

# DEER

## **Animal Welfare (Deer) Code of Welfare 2007**

*A code of welfare issued under the Animal Welfare Act 1999*

18 May 2007

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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 (Deer) Code of Welfare 2007 is issued by me, by a notice published in the *Gazette* on 17 May 2007, under section 75 of the Animal Welfare Act 1999. This code comes into force on 18 May 2007.

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 read 'Jim Anderton', is positioned above the printed name and title.

Hon Jim Anderton  
Minister of Agriculture

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# 1. Introduction, Purpose and Interpretation of Code

## 1.1 Introduction

The Animal Welfare Act 1999 (the Act) imposes obligations on every person who owns or is in charge of deer. 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 deer 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>.

## 1.2 Scope

This code is intended for all persons responsible for the welfare of farmed deer. This code applies to any deer held behind any boundary fence or other enclosure for the broadest purposes of farming, including the keeping of deer on game estates or safari parks. Common species of deer farmed in New Zealand include red deer (*Cervus elaphus*), incorporating various subspecies such as elk or wapiti (*Cervus elaphus canadensis*), and European fallow deer (*Dama dama dama*). For further species, see Appendix VI, "Species of New Zealand Farmed Deer", to this code.

The code covers all aspects of deer production except the removal of velvet and castration of male deer. For specific information on these procedures, please refer to the following:

- velvet antler removal – *Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers*
- castration – *Animal Welfare (Painful Husbandry Procedures) Code of Welfare 2005*.

Farmed deer production, if it is to be performed well, requires a farmer to gain good knowledge, understanding and experience of handling deer and to observe high standards, in order to protect the welfare of the deer. This code is intended to encourage all those responsible for farmed deer production to adopt the highest standard of husbandry, care and handling, so as to equal or exceed the minimum standards.

Under the Act the "owner" of an animal, and the "person in charge" of an animal, are responsible for meeting the legal obligations for animal welfare. In the case of deer, the owner of the animals may place the deer in the care of others for the purposes of rearing, transport and slaughter. See section 2, "Legal Obligations of Owners and Persons in Charge of Animals", and section 3, "Stockmanship", of this code, where the crucial role of the owner and the person in charge is explained.

The owner and person in charge of the deer have overall responsibility for the welfare of the animals. While the stock handlers have responsibilities for the welfare of animals under their immediate care, these responsibilities do not detract from the liability of the owner and person in charge of the deer on the farm.

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 will lie with the owner and person in charge of the deer. Responsibility for meeting minimum standards during the operation of particular tasks will lie with the person responsible for carrying out that particular task.

Advice is given throughout the code and is designed to encourage owners and persons in charge to strive for a high level of welfare. Explanatory material is provided where appropriate.

This code sets out the general principles for the care of deer, and is enhanced by the industry's DeerQA On-Farm Programme that incorporates the recommendations of this code (see section 9, "Quality Management", of this code). Game estate and safari park operators can refer to the *New Zealand Association of Game Estates Industry Agreed Standards* for further information, although these standards do not supersede this code.

Other codes of welfare that are relevant, and are either being produced for the first time or are in the process of being reviewed, include codes concerned with the transport of animals, slaughter at licensed and approved premises, emergency slaughter, and the use of animals for scientific purposes. Where relevant, these other codes should be consulted (see Appendix II, "Codes of Welfare", to this code).

### 1.3 Legal Status of Codes of Welfare

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.

Codes of welfare contain minimum standards and may also contain recommended practice and recommended best practice. In this code, only minimum standards have legal effect and in two possible ways:

- evidence of a failure to meet a relevant minimum standard may be used to support a prosecution for an offence under the Act (see Appendix I, "Strict Liability and Defences", to this code)
- a person who is charged with an offence against the Act can defend himself/herself by showing that he/she has equalled or exceeded the minimum standards (see Appendix I, "Strict Liability and Defences", to this code).

Recommendations for best practice under New Zealand conditions set out standards of care and conduct over and above the minimum required to meet the obligations in the Act. They are included for educational and information purposes.

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.

## 1.4 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*.

This code was drafted by Deer Industry New Zealand. Deer farmers, veterinarians, scientific researchers, processor exporters, stock and station agents, and other interest groups were consulted. NAWAC publicly notified the draft code of welfare on 11 December 2004.

## 1.5 Contents of this Code

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; and
- 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:

- section 10 or section 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 farmed deer. 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.

## 1.6 Revision of the Code

This code is based on the knowledge and technology available at the time of publication, and may need to be varied in the light of future advances and knowledge. In any event, this code will be reviewed no later than 17 May 2017 (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.

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

## 1.7 Interpretation and Definitions

### 1.7.1 Interpretation

#### ***Minimum Standards***

Minimum standards are identified in the text by a heading, and use the word “must” or similar. They are highlighted in boxes within the text.

### ***Recommended Best Practice***

The Act provides that codes of welfare may contain recommendations for best practice.

The Act does not define “recommended best practice”. NAWAC takes “recommended best practice” to mean the best practice agreed at a particular time, following consideration of scientific information, accumulated experience and public submissions on the 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.

Recommended best practices are identified in the text by a heading, and generally use the word “should”.

### ***Good Practice***

The Act does not define “good practice”. NAWAC takes “good practice” 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.

### ***Scientific Knowledge***

The Act does not define “scientific knowledge”. NAWAC takes “scientific knowledge”, relevant to its areas of responsibility, 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.

### ***Available Technology***

The Act does not define “available technology”. NAWAC takes “available technology” to represent, for example, existing chemicals, drugs, instruments, devices and facilities which are used practically to care for and manage animals.

## **1.7.2 Definitions**

### ***Act***

“Act” means the Animal Welfare Act 1999.

### ***Animal***

This code applies to farmed deer, being animals as defined in section 2 of the Act:

“Animal” –

- (a) Means any live member of the animal kingdom that is –
  - (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 this Act; and
- (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
- (c) Includes any marsupial pouch young; but
- (d) Does not include –
- (i) A human being; or
  - (ii) Except as provided in paragraph (b) or paragraph (c) of this definition, any animal in the pre-natal, pre-hatched, larval, or other such developmental stage.

### ***Ill-treat***

As defined in section 2 of the Act, “ill-treat”, 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.

### ***Owner***

As defined in section 2 of the Act, “owner”, in relation to an animal, includes the parent or guardian of a person under the age of 16 years who –

- (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.

### ***Person in Charge***

As defined in section 2 of the Act, “person in charge”, in relation to an animal, includes a person who has the animal in that person’s possession or custody, or under that person’s care, control, or supervision.

## **1.8 Glossary**

See also section 1.7, “Interpretation and Definitions”, of this code.

<b>adult</b>	Any deer over the age of 2 years (birthdates are generally considered to be 1 December, but Animal Health Board regulations recognise 1 January as the birth date for Tb testing purposes).
<b>adverse weather</b>	Unfavourable weather conditions that may pose harm or risk to the animals.
<b>back fencing</b>	A technique in break feeding (see below) whereby previously grazed adjacent areas are closed off to animals using a fence, often electrified, to prevent damage from treading or overgrazing which may result in reduced pasture growth.
<b>baleage</b>	Baled pasture, plastic wrapped and ensiled.

<b>BCS</b>	Body Condition Score – a 5-stage scoring system for adult deer used to classify their body condition, based on the assessed amount of fat and/or muscle covering, particularly over the rump and pelvis. BCS, while illustrated for red deer, is applicable for assessing all common farmed deer species in New Zealand (see Appendix III, “Condition Scoring of Deer”, to this code).
<b>brassicas</b>	Fodder crop of the brassica family.
<b>break feeding / strip grazing</b>	Control of a feed supply of pasture or crop (brassica or cereal) using a temporary electric fence or netting, shifted regularly (usually daily) to provide fresh feed.
<b>calf</b>	Interchangeable term for fawn (see below) depending on the species; usually applied to red deer, wapiti and their hybrids.
<b>certified velvetter</b>	A person who is approved to remove velvet under the contractual conditions of the National Velvetting Standards Body formal certification scheme.
<b>colostrum</b>	Milk secreted by the female for the first few days following birth (parturition) characterised by high antibody content.
<b>crude protein</b>	The total nitrogen content of a feed multiplied by 6.25 (used to assess the protein content of a feed source).
<b>deer farm</b>	An enclosed area that has been fenced off for the purpose of farming deer, including the keeping of deer on game estates or safari parks.
<b>diurnal patterns</b>	A pattern of conditions such as temperature or light, which is repeated daily.
<b>DM (dry matter)</b>	A standardised measure of feed quantity, expressed as the percentage of feed remaining following removal of all moisture. While it is commonly used to compare different feed types, it does not reflect feed quality, in particular the energy content of the feed.
<b>doe</b>	Adult female fallow deer.
<b>dystocia</b>	Birthing difficulties.
<b>ear marking</b>	Removal of part of the ear for identification purposes. May also be known as notching.
<b>fawn</b>	Newborn deer until weaned (interchangeable term for calf depending on the species).
<b>fawning/calving</b>	Period of time when female deer are giving birth.
<b>feed budget</b>	The process of allocating available feed resources (grazed pasture or crop, and supplementary feeds) to meet the daily requirements of a group of animals. Development of a feed budget ensures that those periods when feed supply may be inadequate are identified, thus allowing contingency planning for allocation, feeding (and purchase) of supplementary feed supplies.
<b>food/feed</b>	The words “food” and “feed” are used interchangeably.

