the transport of animals
- section 23(1) and (2) – transport of animals
- section 29(a) – ill-treating an animal.

In making a recommendation under section 73(3), section 73(4) requires NAWAC to have regard to:

- the feasibility and practicality of effecting a transition from current practices to new practices and any adverse effects that may result from such a transition
- the requirements of religious practices or cultural practices or both
- the economic effects of any transition from current practices to new practices.

This code provides for the physical, health and behavioural needs (as defined in section 4 of the Act) of animals being presented for slaughter. These needs include:

- proper and sufficient food and water
- adequate shelter
- opportunity to display normal patterns of behaviour

- physical handling in a manner which minimises the likelihood of unreasonable or unnecessary pain or distress
- protection from, and rapid diagnosis of, any significant injury or disease,

being a need which, in each case, is appropriate to the species, environment and circumstances of the animal.

This code also takes account of:

- good practice
- scientific knowledge
- available technology.

Legal Obligations of Owners and Persons in Charge of Animals

The owner or person in charge of an animal has overall responsibility for the welfare of the animal in his or her care. The legal obligations set out below are not an exhaustive list of the obligations in the Act.

(a) The owner or person in charge of an animal must:

- ensure that the physical, health and behavioural needs of the animal are met in a manner that is in accordance with both good practice and scientific knowledge
- where practicable, ensure that an animal that is ill or injured receives treatment that will alleviate any unreasonable or unnecessary pain or distress being suffered by the animal or that it is killed humanely.

(b) The owner or person in charge of an animal must not without reasonable excuse:

- keep an animal alive when it is in such a condition that it is suffering unreasonable or unnecessary pain or distress
- sell, attempt to sell or offer for sale, otherwise than for the express purpose of being killed, an animal, when it is suffering unreasonable or unnecessary pain or distress
- desert an animal in circumstances in which no provision is made to meet its physical, health and behavioural needs.

(c) No person may:

- ill-treat an animal
- release an animal that has been kept in captivity, in circumstances in which the animal is likely to suffer unreasonable or unnecessary pain or distress
- perform any significant surgical procedure on an animal unless that person is a veterinarian, or a veterinary student under the direct supervision of a veterinarian, or a person approved by a veterinarian
- perform on an animal a surgical procedure that is not a significant surgical procedure (as defined by the Act) in such a manner that the animal suffers unreasonable or unnecessary pain or distress
- kill an animal in such a manner that the animal suffers unreasonable or unnecessary pain or distress.

Regulations Review Committee of Parliament

Codes of welfare are deemed to be regulations for the purposes of the Regulations (Disallowance) Act 1989. As such, they are subject to the scrutiny of the Regulations Review Committee of Parliament.

Any person or organisation aggrieved at the operation of a code of welfare has the right to make a complaint to the Regulations Review Committee, Parliament Buildings, Wellington.

This is a parliamentary select committee charged with examining regulations against a set of criteria and drawing to the attention of the House of Representatives any regulation that does not meet the criteria.

Grounds for reporting to the House include:

- the regulation trespasses unduly on personal rights and freedoms;
- the regulation is not made in accordance with the general objects and intentions of the statute under which it is made; or
- the regulation was not made in compliance with the particular notice and consultation procedures prescribed by statute.

Any person or organisation wishing to make a complaint should refer to the publication *Making a Complaint to the Regulations Review Committee*, which can be obtained from the website:

<http://www.clerk.parliament.govt.nz>, or by writing to: Clerk of the Committee, Regulations Review Committee, Parliament Buildings, Wellington.

Strict Liability

In the prosecution of certain offences under the Animal Welfare Act 1999 committed after 19 December 2002, evidence that a relevant code of welfare was in existence at the time of the alleged offence and that a relevant minimum standard established by that code was not complied with is rebuttable evidence that the person charged with the offence failed to comply with, or contravened, the provision of the Animal Welfare Act to which the offence relates. (See sections 13(1A), 24(1) and 30(1A) of the Animal Welfare Act 1999, as amended by the Animal Welfare Amendment Act 2002.)

