

Commercial Slaughter

Code of Welfare

1 October 2018

TITLE

Code of Welfare: Commercial Slaughter

COMMENCEMENT

This Code of Welfare comes into force on 1 October 2018.

REVOCATION

This Code of Welfare revokes and replaces the Code of Welfare: Commercial Slaughter, dated 15 December 2016, and the Amendment Notice titled "Inclusion of a further minimum standard in the Animal Welfare (commercial slaughter) Code of Welfare 2010" dated 10 December 2010.

ISSUING AUTHORITY

This Code of Welfare is issued by the Minister of Agriculture, by a notice published in the Gazette, under section 75 and 76 of the Animal Welfare Act 1999, after having complied with the matters specified in section 75(1) and 76(2).

Contact for further information
National Animal Welfare Advisory Committee
c/- Ministry for Primary Industries (MPI)
Regulation & Assurance Branch
Animal Welfare
PO Box 2526
Wellington 6140
Email: animalwelfare@mpi.govt.nz

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Introduction

This introduction is not part of the Code of Welfare, but is intended to indicate its general effect.

Purpose

The purpose of this Code is to provide information to the owners and persons in charge of animals involved in commercial slaughter about the standards they must achieve in order to meet their obligations under the Animal Welfare Act 1999.

These standards are based on the following basic principles:

- pre-slaughter handling facilities and procedures that minimise stress;
- the use of competent, well-trained, caring personnel;
- appropriate equipment which is fit for the purpose;
- an effective process which induces immediate insensibility, or an induction to a period of insensibility, without distress; and
- a guarantee of non-recovery from that process until death ensues.

This Code of Welfare encourages all those responsible for animals being commercially slaughtered to adopt the highest standards of husbandry, care and handling, and to equal or exceed the minimum standards.

Adequately maintaining the welfare of animals being commercially slaughtered requires experience, training and the observance of high standards.

Background

The Animal Welfare Act 1999 provides for the welfare of animals in New Zealand. It puts obligations on people who own or are in charge of animals to provide for the welfare of their animals.

The Act establishes the fundamental obligations relating to the care of animals and provides for the development and issue of codes of welfare.

Codes of welfare expand on the basic obligations of the Act by setting minimum standards and recommending best practice for the care and management of animals.

This Code of Welfare also references regulations issued under the Animal Welfare Act 1999. Regulations are prescribed under the Animal Welfare Act and impose enforceable requirements on owners and persons in charge of animals. For ease of reference, regulations relevant to this Code are set out in an appendix to this Code. Penalties for failure to comply with the regulations are specified in the relevant regulations. The appendix to this Code is not intended to provide an exhaustive list of all obligations under the Act or regulatory requirements. Owners and persons in charge of animals are responsible for ensuring that they are aware of and understand all Act and regulatory requirements that are relevant to them.

Who should read this Code of Welfare?

This Code of Welfare is intended for all persons responsible for the welfare of animals that are commercially slaughtered.

Under the Act the “owner” and every “person in charge” of an animal are responsible for meeting the legal obligations for the welfare of animals under their care.

For animals being commercially slaughtered, the owner of the animals places them in the care of others who become the persons in charge, but this does not derogate from their responsibility to ensure that the requirements of the Act are met.

The owner or person in charge of a slaughter premises has overall responsibility for the welfare of the animals at the premises. Stock handlers are responsible for the welfare of animals under their immediate care, but these responsibilities do not detract from the liability of the owner and person in charge of the slaughter premises. Homekill service providers and pet food operators are treated as the person in charge for the stunning and slaughter processes provided for in this Code.

Why is this important?

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

This Code of Welfare includes information and example indicators for each minimum standard. The list of indicators is not exhaustive but is given to provide guidance on ways in which a minimum standard may be met.

Owners and persons in charge of animals are not required to comply with the recommendations for best practice in this Code, but are encouraged to do so to provide higher standards of welfare.

Legislative background

This Code does not provide an exhaustive list of the Act's requirements, and owners and those in charge of animals should note that they must comply with the minimum standards in this Code and in the general provisions of the Act. A copy of the Act is accessible at: www.legislation.govt.nz.

Other information

Codes of welfare have been developed, or are being developed, for individual species of animals and for the transport of animals. Other codes of welfare should be consulted where appropriate (see www.mpi.govt.nz).