<b>game estate / safari park</b>	Farming operation where animals are kept (whether all of the time or only some of the time), as if in the wild, for the purpose of providing opportunities for persons to hunt, or where deer are held on display.
<b>ground cover</b>	Natural vegetation (e.g. rank grass, low scrub, weeds or brush) or artificial shelter (e.g. tree branches, hay bales) for the protection of newborn fawns.
<b>handling facilities</b>	An area set up to handle deer for routine animal management, health treatments, sorting and drafting (e.g. pens, deer sheds, lairage, yards).
<b>hard antler</b>	Fully grown calcified antler that no longer has functional nerve or blood supply (stripping of velvet will be evident to a greater or lesser extent).
<b>hind</b>	Adult female red or wapiti deer. Reference to hinds in this code also includes does.
<b>holding facilities</b>	An area set up to temporarily hold deer (e.g. pens, deer sheds, lairage, yards).
<b>husbandry</b>	Care and management practices of deer farming.
<b>lactating hind/doe</b>	A hind or doe that has given birth, and is producing milk to feed her calf or fawn.
<b>lairage</b>	A facility where animals are held, particularly prior to slaughter or as part of transportation.
<b>lux</b>	International measure of light intensity (not to be confused with watts).
<b>ME (metabolisable energy)</b>	A standardised measure of the digestible energy content of a feed that is available for use by the animal for maintenance, growth or lactation, expressed in megajoules (MJ) per unit of dry matter.
<b>mechanical restraints</b>	Devices designed to safely restrain animals for the purpose of administering animal health remedies, handling or reproductive techniques. Commonly referred to as bales, crushes and/or cradles.
<b>MJ</b>	Megajoules is a measure of the digestible energy of the food provided. MJ units are used to compare the feed quality of different feed stuffs.
<b>mob</b>	Group of deer.
<b>pecking order</b>	The social hierarchical order resulting from individuals establishing their dominance within a group of deer.
<b>persistent bullying</b>	Enduring aggression towards a deer by one or more other deer, leading to welfare being compromised.
<b>rotational grazing</b>	A grazing management system based on a feed budget, in which animals are controlled by grazing techniques such that they regularly graze an area of pasture that meets the nutritional needs of all the deer present.
<b>rut</b>	The breeding season for deer, characterised by seasonal sexual activity in both male and female deer as well as aggressive behaviour in male deer. (Note: This aggression presents a risk to people and other male deer from February to May.)

<b>scouring</b>	Diarrhoea, producing voluminous, soft to fluid, and often vile-smelling faeces.
<b>set-stocking</b>	A grazing management system that establishes a long-term grazing density over a large area or number of paddocks for a period of weeks or months (e.g. during calving or over winter).
<b>shield</b>	Device used by farmers as protection from aggressive animals. Shields are normally constructed from plywood or plastic.
<b>silage</b>	Pasture which has been preserved by fermentation, which may be made in a pit, stack or in wrapped bales (baleage).
<b>species</b>	In the context of this code, refers to <i>Elaphurus</i> , <i>Dama</i> , <i>Cervus</i> and <i>Odocoileus</i> (see Appendix VI, “Species of New Zealand Farmed Deer”, to this code).
<b>stock handler</b>	A person who undertakes the immediate day-to-day husbandry tasks associated with management and care of deer.
<b>stockmanship</b>	Putting into practice the skills, knowledge, experience, attributes and empathy necessary to manage stock.
<b>supplementary feeds</b>	Feeds which are additional to grazed pasture including baleage, hay, silage, crops and cereal-based foods which may be fed in circumstances where grazed pasture is not available, or when pasture growth rates are insufficient to meet the needs of a group of animals. The nature and amount of supplementary feed required is calculated within a feed budget, with consideration to meeting the crude protein and other nutritional requirements of the animal.
<b>velvet antler</b>	Deer antler in the active stages of growth.
<b>velvetting</b>	The act of surgically removing velvet antler from male deer.
<b>weaner</b>	A deer after it has been weaned (typically at 3 – 4 months of age) until it reaches approximately 9 – 10 months of age.
<b>weaning</b>	The act of permanently separating fawns or calves from their mothers.

## 2. Legal Obligations of Owners and Persons in Charge of Animals

The owner or person in charge of a deer has overall responsibility for the welfare of the deer 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 a deer must:
  - (i) ensure that the physical, health and behavioural needs of the deer are met in a manner that is in accordance with both good practice and scientific knowledge
  - (ii) where practicable, ensure that a deer that is ill or injured receives treatment that will alleviate any unreasonable or unnecessary pain or distress being suffered by the deer or that it is killed humanely.
- (b) The owner or person in charge of a deer must not without reasonable excuse:
  - (i) keep a deer alive when it is in such a condition that it is suffering unreasonable or unnecessary pain or distress
  - (ii) sell, attempt to sell or offer for sale, otherwise than for the express purpose of being killed, a deer, when it is suffering unreasonable or unnecessary pain or distress
  - (iii) desert a deer in circumstances in which no provision is made to meet its physical, health and behavioural needs.
- (c) No person may:
  - (i) ill-treat a deer
  - (ii) release a deer that has been kept in captivity, in circumstances in which the deer is likely to suffer unreasonable or unnecessary pain or distress
  - (iii) perform any significant surgical procedure on a deer unless that person is a veterinarian, or a veterinary student under the direct supervision of a veterinarian or, in the case of a controlled surgical procedure, a person approved by a veterinarian
  - (iv) perform on a deer a surgical procedure that is not a significant surgical procedure (as defined by the Act) in such a manner that the deer suffers unreasonable or unnecessary pain or distress
  - (v) kill a deer in such a manner that the deer suffers unreasonable or unnecessary pain or distress.

Defences are set out in Appendix I, "Strict Liability and Defences", to this code. The Act contains specific procedural requirements before these defences can be relied on, and these requirements are described in Appendix I, "Strict Liability and Defences", to this code.

### 3. Stockmanship

#### ***Introduction***

Owners and persons in charge are required to ensure that their personnel have either the relevant knowledge and training or appropriate supervision to ensure that the health and welfare needs of the deer in their care are met. Personnel should undergo training either formally or on the job by experienced supervisors. Any contracted or temporary staff should be trained and competent in the relevant activity.

The owner or person in charge may place the deer in the care of others for the purpose of rearing, transport and slaughter but this does not absolve them from their responsibility.

#### **Minimum Standard No. 1 – Training**

**The owner or person in charge must ensure that all stock handlers gain experience, either formally or informally, to a level of competency that ensures that animal welfare is maintained in accordance with this code.**

#### ***General Information***

The New Zealand Qualifications Authority lists a number of training qualifications for stock handlers. These include the National Certificate in Agriculture.

Information on these qualifications and accredited training providers is available through the NZQA website: <http://www.nzqa.govt.nz/framework/>.

## 4. Food and Water

### 4.1 Food and Feeding

#### *Introduction*

All deer should receive a daily diet in adequate quantities and containing sufficient nutrients to meet their requirements to maintain good health and welfare.

When considering the amount of food and nutrients deer require, a number of factors need to be taken into account:

- physiological state
- extensive or intensive management systems
- age
- sex
- size
- body condition
- state of health
- nutritional composition of feed
- quality of diet
- introduction of new feeds
- maximum periods of food deprivation (e.g. during transportation)
- growth rate
- previous feeding levels
- feeding frequency
- terrain
- genetic impact of strain or breed
- level of activity and exercise
- climatic and seasonal factors (e.g. extreme weather)
- provision of shelter.

These factors create variation between individuals in terms of food and nutrient requirements.

Grazed pasture is the main source of feed for deer in New Zealand farming systems. Although there is considerable variation in pastoral management systems throughout New Zealand, due for example to extensive and intensive farming situations, season, climatic differences, and land and soil types, there are some common feeding management techniques available for deer farmers.

The general principles of grazing management are to optimise animal intakes by increasing the efficiency of feed utilisation (reduction of wastage), and improve feed quality through management of pasture growth. At certain times of the year, farmers may introduce controlled grazing systems such as break feeding and rotational grazing, such that pasture or crop is rationed according to a feed budget which ensures that the daily feed requirements of the animals are met. Pasture is rationed,

depending on stocking rates, for daily grazing needs but breaks may need to be shifted more frequently in wet or muddy conditions. The amount of pasture available for consumption on each break should meet the needs of all the deer while they are on that break. Where the available budgeted/allocated pasture fails to meet these needs, additional supplementary feeds with appropriate dry matter and energy content are included to ensure that daily intakes are sufficient.

Feeding levels are best determined by monitoring the body condition of the deer (see Appendix III, "Condition Scoring of Deer", to this code), or regular liveweight monitoring. BCS is a means of taking into account the variability in size and conformation. It is difficult to specify a complete range of the quantities of food and nutrients required as a minimum standard. Appendix IV, "Energy Value of Different Supplements", to this code provides energy values for some common supplementary feeds. Tables 1 and 2 should be used as guidelines within which the energy needs of the individual deer can be assessed. Many farmers adopt feed budgeting principles to assist in the nutritional planning process.

### **Minimum Standard No. 2 – Food**

- (a) Deer must receive adequate daily quantities of food and nutrients to enable each deer to:**
  - (i) maintain good health; and**
  - (ii) meet its physiological demands; and**
  - (iii) prevent metabolic and nutritional disorders.**
- (b) If any deer shows signs of emaciation, or if the Body Condition Score (BCS) of any individual deer, other than fawns or weaners, falls below 2, immediate remedial action through veterinary attention, improved nutrition or husbandry practice must be taken to both remedy and prevent further deterioration and any risk to animal health or welfare.**
- (c) Any signs of ill-thrift or emaciation in fawns/weaners must be promptly investigated and remedial action taken.**

#### *Note*

In New Zealand it is illegal to feed ruminant proteins to deer (regulation 4 of the Biosecurity (Ruminant Protein) Regulations 1999).