Defences

It is a defence in the prosecution of certain offences under the Animal Welfare Act 1999 if the defendant proves that there was in existence at the time of the alleged offence a relevant code of welfare and that the minimum standards established by the code of welfare were in all respects equalled or exceeded. (See sections 13(2)(c), 24(2)(b) and 30(2)(c).)

If a defendant in a prosecution intends to rely on the defence under section 13(2)(c) or 30(2)(c), the defendant must, within seven days after the service of the summons, or within such further time as the Court may allow, deliver to the prosecutor a written notice. The notice must state that the defendant intends to rely on section 13(2) or 30(2) as the case may be, and must specify the relevant code of welfare that was in existence at the time of the alleged offence, and the facts that show that the minimum standards established by that code of welfare were in all respects equalled or exceeded. This notice may be dispensed with if the Court gives leave. (See sections 13(3) and 30(3).)

The strict liability provisions and the defence of equalling or exceeding the minimum standards established by a code of welfare apply to the following offences:

Failing to Provide

Section 12(a): A person commits an offence who, being the owner of, or a person in charge of, an animal, fails to comply, in relation to the animal, with section 10 (which provides that the owner of an animal, and every person in charge of an animal, must ensure that the physical, health and behavioural needs of the animal are met in a manner that is in accordance with both good practice and scientific knowledge).

Suffering Animals

Section 12(b): A person commits an offence who, being the owner of, or a person in charge of, an animal, fails, in the case of an animal that is ill or injured, to comply, in relation to the animal, with section 11 (which provides that the owner of an animal that is ill or injured, and every person in charge of such an animal, must, where practicable, ensure that the animal receives treatment that alleviates any unreasonable or unnecessary pain or distress being suffered by the animal).

Section 12(c): A person commits an offence who, being the owner of, or a person in charge of, an animal, kills the animal in such a manner that the animal suffers unreasonable or unnecessary pain or distress.

Surgical Procedures

Section 21(1)(b): A person commits an offence who, without reasonable excuse, acts in contravention of or fails to comply with section 15(4) (which provides that no person may, in performing on an animal a surgical procedure that is not a significant surgical procedure, perform that surgical procedure in such a manner that the animal suffers unreasonable or unnecessary pain or distress).

Transport

Section 22(2): A person commits an offence who fails, without reasonable excuse, to comply with any provision of section 22(1) (which provides that every person in charge of a vehicle or an aircraft, and the master of or, if there is no master, the person in charge of, a ship, being a vehicle, aircraft or ship in or on which an animal is being transported, must ensure that the welfare of the animal is properly attended to, and that, in particular, the animal is provided with reasonably comfortable and secure accommodation and is supplied with proper and sufficient food and water).

Section 23(1): A person commits an offence who, without reasonable excuse, confines or transports an animal in a manner or position that causes the animal unreasonable or unnecessary pain or distress.

Section 23(2): A person commits an offence who, being the owner of, or the person in charge of, an animal, permits that animal, without reasonable excuse, to be driven or led on a road, or to be ridden, or to be transported in or on a vehicle, an aircraft, or a ship while the condition or health of the animal is such as to render it unfit to be so driven, led, ridden or transported.

Ill-treatment

Section 29(a): A person commits an offence who ill-treats an animal.

Inspection of Premises

Section 127(1): Inspectors appointed under the Animal Welfare Act 1999 have the power to enter any land or premises (with the exceptions of dwellings and marae), or any vehicle, aircraft or vessel, at any reasonable time, for the purpose of inspecting any animal.

Inspectors include officers of MAF Compliance and Enforcement Group, inspectors from approved organisations (e.g. Royal New Zealand SPCA) appointed by the Minister, and the Police.

Appendix V: Codes of Welfare

Process for Code Development

The Act established the National Animal Welfare Advisory Committee (NAWAC) and provided for the issue of codes of welfare with legal effect. One of the responsibilities of NAWAC is to advise the Minister of Agriculture (the Minister) on the content of codes of welfare following a process of public consultation.