Codes of welfare must be accompanied by a report that sets out the deliberations that the National Animal Welfare Advisory Committee (NAWAC) undertook when developing the codes of welfare including the standards and recommendations for best practice, the nature of any significant differences of opinion during drafting and consultation, and any matters that should be dealt with by regulation. Code reports can be accessed online (see www.mpi.govt.nz).

This Code is consistent with the World Organisation for Animal Health (OIE) *Guidelines for the slaughter of animals for human consumption*.

Although efforts to include relevant regulations within this Code have been made, there may be other regulations which are relevant to you. The full list of all animal welfare regulations should be consulted where appropriate (see www.legislation.govt.nz).

Part 1: General Requirements

1.1 Application

This Code applies to the following people, as defined in the Animal Products Act 1999:

- primary processors (as further defined in the Animal Products (Definition of Primary Processor) Notice 2000);
- dual operator butchers;
- homekill or recreational catch service providers listed under section 76 of the Animal Products Act;
- any person operating a food business where animals are killed for the purposes of human consumption; and
- pet food operators.

This Code applies to persons in charge of the following animals:

- farmed mammals, birds, finfish (including eels), crustaceans and any other species defined in the Animal Welfare Act 1999 that are slaughtered to produce animal products for trade, whether this is for human or animal consumption, or for rendering or manufacture as fertiliser, or for fur production;
- mammals and birds in a wild state that are caught alive, taken into a person's care and later killed; and
- finfish (including eels), crabs, lobsters or crayfish that are caught from the wild and held in captivity at onshore premises including restaurants, prior to slaughter for sale as food.

The welfare of terrestrial animals is covered from the time at which they are unloaded at slaughter premises to the time at which they are slaughtered. In the case of slaughter on the farm, the period considered is from the time of presentation of the animal to the homekill operator to slaughter. In the case of aquatic animals, the period considered is from capture to slaughter.

This Code does not apply to:

- the killing of pest animals;
- the hunting of animals, including trophy hunting on game estates or safari parks;
- recreational and commercial fishing where fish are caught for imminent destruction; or
- on-farm killing of animals for own consumption.

1.2 Interpretation and definitions

Refer to Schedule I – Interpretation and Definitions.

Part 2: Competence

Introduction

While this Code is based on current knowledge and technology available at the time of issue, it does not replace the need for experience and common sense in the handling of animals.

Owners or persons in charge should ensure that their personnel have either the relevant knowledge and training or appropriate supervision to ensure that the health and welfare needs of the animals in their care are met. Personnel should either undergo formal training or be trained on the job by experienced supervisors. Personnel should be appropriately instructed in the care and maintenance of animals and how their actions may affect the animals' welfare. Knowledge of the normal appearance and behaviour of animals is essential for recognising early signs of distress or disease so that prompt action is taken or advice sought. Any contract staff or temporary staff should also be trained and competent in the relevant activity.

Minimum Standard No. 1 – Persons in Charge

Persons in charge of slaughter premises must ensure that animals are cared for by a sufficient number of personnel who possess the appropriate ability, knowledge and professional competence to maintain the health and welfare of the animals in accordance with the minimum standards in this Code.

General Information

Quality assurance programmes emphasise the importance of training of personnel, and include written procedures for handling and slaughter techniques (see Part 8: Quality Assurance Programme of this Code).

2.1 Competence of Stunning and Slaughter Personnel

Introduction

To ensure that the welfare of animals is maintained during stunning and bleeding out and that the process operates at maximum effectiveness, the system of stunning and bleeding out is required to be included in a quality management programme which also includes training, competence and supervision (see Part 8: Quality Assurance Programme of this Code).

Minimum Standard No. 2 – Competence of Stunning and Slaughter Personnel

- (a) Animals must be killed either:
 - i) by a person competent in the handling and slaughter of the species; or
 - ii) when untrained personnel are carrying out stunning and/or bleeding out, under the direct supervision of a person competent in the handling and slaughter of that species.
- (b) Personnel must be trained to perform the stunning and bleeding out procedures correctly, and trained in the method of applying the apparatus.
- (c) Stunning and slaughter personnel must be trained to recognise the signs associated with both an effective and an ineffective stun, and must take action to ensure that any animal that receives an ineffective stun is immediately rendered unconscious.

Part 3: Large Mammals

Large mammals include cattle, sheep, goats, pigs, deer, equines and camelids, of all ages, that are farmed or are caught alive and taken into a person's care to be killed. Small mammals such as rabbits, mustelids and possums are dealt with in Part 4: Small Mammals.