#### ***Recommended Best Practice***

- (a) Feeding methods should be designed to reduce fouling and wastage. Deer will not eat muddy or contaminated pasture.
- (b) Measures should be taken to minimise access of deer, and particularly pregnant hinds, to toxic plants and noxious or harmful materials including:
  - (i) ragwort
  - (ii) most garden ornamental plants (e.g. oleander, rhododendrons, azaleas, yew, daphne, laurel, privet, rhubarb leaves)
  - (iii) toxic paint and timber preservatives.

- (c) Measures should be taken to minimise access of deer to:
  - (i) electrical fittings
  - (ii) building paper
  - (iii) loose fencing wire
  - (iv) twine and plastic wrap.
- (d) Changes in diet, especially if feeding grain and/or other readily fermentable carbohydrates, should be gradually introduced over a 5 – 10-day period. This will allow rumen bacteria to adjust and thus prevent digestive problems and the risk of death through acidosis.
- (e) When feeding brassicas and/or concentrates, a supplementary source of roughage such as hay, barley straw, silage or baleage should be added to the diet to aid proper digestion.
- (f) Deer maintained for long periods of time on high proportion grain diets should receive appropriate dietary supplementation to ensure they maintain their levels of essential vitamins and trace elements.
- (g) There should be enough reserve feed to allow more frequent shifts of deer if it is very wet and the fodder grazed becomes trampled and muddy. An alternative area should be made available, such as an adjacent paddock, to provide a dry area for animals to lie down.
- (h) Supplementary feeds should be conserved and stored in a way which preserves feed quality and prevents growth of moulds and contamination by rodents, birds, and cats.
- (i) The BCS of all deer rising 2 years and over should be between 3 and 4 (see Appendix III, “Condition Scoring of Deer”, to this code). Adult stags lose condition and weight over the rut and should be fed and managed to ensure recovery of body condition and weight in early winter. See Tables 1 and 2.
- (j) Female deer should be well fed to meet pregnancy requirements, and in summer and autumn to meet lactational and/or growth demands and to ensure that they are in good body condition going into winter.
- (k) Yearling stags and hinds should be well fed in all seasons to realise their growth and breeding potential.
- (l) When feeding baled forage, twine and wrap should be removed to prevent the risk of illness or death from ingestion and to avoid injury from entanglement.
- (m) Preparation for the transport of weaners requires particular care and prolonged periods without food and water should be avoided. Access to food should be limited during the 12 hours prior to transportation of yearling and adult deer (the use of holding paddocks is encouraged) and then removed altogether for the last 4 – 6 hours (see the *Code of Recommendations and Minimum Standards for the Welfare of Animals Transported within New Zealand*, and any other relevant code or guideline including the *DeerQA Transport Programme*).

### **General Information**

Signs of ill-thrift or emaciation in fawns and weaners may include rapid weight loss relative to herd mates, rough body appearance (hair loss) and being bullied by herd mates.

Liveweight monitoring is a more appropriate measure of the success of a feeding regime than BCS for fawns/weaners.

Pregnant hinds of BCS greater than 4 accompanied by a lack of fitness may have problems with dystocia during calving.

Deer have a ruminant digestive system requiring a regular supply of nutrients and micronutrients (minerals, vitamins and elements required in small amounts to enable the body's chemical reactions to function effectively), similar to other ruminant animals; however, daily intake requirements are strongly influenced by ambient temperatures and changing seasons.

Consideration needs to be given to the quality and quantity of the diet, including energy content (ME) and levels of micronutrients, needed to maintain good health and meet the requirements of growth, pregnancy, lactation, velvet growth, rutting, and environmental stress, as appropriate to the species and environment. Low energy feeds, such as barley straw or baled rank pasture, may not meet minimum feed requirements as the animal cannot eat sufficient bulk to meet maintenance requirements.

Feed demands are increased by sustained cold and wet weather and wind chill effects. Nutrient allowances should be increased by 20 – 30% when deer are in exposed or poorly sheltered conditions in winter.

The recommended nutrient requirements of different classes of young male red deer are shown as guidelines in Table 1.

High energy and high quality diets are critical during autumn for winter survival,

Adult stags dramatically reduce their food intake during the autumn rut when they naturally lose up to 30% of their peak body weight. Additional quality high energy feed needs to be made available immediately after the rut to bring stags back to condition quickly. Over winter stags risk further weight loss and marked decline in BCS unless appropriately fed. This can quickly lead to increased susceptibility to disease. Energy requirements of stags during this period are high and increase further in bad weather. See Table 2.

During prolonged summer or dry conditions supplementary feeding for hinds with young at foot (introduced gradually to allow pre-weaning training) will have welfare and growth benefits. If the prolonged summer or dry conditions persist, however, early weaning of calves/fawns should be considered.

Back fencing as a strip grazing practice may increase the risk of exposure to harmful bacteria and/or internal parasites through contamination with faecal material.

### ***Feeding Management***

The following tables are to be treated as general guidelines only because there is considerable variation in pastoral feeding management systems throughout New Zealand. ME is calculated per weight of DM. Various tables can be used to compare the energy value or energy quality of different foods (see Appendix IV, "Energy Value of Different Supplements", to this code).

ME requirements are also used to express daily energy needs for maintenance and growth in deer and vary according to the season, the breed and sex, and the targeted growth functions of deer. These requirements need to be known to develop the appropriate amounts and quality of rations offered (see Tables 1 and 2).

<b>Table 1: Guidelines for seasonal daily energy requirements for maintenance and growth of male red deer from weaning through to 18 months of age</b>								
<b>Maintenance requirements</b> (MJ ME/day)	LIVEWEIGHT (kg)							
	40	50	60	70	80	90	100	110
Autumn or Winter Sheltered	12	14	16	18	20	22	24	26
Winter – unsheltered	14	16	18	21	23	25	27	29
Spring	11	13	15	17	18	20	22	23
Summer	10	12	13	15	17	18	20	21
<b>Growth requirements</b> (MJ ME/day)	GAIN (g/day)*							
	50	100	150	200	250	300	350	400
Extra energy needed	3	5	8	11	13	16	19	21
<p>Seasonal maintenance requirements are markedly affected by the weather. They may be lower when temperatures are warmer than normal and conversely higher when temperatures are lower than normal.</p> <p>* Add extra energy for gain to the maintenance requirement to get total requirement.</p>								

<b>Table 2: Guidelines for seasonal daily energy requirements of mature deer per animal (MJ ME/day)</b>				
	AUTUMN	WINTER	SPRING	SUMMER
<b>Stags</b>				
NZ Red (220 kg)	19	35	42	38
Elk x Red (240 – 350 kg)	25	47	56	51
Elk or Wapiti (350 – 450 kg)	34	62	71	66
Fallow (90 kg)	12	18	20	18
<b>Hinds/Does</b>				
NZ Red (110 kg)	27	26	28	49*
Elk x Red (140 – 160 kg)	48	46	50	85*
Elk or Wapiti (180 – 240 kg)	64	61	67	120*
Fallow (55 kg)	10	10	10	15*
<p>This assumes diets contain 14 – 16% crude protein as adequate for maintenance.</p> <p>* Lactating female with fawn at foot.</p>				

## 4.2 Water

### *Introduction*

The provision of an adequate supply of water is critical for maintaining deer health and welfare. The way in which daily water requirements are supplied varies between farms. Water needs for different classes of deer have wide variations during the year, which if not adequately fulfilled can lead to rapid deterioration of animal health and welfare.

### **Minimum Standard No. 3 – Water**

- (a) All deer must have access to an adequate daily supply of drinking water that is not harmful to health.
- (b) The water delivery system must be reliable and maintained to meet daily demand.
- (c) In the event of a water delivery system failure, remedial action must ensure that the daily water requirements are met.
- (d) Any deer retained in yards or within holding facilities for longer than 12 hours must have access to drinking water.
- (e) The water delivery system must be at a height that is appropriate for the size of the deer being supplied.

### *Recommended Best Practice*

- (a) Watering facilities should be designed to reduce fouling and wastage.
- (b) In normal farming operations when deer are being worked in yards during hot weather and/or subjected to stressful events such as weaning, Tb testing, pregnancy scanning or velveting, access to drinking water should be provided.
- (c) Deer being held for transport or lairage should not be without water for periods longer than 6 hours.

### *General Information*

The daily consumption of water by deer can vary widely according to species, body weight, age, sex, climatic conditions, type of diet and feed intake.

Some classes of deer will have significantly increased requirements for water at certain times. For example:

- adult stags during the rut
- stags during the first 24 – 48 hours after velveting
- lactating hinds
- weaned deer (up to 10 days after weaning).

In excessively hot weather conditions, all classes of deer will require more water as deer drink water to mitigate heat stress.

To ensure that water is always available (where used) water reticulation systems need to be inspected regularly for normal function, preferably daily during summer or extended periods of dry weather and at least weekly during winter. Where extensive grazing systems are used, depending on the size of the storage systems, less frequent inspections may be suitable.

Limited research has been completed to estimate the water requirements of red deer. The recommendations in Table 3 have been developed from 3 winter feeding experiments with weaner deer (45 – 80 kg liveweight) fed on combinations of silage, concentrates and a brassica crop. The recommendations for hinds and stags are based on the comparison of the weaner data with other livestock species, with subsequent extrapolation to mature livestock weight and size.