A draft code may be developed by anyone, including NAWAC or the Minister. It is then submitted to NAWAC. Provided the draft meets criteria in the Act for clarity and compliance with the purposes of the Act, and provided representatives of persons likely to be affected by the code have been adequately consulted, NAWAC publicly notifies the code and calls for submissions. NAWAC is then responsible for recommending the form and content of the code to the Minister after having regard to the submissions received, good practice and scientific knowledge, available technology and any other relevant matters.

NAWAC may recommend standards that do not fully meet the obligations in the Act if certain criteria specified in the Act are met.

The Minister issues the code by notice in the *Gazette*.

The original draft of this code was written by a group designated by NAWAC and has been reviewed by representatives of farmers, the meat and wool industries, veterinarians and animal welfare organisations. NAWAC publicly notified the draft code of welfare on 31 October 2008.

Revision of the Code

This code is based on the knowledge and technology available at the time of publication, and may be reviewed in the light of future advances and knowledge. Consequently, NAWAC will review this code when deemed necessary. In any event, this code will be reviewed no later than 25 June 2020 (being 10 years from the date on which this code was issued by the Minister).

Comments on this code are always welcome and should be addressed to: The Secretary, National Animal Welfare Advisory Committee, PO Box 2526, Wellington 6140.

Further information can be obtained from the website: <http://www.biosecurity.govt.nz/animal-welfare>.

Codes of Welfare

- Animal Welfare (Broiler Chickens: Fully Housed) Code of Welfare 2003
- Animal Welfare (Rodeos) Code of Welfare 2003
- Animal Welfare (Pigs) Code of Welfare 2005
- Animal Welfare (Layer Hens) Code of Welfare 2005
- Animal Welfare (Zoos) Code of Welfare 2005
- Animal Welfare (Circuses) Code of Welfare 2005
- Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005
- Animal Welfare (Companion Cats) Code of Welfare 2007
- Animal Welfare (Deer) Code of Welfare 2007
- Animal Welfare (Dairy Cattle) Code of Welfare 2010
- Animal Welfare (Commercial Slaughter) Code of Welfare 2010
- Animal Welfare (Dogs) Code of Welfare 2010

Codes of Recommendations and Minimum Standards

- Sea Transport of Sheep from New Zealand, September 1991
- Welfare of Deer During the Removal of Antlers, July 1992, amended August 1994, August 1997
- Welfare of Horses, February 1993
- Care of Animals in Boarding Establishments, August 1993
- Sale of Companion Animals, September 1994
- Welfare of Animals Transported within New Zealand, November 1994, amended June 1996, August 1998
- Welfare of Animals at Saleyards, May 1995
- Emergency Slaughter of Farm Livestock, December 1996
- Welfare of Ostrich and Emu, September 1999

Guidelines

- Welfare of Stock from which Blood is Harvested for Commercial and Research Purposes, March 2009
- Welfare of Yearling Fallow Deer During the Use of Rubber Rings to Prevent Antler/Pedicle Growth, September 1997
- Welfare of Red and Wapiti Yearling Stags During the Use of Rubber Rings to Induce Analgesia for the Removal of Spiker Velvet, September 1998

<p>Codes and Guidelines may be obtained from:</p> <p><i>Executive Co-Ordinator</i> <i>Animal Welfare</i> <i>MAF Biosecurity New Zealand</i> <i>Ministry of Agriculture and Forestry</i> <i>PO Box 2526</i> <i>WELLINGTON 6140</i> <i>Tel: 04 894 0366</i> <i>email: animalwelfare@maf.govt.nz</i></p>	<p>Or can be inspected at:</p> <p><i>Animal Welfare</i> <i>Ministry of Agriculture and Forestry</i> <i>Pastoral House</i> <i>Reception</i> <i>Level 10</i> <i>25 The Terrace</i> <i>WELLINGTON 6011</i></p>
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Codes and Guidelines are available on MAF's website.

The web page address is: <http://www.biosecurity.govt.nz/animal-welfare>.