3.1 Facilities for Large Mammals

Introduction

Overall responsibility for the design, provision, operation and maintenance of suitable facilities and equipment rests with the owner or person in charge of the slaughter premises.

Holding and stunning facilities should be designed to encourage easy and natural movement of animals, bearing in mind the behavioural characteristics of the species concerned. The facilities should be designed to ensure the prevention of injury to animals and to minimise the amount of animal handling and distress. Animals should be provided with protection from the elements to meet the physiological needs of the individual species.

Additional factors to be considered are:

- ease of (and natural) movement of animals
- prevention of means of escape
- the slope of ramps
- design, construction, maintenance and condition of the floor and wall surfaces
- washing facilities
- watering and feeding facilities
- disposal of effluent
- ventilation
- lighting
- races (including those leading to point of slaughter)
- noise

See summary of regulations appended to this Code:

- Regulation 10 - Shelter requirements for young calves before transportation and at points of sale or slaughter
- Regulation 35 - Requirements for loading and unloading facilities used with young calves

Minimum Standard No. 3 – Facilities for Large Mammals

- (a) The design and construction of slaughter premises must be suitable for the species passing through the premises, and facilities must be maintained in such a condition as to minimise the likelihood of distress or injury.
- (b) All animal handling facilities must be operated so that they do not result in injury to animals.
- (c) The lairage must provide adequate shelter from adverse weather conditions and ventilation to protect the welfare of the animals being held for slaughter.
- (d) Facilities where animals are held for more than 4 hours must allow all animals to move freely, stand up and lie down.
- (e) One-way gates and other devices situated in races or ramps to prevent an animal going backwards, must be designed and operated so that they do not trap animals, lead to injury or

- cause the operator to apply undue pressure on animals to force them to pass through the gate or device.
- (f) The design and slope of ramps must be such as to minimise animals skidding or becoming distressed or injured.
 - (g) All animals must have access to water that is palatable and not harmful to health in a quantity sufficient to satisfy their thirst.
 - (h) Where animals are washed, the washing facilities must be designed and operated in a manner that causes minimal distress and which does not cause injury.
 - (i) Sufficient fixed or portable lighting must be available so that animals can be inspected in their pens at any hour of the day and night.

Recommended Best Practice

- a) The maximum slope of ramps should not exceed 20° for all animals except bobby calves. The maximum slope of ramps should not exceed 12° for bobby calves.
- b) The width of the ramp should be at least as wide as the exit opening of the transport vehicle.
- c) Cladding of gates or walls to present a solid visual barrier should be considered where charging at gates or walls is likely to be a problem.
- d) Where appropriate, gates, posts and buttresses should be padded to minimise injury to animals.

General Information

Ramps should have non-slip surfaces or cleats to minimise slipping. The unloading ramp should be level with the floor of the transport vehicle, and the bottom of the ramp should meet the level of the unloading bay platform. Because animals move more readily uphill than downhill, ramps should be horizontal or should slope upwards. If the ramps slope downward, the slope should be as flat as possible. Water should not be applied to the ramp as a means of making the ramp slippery and using it as a chute. The walls should prevent animals from falling or jumping off the ramp, and should be smooth with no projections that may injure animals.

Floors should have non-slip surfaces. If gratings are used they should be of an appropriate design for the species and maintained to prevent injury. The arrangement of the grating throughout the holding facilities should be such that any changes in direction of the grating do not cause baulking.

Fences and gates should be designed to allow good flow and to prevent injury, and should not have any projections that may injure animals. Where appropriate, the presence and absence of cladding on gates and barriers should be arranged to encourage movement of animals in the required direction and to minimise the likelihood of gate or barrier charging by animals that are attempting to escape. Gates should be used in a considerate manner, and should not be used to stop animals while they are in motion.

3.2 Handling of Large Mammals

Introduction

Minimising stress during pre-slaughter lairage will facilitate handling and improve both handler safety and animal welfare. Excited or agitated animals can seriously injure themselves, other animals or their handlers. Transport stress has been shown to have a detrimental effect on animal physiology, and this may precipitate clinical signs of disease or metabolic stress during the pre-slaughter period.

Animals suffering from disease, injury or other abnormality may experience pain or distress. For this reason, all animals need to be inspected on arrival at slaughter premises, and during the holding period prior to slaughter. Personnel inspecting animals need to be competent at recognising normal and abnormal behaviour. Where animals are distressed, in pain or suffering, action needs to be taken to alleviate or treat this, where practical and as appropriate to the situation.