Deer need a supply of drinking water even if feeding on high water content fodder such as brassicas and spring pastures.

<b>Table 3: The estimated daily drinking water requirements (litres/day) for red deer when fed either forage (pasture, silage or a brassica crop) or a concentrate diet</b>		
	<b>FORAGE</b>	<b>CONCENTRATE</b>
Weaners (up to 85 kg LW)	0.5 – 1.5 L/day	1.5 – 2.5 L/day
Hinds (dry, 100 – 120 kg LW)	1.5 – 2.0 L/day	3.0 – 4.0 L/day
Hinds (lactating, 100 – 120 kg LW)	5.5 – 7.0 L/day	8.0 – 10.0 L/day
Stags (180 – 250 kg LW)	3.0 – 4.0 L/day	6.0 – 7.0 L/day
<p>Assumptions made:</p> <ul style="list-style-type: none"> <li>• The table refers to ambient temperature up to 20°C.</li> <li>• For temperatures over 20°C, approximately 1.0 L/day should be added per 100 kg LW for every 5°C increase in temperature.</li> <li>• Drinking water is assumed to contribute 25% and 75% of total water requirements for forage and concentrate diets respectively, the remainder coming from the feed.</li> <li>• The DM concentration of a forage diet is assumed to be up to 30% DM, while that of a concentrate diet is assumed to be greater than 80% DM.</li> <li>• At low DM concentrations (under 15% DM in forages such as spring pastures or brassica crops) animals may not use additional drinking water.</li> <li>• Weaner requirements are based on a liveweight gain of 0 – 350 g/day.</li> <li>• Water requirements of hinds are based on a maintenance feed intake of 2 kg DM/day and a lactation feed intake of 4 kg DM/day.</li> <li>• For lactating hinds an additional water requirement of 1 L/kg milk produced has been added.</li> <li>• Stag water requirements are based on a maintenance feed intake of 4 kg DM/day.</li> </ul>		

## 5. Shelter and Facilities

### 5.1 Shelter and Shade

#### *Introduction*

Deer farmers need to be aware of the animal welfare implications of inadequate shelter and shade, and develop management plans to provide shelter and shade in adverse weather conditions to mitigate welfare risks.

Shelter and shade may be provided in a number of ways including through the use of topographical features such as gullies or hollows (of adequate depth), natural features such as stands of trees or scrub, hedges or shelter belts, or artificial structures such as buildings, hay stacks, etc.

Some sites may be unsuitable from a welfare point of view due to rainfall, poor drainage, steep slopes and/or susceptibility to flooding.

Shelter may also be important when environmental conditions are not extreme, for example where female deer seek isolation to give birth and hide their young, or where an animal that is ill wishes to separate itself from its group.

#### *Cold Conditions and Hypothermia*

The combined effect of wind and cold ambient temperatures, measured as wind chill, has a major influence on the welfare of all classes of deer through increasing their energy demands for warmth. The prevention of wind chill is an important welfare factor for deer.

Rainy weather further compounds the influence of wind and cold as deer, when wet, may have reduced insulation. Body condition will also have an influence. Males after the rut, and young stock, have very little fat cover and are more vulnerable to the effects of cold weather.

Research findings have shown that during winter conditions when ambient temperature is less than 5°C, deer begin to divert energy from growth and maintenance into heat production. Provision of good shelter including shelter belts, tree plantations and landforms can reduce feed demands for maintenance by 15 – 20% per day in cold weather.

Early signs of significant cold exposure in deer include behavioural changes such as shivering and huddling together. Where animals are exposed to cold conditions with which they cannot 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 remedial action.

#### *Hot Conditions and Heat Stress*

The combined effects of high ambient temperatures, high relative humidity and exposure to sunlight, combined with low wind speeds, can cause stress. For example, where the ambient temperature is 25°C in conjunction with a relative humidity level of 60%, on a sunny day deer are likely to display signs of mild heat stress.

Other factors that affect an animal's ability to cope with heat include insulation, coat colour and structure, breed, acclimatisation, diet, social factors, individual variation in heat tolerance, water temperature and availability, type of ground surface and stage in the productive cycle. Heat loading may also be exacerbated by the body heat generated from some diets and from excessive activity such as yarding and handling during hot weather.

When deer are exposed to conditions that cause heat stress they will use a number of ways to relieve the heat load. These include increased respiration rate, reduced grazing activity and increased water consumption. If the heat load continues, animals will progress to open mouth panting, with tongues extended when severe. If relief cannot be achieved, core body temperature rises (hyperthermia) and they may die.

Heat stress may be managed in a number of ways other than merely the provision of shade. All classes of stock need to be provided with means to minimise heat stress. Deer may not always choose shade, even on hot days. Where shade is limited in hot conditions, it is particularly important that water supplies are plentiful as deer drink water to mitigate heat stress.

Rapidly changing diurnal patterns, e.g. during spring and autumn, can create additional stresses which need to be recognised.

#### **Minimum Standard No. 4 – Shelter**

- (a) All deer, including fawns, must have access to shelter to reduce the risk to health and welfare caused by exposure to cold.**
- (b) Where conditions are likely to lead to fatal hypothermia remedial action must be taken.**
- (c) At calving/fawning time fawns must have access to sufficient ground cover for at least the first 2 weeks following birth, to allow them to express their natural hiding behaviour.**
- (d) All classes of deer must be provided with means to minimise the effects of heat stress.**

#### ***Recommended Best Practice***

- (a) It is strongly recommended that deer have access to a relatively dry and sheltered area on which they may rest, particularly where paddock conditions become very muddy when crops are grazed or direct-fed during wet weather.
- (b) Farmers should provide shelter and shade through tree plantings, artificial shade, access to mature tree blocks, or paddocks with contours that provide protection from adverse weather conditions.
- (c) Farmers should provide deer with a range of means to mitigate heat stress such as plentiful water, a wallow or shade.
- (d) Farmers should have contingency plans to be followed in emergencies such as floods, storms, fire risk or severe weather conditions.

#### ***General Information***

Contingency plans for emergencies such as floods, storms, fire risk or severe weather should include:

- paying heed to weather warnings
- seeking additional assistance if needed
- ensuring stock have access to supplementary feeds and water supply

- clearing access routes of any slips, trees and other obstacles as quickly as possible when damaged
- checking security of perimeter or at-risk fencing.

Be aware that, in some snowstorms, turbulence can result in drifts in the lee of shelter and this may trap deer.

In the case of winter storms, move deer to more sheltered areas or lower altitude as soon as is safely possible.

Shelter can be provided by land contours, vegetation, windcloth or other artificial structures.

Trees can diffuse rain and wind but, without land contour shelter, deer may still not be adequately protected in adverse weather.

Fawns are very susceptible to heat and cold stress. When limited natural cover exists, farmers should provide some form of artificial cover (e.g. hay bales, cut tree branches).

## 5.2 Handling Facilities

### *Introduction*

The way in which deer facilities are designed, constructed, operated and maintained can have a direct impact on the health, productivity, safety and welfare of deer. Different deer species require purpose-built features.

Essential features include consideration of safe footing, ventilation, sound construction preventing injury risk, and ease and safety of operation for both deer and their handlers.

When new deer sheds or shelters are being built or old buildings are being renovated or converted for deer, advice can be sought from industry and outside sources (e.g. NZ Deer Farmers Association, Deer Industry New Zealand, *DeerQA On-Farm Manual*, other deer industry professionals) on the essential facility requirements necessary to maintain deer welfare.

### **Minimum Standard No. 5 – Handling Facilities**

- (a) Facilities must be designed, constructed and maintained to prevent injury to animals during routine husbandry procedures.**
- (b) All protrusions, gaps and edges, including damaged flooring, likely to cause injury to deer must be removed, repaired or covered.**
- (c) The storage of all health remedies, toxic materials and associated equipment must be secure and inaccessible to deer.**
- (d) Ventilation must be sufficient to prevent a build-up of excessive heat, humidity and noxious gases.**
- (e) All deer facilities must have light at a minimum of 20 lux available at all times to enable safe inspection and handling of animals.**
- (f) All power cables and associated fittings must be inaccessible to deer.**
- (g) Floors must be constructed of non-slip material.**

### **Recommended Best Practice**

- (a) Gates and doors should be maintained in good working order. They should open and close securely and swing freely. Gate latches should not protrude and risk injury to stock.
- (b) Facilities should be of a standard such that mud or dust does not accumulate.
- (c) Faeces and urine should not be permitted to accumulate to the stage where they pose a threat to the health and welfare of deer.
- (d) All mechanical equipment used in deer facilities should be maintained in sound working order, with machinery and controls protected from and inaccessible to deer.
- (e) Toxic paint and timber preservatives should not be used on surfaces or floors that are accessible to deer.
- (f) The design of facilities should encourage the free movement of deer and allow ease of drafting into small groups for access to restraints, raceways, cradles, pens and load-out facilities.
- (g) Stock handlers should be trained in the safe operation and rapid release of deer from restraints, sheds and yards.
- (h) No more than a third of the pen should be taken up when the deer crowd together to reduce stress and injury.

### **General Information**

Overcrowding in handling pens is a major cause of stress and injury.

Young deer are particularly vulnerable to heat stress during yarding and handling.

Poor maintenance of concrete, slatted or perforated floors can cause problems such as lameness or damage to feet, and risk introduction of serious disease (foot abscesses) and chronic illness.

## **5.3 Holding Facilities**

### **Introduction**

Farmers may wish to hold deer in facilities for short-term specific needs (e.g. quarantine, weaning, lairage, drenching, weighing, display for on-farm sale), or for longer periods of time during winter. In these situations deer are totally dependent on their handlers for all daily requirements, welfare and safety, and farmers must be aware that there are additional responsibilities of care.

Sufficient floor or pad space needs to be provided to enable the deer to exhibit normal behaviour patterns relating to resting, rumination and play, and to minimise aggression within the group. When grouping animals, group structures should avoid a wide range of liveweights to reduce the risk of bullying. Stocking density should be calculated based on the heavier animals.

### **Minimum Standard No. 6 – Holding Facilities**

- (a) Facilities must be designed, constructed and maintained to:**
  - (i) allow ready access to handling and inspection of deer; and**
  - (ii) enable segregation and treatment of any deer; and**
  - (iii) enable ready evacuation in the case of emergencies.**

***Minimum Standard No. 6 continued***

- (b) Where deer are held in facilities for periods of more than 24 hours, a sufficient area of dry bedding within the holding facilities must be available to allow all deer to rest by lying down.**
- (c) Ventilation must be sufficient to prevent a build-up of harmful concentrations of gases such as ammonia and carbon dioxide.**
- (d) If ammonia levels of 25 ppm or more are detected within the holding facility, immediate and appropriate action must be taken to reduce the ammonia levels.**
- (e) Where deer do not have access to natural daylight, a minimum of 8 hours and a maximum of 16 hours of continual artificial daylight (minimum 50 lux) must be provided.**
- (f) During inspection periods, natural or artificial light of at least 20 lux must be available at the level of resting deer in all holding facilities.**
- (g) Water supply systems must be well protected to ensure that the risk of flooding, loss of supply or fouling is minimised.**
- (h) All sharp objects, protrusions and edges, including damaged flooring likely to cause injury to deer, must be removed, repaired or covered.**
- (i) Any electrical fittings and attachments to mains voltage must be out of the reach of the deer, or protected from interference or damage by the deer.**
- (j) To minimise aggression and injuries, additional care must be taken when male deer with hard antlers are held in holding facilities.**
- (k) Deer must not be released from a prolonged period indoors without ready access to shelter and shade in adverse weather to avoid temperature stress.**
- (l) All deer must have enough space to be able to lie down, rise and stand comfortably without undue risk of stress or injury to themselves or other animals.**
- (m) Ceiling heights must be at least 2.4 metres.**

***Recommended Best Practice***

- (a) Floors should be constructed of a non-slip material to minimise the risk of injury.
- (b) Deer facilities should not be built on sites that are prone to flooding or landslides.
- (c) Outdoor runs should be provided.
- (d) Emergency response plans should be developed to identify potential hazards and these should be part of the management practice routines to ensure safety and welfare of deer and handlers.
- (e) To reduce aggressive interactions and allow deer free movement and sufficient room to move past each other, pens should be square, or close to square, but should not have a width of less than half the pen length.
- (f) The minimum area per pen for groups of deer held for longer than 24 hours should be 9 sq m. Larger pens, e.g. greater than 36 sq m, are favoured.

- (g) As a guide the minimum space allowance, based on body weight and size, should not be less than:
  - (i) 1.2 sq m per 50 kg weaner increasing to 1.8 sq m for deer up to 80 kg
  - (ii) 2.1 sq m per adult female deer up to 120 kg
  - (iii) 2.8 sq m per adult male deer up to 200 kg.
- (h) Preventative measures should be employed to minimise contamination of stored feed by rodents, birds and other pests.
- (i) Ceiling height should be determined in relation to the size of the deer to allow the deer to exhibit normal playful behaviour (recommended greater than 3.2 metres).
- (j) Frequent changes of group structure should be avoided.
- (k) Waste food and contaminated bedding material should not be allowed to accumulate to a level which poses a threat to the welfare and health of the deer (e.g. wet, mouldy or noxious).
- (l) Feeding and watering systems should be constructed to be readily accessible, prevent competition and take into account the feed, stock type and size of the enclosure.
- (m) The facility should be sufficiently ventilated at all times to allow for the free flow of air throughout, in order to keep the facility dry, avoid build-up of noxious (harmful) gases and humidity, and remove excess heat.
- (n) Ammonia levels should not consistently exceed levels of 10 – 15 ppm.
- (o) Conditions that allow build-up of mud or dust should be avoided.
- (p) Holding facilities should provide for a separate pen to hold and treat bullied, unwell or injured deer until recovery, and to manage bullying.
- (q) Environmental enrichment practices should be considered and, where used, should not increase the risk of injury to deer. Such practices may include:
  - (i) the provision of “toys” such as a length of hanging chain, suspended tyres, large plastic balls or containers
  - (ii) positive human contact
  - (iii) the use of a radio to accustom deer to a range of noises and voices.
- (r) Toxic paint and timber preservatives should not be used on surfaces or floors that are accessible to deer.

### **General Information**

50 lux is measured as being sufficient light to read a newspaper at arm's length.

Appropriate rodent control measures include poisoning (using appropriate bait stations) and trapping.

Poor growth performance, signs of bullying, hair in the mouth, bare skin patches, and ill-thrift are all indicative of welfare issues that require remedial action.

Settling of deer is improved by allowing them visual contact with animals in adjoining pens.

Emergency contingency plans need to consider:

- rapid release of deer into a secure environment
- access to water source or fire extinguisher

- familiarisation of staff with emergency procedures.

Animals housed for long periods of time become accustomed to routine. Outside influences such as visits from strangers, noise, vehicles and unfamiliar dogs can cause undue stress and should be discouraged.

As a guide, a level of 10 – 15 ppm of ammonia in the air can be detected by smell and an ammonia level over 25 ppm may cause eye and nasal irritation in people. In general, if the level of noxious gases within a shed is uncomfortable for people, it is also uncomfortable for deer, compromises animal welfare, and may predispose deer to respiratory disease and reduced performance.

Familiarisation of deer with farm facilities at a young age reduces apprehension.

Where larger groups of deer are run together, there is an associated increased risk of injury and smothering.

## 5.4 Restraint and Handling Practices

### ***Introduction***

Appropriate and effective restraint will avoid stress and injury during husbandry practices. In the manual or mechanical restraint and handling of deer, the safety and welfare of both deer and handler must be considered. The safe and efficient movement of deer is dependent on both the good design of facilities and stock handling skills.

### **Minimum Standard No. 7 – Restraint and Handling Practices**

- (a) Chemical (drug) immobilisation techniques must only be used by registered veterinarians (excluding velvet antler removal where the individual is a certified velvetter).**
- (b) Electric prodders or goads must not be used.**
- (c) Handling aids, such as stock canes or lengths of plastic piping, are permissible to assist the movement of deer but must only be used in a manner which causes minimal stress and avoids injury.**

### *Note*

Velvet antler removal is a controlled surgical procedure, as defined by the Act and is specifically covered in the *Code of Recommendations and Minimum Standards for the Welfare of Deer During the Removal of Antlers*.

### ***Recommended Best Practice***

- (a) Deer should be handled quietly with care and patience. Familiarising deer with handling facilities and management routines from an early age reduces apprehension and assists handling.
- (b) Deer should not be handled in periods of adverse weather conditions (e.g. thunder and hailstorms, strong winds, excessive heat).

- (c) Handling deer in dusty facilities should be avoided as it may cause lung or eye irritation.
- (d) Mobs of deer should be broken into smaller mobs as soon as possible after entering handling facilities. Smaller mobs should be held in appropriately sized pens and should be able to see other groups of deer. Avoid isolating individual deer as much as possible.
- (e) Deer should not be held in handling facilities for prolonged periods of time awaiting treatment or recording.
- (f) If used, dogs should be well trained and be under strict control at all times.

### **General Information**

Where used appropriately, useful aids to assist in the safe movement of deer include:

- rattles
- shields
- stock canes.

When deer are held in yards for long periods they are liable to become restless and there is an increased risk of injury. Work needs to be planned to ensure that deer are only held for short periods. Alternatively, deer can be held in adjacent pastures or paddock facilities until such time as they can be processed efficiently.

## **5.5 Restraint Equipment**

### **Introduction**

Mechanical restraints are commonly used. Restraining devices such as bales, squeezes, crushes and cradles need to be designed and sized specifically for each deer species being farmed.

### **Minimum Standard No. 8 – Restraint Equipment**

- (a) Restraint equipment used must be maintained in good working order.**
- (b) Restraint equipment must be used appropriately in order to minimise the risk of injury or unnecessary pain or distress to deer.**
- (c) Restraint equipment used must be suitable for the class, age and type of deer being handled.**
- (d) Operators must be fully conversant with the safe operating procedures of the restraint equipment.**
- (e) Deer must not be held in a restraint for more than the time required to carry out the procedures for which they are being restrained.**
- (f) Deer must be able to be rapidly released from restraint equipment.**

### **Recommended Best Practice**

- (a) Restraints should be regularly cleaned and kept free of contaminants such as bird droppings, blood, mud and deer hair.

- (b) Restraints should be located or positioned within the facilities to allow for ease of access and exit for deer and stock handlers.
- (c) Hydraulic restraint pressures should not exceed the manufacturer's specifications or be likely to cause injury and should be checked regularly.

## 6. Husbandry Practices

### 6.1 Deer Behaviour

#### *Introduction*

Deer are highly social and hierarchical animals that seek comfort in mob situations. They have a strong natural flight response and specific behavioural needs. These include wallowing, rutting activity and specific calving behaviour. Newly weaned deer are vulnerable to separation stress.