In situations where it is not practical to treat animals that are in pain or distress within appropriate time frames, the animal should be humanely killed as soon as practicable.

The provision of feed during the pre-slaughter period will be dependent on the length of time until slaughter and the physiological requirements of the animals.

See summary of regulations appended to this Code:

- Regulation 9 – Maximum time young calves may be off feed before slaughter
- Regulation 48 – Use of electric prodders
- Regulation 49 – Prodding animals in sensitive areas

Minimum Standard No. 4 – Handling of Large Mammals

- (a) Animals must be handled and moved in such a manner as to minimise distress.
- (b) Different species of animals must not be mixed.
- (c) Horned cattle and animals known to be aggressive must be penned separately if there is insufficient space for pen-mates to escape injury.
- (d) If problems of aggressive behaviour occur, the animals must be held separately and/or slaughtered as soon as practicable.
- (e) All animals must be assessed for the presence of distress or suffering caused by physiological state, injury, disease or other abnormality, as soon as possible, but within 8 hours of arrival at the slaughter premises. Injured, diseased or abnormal animals must be treated appropriately to ensure their welfare is protected.
- (f) Personnel inspecting animals must be competent at recognising normal and abnormal behaviour that indicates distress or suffering due to injury, disease, physiological state or other abnormality.
- (g) Animals that are unable to stand or bear weight and walk on all four entire limbs must be slaughtered as soon as possible in the situation in which they are found (as distinct from taking them to a slaughtering site) using a humane slaughter method.
- (ga) Animals to which the definition of calf in regulation 8(3) of the Animal Welfare (Care and Procedures) Regulations 2018 applies must not be killed by the use of blunt force to the head except in the circumstances described in regulation 8(1) of those regulations.
- (h) When animals give birth in the holding pens, the welfare of both dam and offspring must be protected.
- (i) Lactating dairy cattle with distended udders must be slaughtered within 24 hours of arrival unless milked.
- (j) Milk lambs must be slaughtered as soon as possible but within 28 hours of being loaded for transport unless fed: see Minimum Standard 4 (l).
- (ja) Animals to which the definition of young calf in regulation 3 of the Animal Welfare (Care and Procedures) Regulations 2018 applies must be slaughtered in accordance with regulation 9(1) and (2) of those regulations.
- (k) Cattle, sheep, goats, pigs, deer, equines and camelids must not be held in lairage for longer than necessary before slaughter and must not be held in lairage for longer than 48 hours before slaughter.
- (l) If animals are held in lairage for longer than the periods stated below, they must then be fed at least maintenance rations:
 - i) Milk lambs – 20 hours
 - ii) Pigs and equines – 24 hours
 - iii) Cattle, sheep, goats, deer and camelids – 36 hours.
- (m) If animals are held in holding paddocks, they must be provided with appropriate standards of husbandry for that species.
- (n) Dogs must be under control at all times.
- (o) Dogs must not be used to move bobby calves, milk lambs, deer, pigs or goats.

- (p) All swim washing and high-pressure or high-volume spray washing must be closely monitored at all times to ensure the welfare of the animals.
- (q) Any animals that go under or swim in the wrong direction during swim washing must be assisted immediately.
- (r) Animals must not be washed more than twice.
- (s) When handling animals, no more than the minimum force required is to be used.
- (t) Goads must not be used to move animals, except:
 - i) where the safety of the handler is at risk; or
 - ii) when loading a stunning pen; or
 - iii) for very stubborn cattle (but not calves).
- (ta) Electric prodders must not be used on animals, except on—
 - i) cattle that weigh over 150 kg; or
 - ii) during loading or unloading for transport, on pigs that weigh over 150 kg; or
 - iii) during loading of a stunning pen at any slaughter premises, on pigs that weigh over 150 kg; or
 - iv) during loading of a stunning pen at any slaughter premises, on deer of any size.

Where permitted to be used, an electric prodder may be used only on the muscled areas of the animal's hindquarters or forequarters, and the animal must have sufficient room to move away from the prodder.
- (u) Animals must not be struck or prodded with a goad in the udder, anus, genitals, or eyes.
- (ua) Animals must not be prodded in sensitive areas.
- (v) Animals which are injured, suffering or otherwise unfit for further transport (except newborn animals) must be slaughtered or humanely killed at the slaughter premises.