Specialised skills and a good understanding of deer behaviour are required in all aspects of deer management. Species and breed differences do exist and should be considered. Poor husbandry practices have a direct impact on deer welfare.

It is preferable for larger mobs of deer to be broken down into smaller mobs for handling and yarding purposes. The size and numbers of mobs will vary depending on the size and design of the yards and facilities.

For the safety and welfare of both deer and their handlers, care should be exercised when handling deer.

Deer in controlled grazing systems adjust quickly and positively to a consistent routine of movement time and supplementary feeding, which normally leads to a more settled behaviour, better growth and maintenance of body condition. Lack of, or disrupted, routine may aggravate bullying and disrupt herd structure, and hence may impact on welfare.

Deer are hierarchical animals by nature, and the aggression and bullying by more dominant deer as they seek to establish a “pecking order” can cause severe injuries or stress to more subordinate deer. Stags during the rutting season require careful management to limit fighting.

Likewise, subordinate deer may get less than their feed and water requirements when housed in group situations, or farmed in larger mixed groups, if appropriate feed and watering systems are not in place.

As deer are directly exposed to many climatic variations and their natural responses and movements are modified by farm fences and management, the role of the stock handler is crucial in assuring animal welfare (see section 3, “Stockmanship”, of this code).

Deer wallowing is a natural behaviour and areas to express this, provided they are in balance with environmental care programmes (see *Deer Farmers Landcare Manual 2004*), should be encouraged.

### 6.2 Mixing of Deer

#### *Introduction*

Deer are highly social and hierarchical in nature. Mixing unfamiliar deer can result in fighting and injury unless preventative measures are put in place. This is particularly important for breeding males. A large paddock can be used to minimise confrontation and, where possible, paddocks with broken contours and natural cover will assist in reducing stress.

## Minimum Standard No. 9 – Mixing of Deer

**Where two or more groups of deer are to be mixed they must be observed on mixing, and then daily until settled, for signs of injury or continued aggression likely to lead to injury so that remedial action can be taken if necessary.**

### ***Recommended Best Practice***

- (a) If any deer are subjected to persistent bullying they should be removed from the mob, checked for illness and injury and monitored closely to ensure that confrontation is minimised. When predisposing factors have been identified they should be dealt with immediately.
- (b) Mobs should be grouped according to factors such as bodyweight, sex, age, breed, manageable mob size and their previous management history.
- (c) Running deer at low stocking rates and in small mobs will assist integration of new arrivals.

### ***General Information***

#### *Arrival of New Male Deer*

As deer develop strong social structures in their groups, there will be a degree of stress involved in taking young males from their mob and transporting them to a new property and herd.

If males are selected early and shifted to a new property before the end of January, it will then allow them time to settle and adjust prior to the rut. Introducing a male to a small group of other male deer (ideally no more than 5 – 15) will minimise stress and assist the male to settle quickly during this period. Alternatively the male could be put in with females.

Signs of injury, aggression or stress include continual harassment, hair loss, fighting, excessive fence pacing, and isolation. When mixing, consideration needs to be given to:

- differences in species, breed, age, body size
- climatic conditions
- stage of antler growth
- physiological status and the seasonality of deer as it affects their behavioural status (e.g. late pregnancy, calves at foot, rut, recently weaned)
- temperament
- size of facility or paddock in which deer are to be mixed
- availability of food and water.

## **6.3 Male Deer**

### ***Introduction***

Adult male deer are potentially dangerous at all times. Hand reared deer are unpredictable, and males are particularly dangerous due to their lack of fear of people.

## Minimum Standard No. 10 – Hard Antler

- (a) Male deer with hard antler must be separated from male deer without hard antler, especially during the rut, to avoid risk of injury and to allow easy access to feed and water.
- (b) Farmers must develop management practices to cater for the welfare needs of male deer farmed with hard antler.

### *Recommended Best Practice*

- (a) Handling of male deer should be kept to a minimum, especially during the rut.
- (b) Where multi-sire mating is practised, they should be monitored and adequate space be provided to minimise confrontation between male deer.
- (c) All hard antler/regrowth on adult male deer should be removed by 1 March.
- (d) When yarded, those male deer with hard antler should be penned singly in facilities that limit movement or space.

### *General Information*

Male deer in hard antler need to be handled with special care and management skills to ensure their safety and the welfare of other male deer and that of their handlers.

## 6.4 Management of Hard Antlered Male Deer

### 6.4.1 General Management

#### *Recommended Best Practice*

- (a) Any male deer retained in hard antler over the rut / winter period should be established in their selected mobs prior to hardening of the antler (i.e. before 1 March).
- (b) Hard antlered male deer should be run together in separate age group mobs (i.e. yearlings, 2-year-olds, 3-year-olds and mixed age or adults).
- (c) All areas where hard antlered male deer are to be held should be free of hazards likely to cause entanglement with antlers (e.g. loose wire, twine, baleage wrap).
- (d) Hard antlered male deer should be provided with access to material on which to rub their antlers from mid-February through to the end of the rut (May). This can be natural standing vegetation such as gorse, matagouri or manuka, or introduced branches from trees such as willow or pine.

#### *General Information*

Some farmers believe that males should experience at least 1 year as a juvenile (yearling or 2-year-old) in which hard antler has been carried through to casting of that antler prior to the growth of the next season's new velvet, in order to allow for neck muscle development to support the carriage of hard antler in subsequent seasons.

## 6.4.2 Handling

### ***Recommended Best Practice***

- (a) All anticipated male deer handling activities (e.g. Tb testing, drenching, weighing) should be managed in advance of antler growth.
- (b) Yards should be designed to provide secure separation of handlers from hard antlered male deer, while allowing proper control of animals. A minimum of 2 appropriately trained people should be present at all times.
- (c) Managers choosing to run hard antlered male deer should have available appropriate equipment capable of administering a darted tranquilliser, to be used by the property veterinarian.

## 6.4.3 Feeding Management

### ***Recommended Best Practice***

- (a) Feeding out of supplements to adult hard antlered male deer should be managed to ensure separation between individuals (i.e. individual heaps or multiple rows rather than continuous rows). Static feeders should be at opposite ends of the paddock to water supplies.
- (b) The use of temporary electric fencing to contain adult hard antlered male deer should be avoided.
- (c) Once casting of hard antler begins (August), male deer in mobs should be provided with sufficient area to allow natural separation from each other, while maintaining adequate access to food and water.

### ***General Information***

Yearlings may be successfully contained, especially if introduced to break fencing as weaners, but vigilance to maintain sufficient electrification is imperative.

## 6.5 Female Deer

### ***Recommended Best Practice***

- (a) The provision of appropriate feed during pregnancy and through lactation should ensure that females maintain a BCS of 3 – 4.
- (b) The minimisation of stress (particularly through overcrowding) in females at fawning reduces losses in newborn fawns. Appropriate planning should be undertaken for feed, water and shelter requirements to minimise disturbance.
- (c) During fawning, mothers and newborns should not be disturbed or exposed to unfamiliar events or have routines disrupted.
- (d) Assistance should be given to females that are observed with fawning difficulties.
- (e) Stocking rates for females prior to the onset of fawning should be reduced to avoid disturbance to females and consequent loss of fawns.
- (f) Females should be settled into fawning paddocks for at least 7 – 10 days prior to start of fawning.

### ***General Information***

The standard gestation period for deer is 233 – 265 days depending on the breed. Mating generally starts around 20 March for red deer, elk, wapiti and their hybrids and 20 April for fallow deer, thus births can be expected from the first week of November onwards.

Fawning can be a particularly stressful period for females, and all aspects of care, including shelter and provision of food and water, need to be carefully managed at this time. Females in good condition at fawning (BCS 3 – 4) are more able to be good providers to their offspring and cope with potential dry summer conditions.

In general, unfit and unsettled females are more likely to experience fawning difficulties.

Regular exercise appears to reduce fawning problems and, if possible, it would be good practice to have females on steeper hill paddocks prior to set-stocking at fawning.

## **6.6 Fawns and Fawning**

### **6.6.1 Newborn Fawns**

#### ***Recommended Best Practice***

- (a) When set-stocking females for fawning, females from another herd or mob should not be introduced.
- (b) First fawning females should be managed in mobs separate from older females.
- (c) Sufficient space should be provided for groups of fawning females so that each female can find a suitable quiet and safe place to give birth.

#### ***General Information***

Fawning losses can be reduced when paddocks are fenced to prevent fawns escaping and cover is provided. The natural tendency of the newborn fawn is to seek cover. If this is outside the fence, the fawn may climb through the fence and be unable to return, and risk desertion and starvation.

Frequent disturbance (by humans or other animals) can also add significantly to fawn losses through mismothering. Fawns that are mixed with alien females and get bullied or confused are prone to misadventure, and risk losing contact with their mother. The main causes of death are starvation and exposure, related to both inadequate fawning environments and a failure to develop a fawn-dam bond.

While supervision of fawning is recommended, if deer are unaccustomed to daily supervision it is better to leave them undisturbed and observe them from a distance using binoculars if necessary.

Close to the time of giving birth, female deer instinctively seek to distance themselves from the rest of the herd. In unsuitable paddocks or when the stocking rate is too high they may pace the fence-line, even galloping up and down in an attempt to get away from the herd. It is important to provide sufficient space and shelter in fawning paddocks so that each female deer can find a suitable isolated birth site.

### **6.6.2 Hand Reared Fawns**

#### ***Introduction***

In some instances it may be necessary to hand rear fawns that have been deserted during birth or orphaned through the death of the mother.

Colostrum is a very high-energy food and is required by the fawn to obtain nutrients and antibodies when first born, and is critical for survival.

Farmers should be prepared for the possibility that fawns may need to be hand reared, and have equipment and colostrum on hand. If deer colostrum is not available, then colostrum from any ruminant species or powdered colostrum can be used. Care must be taken to select a brand of powdered colostrum in which the antibodies are still present, i.e. have not been destroyed by the production process.

### **Minimum Standard No. 11 – Hand Reared Fawns**

- (a) Hand reared fawns must receive colostrum or an equivalent substitute as soon as possible after birth.**
- (b) Hand reared fawns must have daily access to feed, fresh roughage and clean fresh water.**

#### ***Recommended Best Practice***

- (a) A supply of powdered or frozen colostrum from any ruminant species should be readily available for feeding to hand reared fawns.
- (b) Hand reared fawns should be inspected daily during the rearing period for signs of diarrhoea, dehydration, constipation and/or coughing. Veterinary advice should be sought for any of these conditions.
- (c) Twelve weeks is the recommended minimum weaning age.

#### ***General Information***

Good hygiene practices are required for the maintenance of feeding equipment, bedding material and toileting areas to keep fawns healthy.

Frequent small feeds (preferably 4 or 5 daily) may be required in the first 2 weeks of life.

Deer milk generally has a higher fat and protein content and less sugar and is more concentrated than cows' milk. It is more similar to sheep and goats' milk. Ewe milk replacers are therefore preferable to cow milk replacers.

Hand rearing involves additional responsibilities in terms of time, facilities and commitment. A good understanding of the fawn's requirements is essential for success.

There are additional challenges in avoiding future behavioural problems through taming. Hand reared fawns should be weaned and associated with other deer as soon as is practicable.

## **6.7 Weaning**

### ***Introduction***

Weaning is a highly stressful time. For management reasons this generally occurs well before natural weaning in the wild, where suckling often continues until the fawn is at least 7 months old.

Management of weaning requires particular care, handling and husbandry. Farmers also have the choice of weaning at a young age, pre-rut (February/March) or post-rut (May/June), or later. Each system has advantages and disadvantages. For example, weaning pre-rut removes a source of nutrition (milk) from the fawn and imposes a separation stress, but has the advantage of improving dam growth and farmed mating management due to a rising plane of nutrition. Delaying weaning until the winter may mean less favourable weather and pasture conditions, but reduces the stress of separation and may allow better weaner growth in the interim.

Newly weaned deer are frequently sold and relocated. Preparation for transport is also an important part of the weaning process.

### **Minimum Standard No. 12 – Weaning**

- (a) Weaning must be managed in a way that avoids excessive stress on the dam and fawn and minimises negative impact on their health and welfare.**
- (b) Newly weaned fawns must be provided with ample high quality, familiar feed, water and shelter.**
- (c) Weaned deer must be inspected frequently to check for signs of ill-thrift, injury or stress, and where appropriate remedial action must be taken to ensure the welfare of the deer.**

#### ***Recommended Best Practice***

- (a) Fawns should not be weaned off liquid feed until the rumen has developed sufficiently to enable them to meet their total feed requirements from solids.
- (b) Fawns should not be weaned at less than 12 weeks (84 days) of age, unless climatic or management extremes are a factor.
- (c) Weaning should be carried out in fine settled weather.
- (d) As far as practicable, newly weaned fawns and dams should be kept out of sight and sound of each other.
- (e) Weaning should involve only separation of the dam and fawn, with minimal handling.
- (f) Fawns should be weaned into an environment with which they are familiar.
- (g) Operations like ear tagging, vaccination and drenching should be performed at least 7 – 10 days pre-weaning to reduce additional stress at the time of separation.

#### ***General Information***

Frequent inspections help management routines and condition deer to contact with handlers.

Feeding supplements to hinds and fawns a few weeks before weaning accustoms fawns to feed, farm and people routines. Continuing with the routine and feeding supplements over the weaning process can be helpful in reducing the stress of separation.

Adding a small number of well-behaved older hinds (“auntie” hinds) to a group of newly weaned deer may aid in settling the fawns and helps with handling, and shifting from paddock to paddock.

On farms where it is not possible to place weaned female deer and fawns out of sight and sound of each other, weaning them into adjacent paddocks can reduce stress. Fences need to be maintained to be fawn-proof and secure.

Confining the fawns in deer yards for a few days with shade, shelter, water and high quality, familiar feed can reduce stress responses to weaning that are otherwise seen in the paddock, but requires a degree of care in the maintenance of facilities and in feeding and contact in holding facilities.

## **6.8 Animal Identification**

### ***Introduction***

Individual animal identification underpins good deer farming practices and allows traceability, production recording and selection.

There is also a legal requirement to tag all deer aged 30 days and over that are moving from a property. Only the official Animal Health Board (AHB) approved tags may be used for this purpose; however, AHB tags can also be designed and used for management purposes.

When tagging deer, care should be taken to ensure that stress and discomfort are minimised by the use of appropriate restraint, the selection and maintenance of instruments, attention to hygiene and the after-care of animals.

Ear marking is now an uncommon practice.

### ***Recommended Best Practice***

- (a) Tagging is a less stressful means of identification than ear marking and is the preferred option.
- (b) Ear marking is not recommended as ear tissue is sensitive and easily damaged.
- (c) If ear marking is performed, no more than 10% of ear tissue should be removed, using an implement that is clean and sharp.
- (d) Manufacturers' instructions for applying tags should be followed.
- (e) Deer should be restrained when ear tagging or marking is being undertaken to avoid soft tissue damage as ears tear easily during application with some equipment. Alternative animal-friendly tagging systems are recommended (e.g. breakaway pin-type applicators).
- (f) When ear marking or ear tagging, care should be taken to avoid cartilage ridges and major blood vessels.
- (g) There should be only one identification tag per ear except if the second ear tag is for tick control.

### ***General Information***

Ear tags for tick control are an accepted addition to the number of tags per ear. In normal circumstances these are inserted on a temporary basis (up to 16 weeks). Thereafter the existing tag holes should be used.

## 7. Animal Health, Disease and Injury Control

### 7.1 Health

#### *Introduction*

Healthy deer have a good appetite, and are active and aware. To ensure the welfare of deer, it is necessary for deer owners, stock handlers and persons in charge to be familiar with normal deer behaviour and the signs of good health as well as ill health. They also need to be aware of the common diseases of deer. Early recognition of ill health will enable expert assistance to be requested.

Deer often show early signs of distress or impending problems by separating from the mob, fence pacing or being lethargic. Sick individuals are often chased from the mob if they attempt to rejoin.

#### **Minimum Standard No. 13 – Health**

- (a) Those responsible for the welfare of deer must be competent at recognising the signs of ill health or injury, and take remedial action as appropriate.**
- (b) Medication must only be used in accordance with registration conditions, manufacturers' instructions or professional advice.**

#### *Recommended Best Practice*

- (a) Isolation of deer from a mob is not a common behaviour, except at calving and during the rut, and its cause should be investigated.
- (b) After treatment sick or injured deer should not be kept alone unless absolutely necessary.
- (c) Records detailing deaths, sickness in animals, nature of illness, treatments given, withholding periods if any, and responses to treatment should be kept to assist with any disease investigations.
- (d) To enable Animal Status Declaration forms to be correctly documented, records detailing routine health management (e.g. parasite control, vaccinations, including date of treatment and withholding period) should be kept.
- (e) A veterinarian or expert deer consultant should be consulted for advice on establishing a health programme covering disease, injury and parasite control. A health programme should include consideration of vaccination, parasite control, trace element supplementation, nutrition, medication, culling, cross-grazing with other livestock species, post-mortems and disposal of dead deer. Licensed vaccines are available for some diseases. Veterinary advice should be sought.
- (f) As often as practicable, post-mortems should be carried out on fatalities to assist in monitoring the health of the mob.
- (g) Dead animals should be appropriately disposed of as soon as possible.
- (h) When scouring occurs, a veterinarian should be consulted to determine the appropriate treatment for the problem.

### **General Information**

Signs of illness may include separation from the group, loss of appetite, elevated temperature, lameness, discharges from eyes, nose or vulva, changes in colour or texture of coat, changes in the appearance and consistency of urine or faeces (e.g. straining or scouring), shivering, sneezing, rapid or irregular breathing, persistent coughing or panting, rapid weight loss, chronic weight loss in spite of adequate feeding, abdominal distension, lack of coordination, seeking cover, seeking water, abnormal behaviour, excessive salivation, unusual aggression, and swollen navels, udders, joints or jaws.

In some areas of New Zealand, ticks are a welfare problem and should be controlled by grazing management and appropriate treatment of deer.

Organic systems present special challenges to health management and may require particular attention to the effects of parasitism.

All replacers for colostrums are inferior to actual hinds' milk and careful attention to scouring problems is therefore needed.

Scours can have parasitic, nutritional, bacterial or viral causes.

## **7.2 Inspections**

### **Introduction**

Regular inspection of deer to check they are healthy is a vital part of ensuring animal welfare under all deer farming systems. Maintaining fence security prevents animal injury due to damaged wire, posts, gates, etc, and also prevents escape. Feral deer pose problems to farmed deer because of the risk of disease and injury through fighting.

It is recognised that deer are farmed under a wide range of situations from intensively managed to feral-like situations. The frequency of inspection of deer will therefore vary depending on the circumstances under which the deer are farmed. More frequent inspections will be possible in more intensive situations compared to extensive farming operations where the deer may only be yarded 2 or 3 times a year.