Recommended Best Practice

- a) Animals should be adequately rested prior to slaughter so that signs of injury, disease and physiological abnormality are not masked at the time the animals are assessed.
- b) Horned cattle should not be presented for slaughter at commercial premises.
- c) Bobby calves, milk lambs, lactating animals and animals in advanced pregnancy should be given priority for slaughter.
- d) Where two or more groups of animals have been mixed, they should be observed until settled for signs of injury, aggression or stress so that remedial action can be taken.
- e) Sheep should not be swim washed if the length of their fleece will result in unreasonable or unnecessary distress or injury during the swim wash process.
- f) Goats should not be swim washed because of the risk of hypothermia. If goats are washed, their slaughter should not be delayed.
- g) Cattle should not be left under a cold-water shower for more than one hour unless there is either a substantial risk of overheating during hot weather or a substantial risk of conflict or riding among the animals that could lead to exhaustion or injury.
- h) Pigs should be kept in stable social groups.
- i) Goads and electric prodders should not be used on pigs.
- j) If an aid is required to assist in moving pigs, or to protect the stock handler, backing (moving) boards should be used.
- k) Dogs should not be used in the forcing pens leading to the slaughter area.

General Information

It is important to select the appropriate group size when moving animals and, if necessary, to divide a pen of animals into smaller groups to make animal movement more manageable.

It is advisable to minimise noise in the animal handling area. In addition, it is important not to stress the animals early in the animal handling procedures. When animals become stressed their behaviour becomes less predictable, they are more difficult to manage and they are more liable to injure themselves, other animals or their handlers.

Animals from different mobs (particularly males and including cryptorchids) should be kept separate. If it is necessary to mix mobs, consideration should be given to the size of the animals, their temperament and the presence or absence of horns.

Measures should be taken to reduce the risk of injury to equines resulting from biting, kicking or slipping, and their shoes should be removed. Also see summary of regulations appended to this Code (Regulation 20 – Persons must not strike horse on its head).

To prevent the risk of fighting, unfamiliar stallions should not be mixed in the same pen or yard.

When shooting an equine, it can be helpful to secure the animal with a head collar or bridle. If necessary, a restless horse can be blindfolded.

Nothing in this Code prevents the feeding of newborn animals or their removal to another place as long as they are managed to ensure their welfare.

Muzzling of dogs is not always necessary or even best practice, and should be left to the discretion of the dog handler. Dogs could be muzzled if the dog handler considers there is a risk that they will bite other animals; however, this risk needs to be balanced against the welfare impact on working dogs. See summary of regulations appended to this Code (Regulation 12 – Muzzles on dogs).

Washing

Washing animals in the pre-slaughter period is a major stressor. While the need for washing of some animals is accepted, it should only take place when absolutely necessary, and both climatic conditions and the body condition of the animals should be taken into consideration when the type and length of washing is considered.

The National Animal Welfare Advisory Committee (NAWAC) believes development of improved methods of removing superficial contaminants in a manner that minimises the stress on the animals deserves a high priority. In particular, NAWAC would like to see the replacement of swim washing by less stressful methods. Improvements are likely to include increased requirements for animals to be presented for slaughter in clean condition with skin free of faecal contamination and wounds.

3.3 Restraint for Stunning of Large Mammals

Introduction

Restraint can be stressful and therefore should be minimised in terms of both the force used and the duration. Conversely, animals that are not well restrained may injure themselves when in confined spaces. Correct restraint is necessary to ensure effective and humane stunning.

Minimum Standard No. 5 – Restraint for Stunning of Large Mammals

- (a) Animals must be presented for stunning in a manner that allows effective stunning.
- (b) A restraining device must be used if the natural behaviour of the animal and the system of handling do not allow the accurate application of the stunning equipment.
- (c) The restraining device must be designed and used in a way that avoids excessive stress to the animal.
- (d) Where a restraining conveyor is used for sheep, goats, calves and pigs in which individuals are separated:
 - i) the width and angle of conveyors must suit lines of animals that are being processed; and
 - ii) conveyors must be designed and operated to prevent animals from climbing on the backs of animals in front of them.

- (e) Cattle, deer and equines must be individually restrained in appropriately designed stunning pens or conveyors.
- (f) Notwithstanding (e), unrestrained cattle, deer and equines, and other large mammals, may be killed by homekill service providers and pet food operators using a firearm.
- (g) Animals must not be left in any restraining device during regular work breaks.
- (h) During a breakdown or if the processing line stops, animals must be removed from the restraining device if they become distressed.
- (i) Large mammals must be unconscious before being shackled.
- (j) All stunning restraint facilities must be regularly inspected and well maintained.