### **Minimum Standard No. 14 – Inspections**

- (a) The owner or person in charge must inspect deer at such frequency as is appropriate to the circumstances and class of deer, for signs of ill health, injuries and general well-being, and take action as required.**
- (b) Deer held in holding facilities must be inspected at least daily.**

### **Recommended Best Practice**

The frequency of inspections should be increased during hot or extremely cold weather, sudden storms, outbreaks of disease, the period of velvet growth and when fawning is expected, or when mobs of deer have been recently mixed.

### **7.3 Emergency Slaughter**

The overriding consideration in emergency slaughter is to prevent the animal suffering further pain or distress, i.e. the procedure should be as humane as possible.

For further information on humane emergency slaughter, see the *Code of Recommendations and Minimum Standards for the Emergency Slaughter of Farm Livestock* and/or consult your veterinarian if you are inexperienced with the procedure.

## 8. Pre-transport Selection

### **Introduction**

Transport should be in accordance with the *Code of Recommendations and Minimum Standards for the Welfare of Animals Transported within New Zealand* or any code that replaces that code. Industry transport guidelines, the *DeerQA Transport Programme*, can also be consulted.

Stockmanship and patience are essential aspects of yarding, selecting and loading deer for transport. Correct design of yards, loading ramps and other associated services is needed to facilitate loading and unloading, with minimum distress and risk of bruising and/or other injuries.

### **Minimum Standard No. 15 – Pre-transport Selection**

- (a) **The person in charge must examine the selected deer prior to transport to ensure that all animals are fit and healthy for transportation.**
- (b) **Pregnant deer expected to give birth within 21 days must not be transported.**
- (c) **Unweaned deer (dams or fawns) and deer that have been weaned for less than 10 days (dams or fawns) must not be transported.**
- (d) **All deer must be able to stand and bear weight on all 4 limbs and be fit enough to withstand the journey without suffering unreasonable or unnecessary pain or distress.**

### **Recommended Best Practice**

- (a) Pregnant deer should not be transported after 1 October. See the *DeerQA Transport Programme*.
- (b) Veterinary advice should be considered if transporting pregnant deer after 1 September.
- (c) Deer should be yarded without food for a minimum of 4 hours before transportation but for no more than 12 hours. Clean water should be available from a familiar source during this time.
- (d) All deer being transported should meet the requirements of the *DeerQA Transport Programme*.

### **General Information**

Experience suggests that deer are less stressed and travel much better when there has been a period of feed restriction prior to transport. Four to 6 hours is a commonly accepted period.

Special attention needs to be paid to transporting deer in hard antler. Information and requirements 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 *DeerQA Transport Programme*.

## **9. Quality Management**

### **9.1 Quality Assurance Systems**

#### ***Recommended Best Practice***

To ensure that standards of animal welfare and husbandry are maintained, each farm should implement a quality assurance system (e.g. Deer Industry New Zealand's QA programmes or specific processor/exporter QA programmes).

#### ***General Information***

In general, the elements of the quality assurance system should provide for the minimum standards and the recommendations for best practice in this welfare code.

### **9.2 Records**

#### ***General Information***

Maintaining accurate animal identification and documentation is an integral part of a quality assurance system and good farm management practice.

## **Appendix I: Strict Liability and Defences**

### ***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 section 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 section 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 exception 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, AWINZ) appointed by the Minister, and the Police.

## **Appendix II: Codes of 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

### ***Regulations and Circular Deemed to be the Animal Welfare (Commercial Slaughter) Code of Welfare 2002***

- Clauses 1(a) and 2, and the heading preceding clause 2, of Part 7 of Schedule 1 to the Fish Export Processing Regulations 1995 (SR 1995/54)
- Regulation 80(1) of the Game Regulations 1975 (SR 1975/174)
- Regulation 76 of the Meat Regulations 1969 (SR 1969/192)
- The Slaughter of Stock, Game, and Poultry Regulations 1969 (SR 1969/194)
- New Zealand Fishing Industry Agreed Implementation Standards 003.4 Live Eels and Rock Lobsters Circular 1995

### ***Codes of Recommendations and Minimum Standards***

- Sea Transport of Sheep from New Zealand, September 1991
- Welfare of Sheep, July 1996
- Welfare of Dairy Cattle, June 1992
- Welfare of Deer During the Removal of Antlers, July 1992, amended August 1994, August 1997
- Welfare of Horses, February 1993
- Welfare of Bobby Calves, July 1997
- Care of Animals in Boarding Establishments, August 1993
- Welfare of Animals at the Time of Slaughter at Licensed and Approved Premises, July 1996
- 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 Dogs, May 1998
- Welfare of Ostrich and Emu, September 1999

### ***Guidelines***

- Welfare of Stock from which Blood is Harvested for Commercial and Research Purposes, April 1996
- 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 Group</i> <i>Biosecurity New Zealand</i> <i>Ministry of Agriculture and Forestry</i> <i>PO Box 2526</i> <i>WELLINGTON</i> <i>Tel: 04 894 0366</i> <i>email: animalwelfare@maf.govt.nz</i></p>	<p>Or can be inspected at:</p> <p><i>Pastoral House</i> <i>Reception</i> <i>Level 10</i> <i>25 The Terrace</i> <i>WELLINGTON</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>.

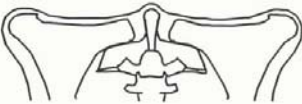


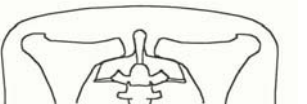

## Appendix III: Condition Scoring of Deer

### **BODY CONDITION SCORE CHART FOR DEER**

This chart can be used broadly for all species of New Zealand farmed deer. The use of BCS is less accurate for assessing weaner deer.

Body condition scoring is based on palpation of the ribs, spine, pelvis and rump of live animals. The simple scoring system varies from score 1 (emaciated) to 5 (excessive condition).

Visual assessment of the body condition of live deer is difficult, particularly during cool months when coat hair is long. A long coat can disguise the actual appearance of the pelvis, ribs and spine, while a short coat can make an animal's appearance more irregular and highlight these areas. The only reliable method of assessing live animal body condition is by palpation of the ribs, spine, pelvis and rump.

<p>Score 1 Emaciated</p> 	<p>No fat cover</p> <p>Pelvis, ribs and spine are prominent</p> <p>Concave rump area</p>
<p>Score 2 Lean</p> 	<p>Minimal fat cover</p> <p>Pelvis, ribs and spine prominent but appear rounded rather than sharp</p>
<p>Score 3 Good condition</p> 	<p>Ideal fat cover</p> <p>Pelvis, ribs and spine not readily distinguished</p> <p>Rump area is flat</p>
<p>Score 4 Forward condition</p> 	<p>Fat</p> <p>Pelvis and rump rounded</p> <p>Spine covered by fat</p>
<p>Score 5 Excessive condition</p> 	<p>Over fat</p> <p>Pelvis concealed by fat cover</p> <p>Rump very convex</p> <p>Spine hard to palpate</p>

## Appendix IV: Energy Value of Different Supplements

The dry matter (DM) and metabolisable energy (ME) content of common supplementary feeds for deer		
FEED TYPE	DRY MATTER %	METABOLISABLE ENERGY (MJ ME/kg DM)
<b>Silage/baleage</b>		
• pasture	25 – 55	8.5 – 11.0
• lucerne	30 – 57	9.5 – 11.5
• whole crop cereal	35 – 42	8.5 – 10.5
• maize	30 – 38	10.8 – 11.7
<b>Hay</b>		
• pasture	85 – 88	8.0 – 10.0
• lucerne	85 – 88	8.5 – 10.5
• red clover	85 – 88	8.0 – 10.0
• pea vine	85 – 88	7.5 – 9.0
<b>Green feeds</b>		
• annual ryegrass	15 – 22	10.5 – 12.8
• oats	12 – 20	9.0 – 12.0
<b>Potatoes</b>	10 – 20	12.5
<b>Carrots</b>	10 – 12	12.5 – 13.0
<b>Onions</b>	10 – 11	13.0 – 14.0
<b>Grain</b>		
• barley	86 – 89	11.5 – 12.8
• oats	86 – 89	10.0 – 11.5
• maize	86 – 89	13.0 – 13.5

## Appendix V: Other Documents

- Deer Industry New Zealand *DeerQA On-Farm Programme*
- Deer Industry New Zealand *DeerQA Transport Programme*

These are available on Deer Industry New Zealand's website. The web address is: <http://www.deernz.org>.

- *Deer Farmers Landcare Manual* (contact Deer Industry New Zealand)

## Appendix VI: Species of New Zealand Farmed Deer

### Common farmed species are:

Red deer	<i>Cervus elaphus</i>
Elk or wapiti	<i>Cervus elaphus canadensis</i> (several subspecies)
European fallow deer	<i>Dama dama dama</i>
Western European red deer	<i>Cervus elaphus hippelaphus</i>
Elk / wapiti x red crossbreeds	<i>Cervus elaphus canadensis</i> x <i>Cervus elaphus</i>
Fiordland wapiti	<i>Cervus elaphus nelsoni</i>

### Rare species retained on farm:

Mesopotamian fallow deer	<i>Dama dama mesopotamica</i>
Pere David's deer (Milu)	<i>Elaphurus davidianus</i>

### Rare farmed deer:

Sika deer	<i>Cervus nippon</i>
Rusa deer	<i>Cervus timorensis</i>
Samba deer	<i>Cervus unicolor</i>

### Enclosure deer:

Whitetail	<i>Odocoileus virginianus</i>
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