General Information

Electrical stunning of free-standing pigs is acceptable, provided that, when selecting and positioning a pig for stunning, stress is minimised for that animal and other pigs in the pen and provided that the application of the electrodes is accurate and there are no pre-stun electric shocks.

Other methods that allow rapid and accurate application of stunning equipment, such as individual restraining crates or crushes in the case of sheep, goats, calves, deer and pigs, can be used.

The stunning pen should be designed, or long-handled stunners made available, to enable the stunning of an animal that goes down in the pen.

3.4 Stunning of Large Mammals

Introduction

Commercial slaughter of animals must be carried out by approved methods. Slaughter by severance of blood vessels supplying the brain or heart causes loss of sensibility and subsequent death due to anoxia. Animals killed by this method are conscious and may experience pain or distress for several seconds or minutes prior to death. Therefore, animals need to be rendered insensible by an approved stunning method prior to slaughter, unless the animal is slaughtered by an approved method which renders the animal instantaneously insensitive. The time between rendering the animal insensible and its subsequent slaughter needs to be kept to a minimum.

Humane methods of stunning animals for commercial slaughter have been developed, including mechanical and electrical stunning. There are variations in stun methods and therefore it is important to understand the way each method works to ensure humane and effective stunning.

All stunning methods must result in immediate loss of sensibility in the animal. If the insensibility induced by the stunning method is reversible (i.e. if the animal is able to recover sensibility after a period of time), brain function must be stopped by another means. This may be achieved by severance of major arteries supplying the brain, or by inducing cardiac arrest by applying an electrical current. The period of insensibility needs to continue until death supervenes.

See summary of regulations appended to this Code:

- Regulation 8 – Prohibition on killing calves by blunt force to the head

Minimum Standard No. 6 – Stunning of Large Mammals

- (a) Prior to slaughter, all animals must be stunned so that they are immediately rendered insensible and must be maintained in that state until death supervenes. This includes a method of stunning that results in immediate insensibility and death.

- (b) Stunning must be applied using one of the following:
- i) a captive bolt firearm; or
 - ii) an electrical stunner; or
 - iii) a suitable firearm.
- (c) Equipment used for stunning must be maintained in good condition in accordance with the manufacturer's recommendations.
- (d) An effective backup stun method must be immediately available in the event that the primary apparatus fails.
- (e) Repetitive ineffective stunning requiring repeat stunning must be investigated and remedied immediately.

Note - Controlled atmosphere stunning of large mammals is not currently carried out in New Zealand.

Recommended Best Practice

Certain reactions are associated with an effective stun, and should be assessed on a periodic basis. Quality control personnel should examine samples of post-stun animals in detail and in accordance with Schedule III – Signs of an Effective Stun in Farmed Mammals, of this Code.

General Information

Specifications of equipment will often be those supplied by the manufacturer and, provided these are adequate, it is important that modifications are not made. It is also important that maintenance of such equipment is carried out in a manner which ensures that it continues to operate according to specification. It may be necessary to check the performance by physical means.

Examples which illustrate the importance of these points are:

- modification of the current control of an electrical stunner by an electrician without checking the calibration of the ammeter, resulting in a significant drop in performance
- failure to properly clean a captive bolt firearm regularly, resulting in a significant drop in performance
- a captive bolt firearm which has eventually become so worn that it must be discarded.

Even when a stunning apparatus is properly installed and maintained, it can still be ineffective if operated incorrectly. Specifications on operation should include the way in which it should be applied to the animal and physical aspects of its actual operation. In the case of electrical stunners, this should include specified currents and duration of application; in the case of captive bolt firearms, this should include specified charges to be used for different classes of animal.

Ineffective stunning requiring repeat stunning in excess of 2% (i.e. 2 out of every 100 firings or 100 electrical discharges) needs to be investigated and remedied immediately.

Other methods of stunning to those listed in Minimum Standard 6(b) may, from time to time, be developed and recommended by NAWAC for inclusion in the Code.

Stunning and Slaughter of Animals on the Farm

The slaughter of large mammals on a farm by a homekill or pet food operator presents some unique difficulties in applying effective stunning prior to slaughter because the available technology is likely to be limited to a firearm or captive bolt firearm. While the use of a firearm to stun some species may present significant risks to the operator, other humans and other animals, captive bolt firearms provide a cost-effective and low risk alternative. Large mammals such as cattle, sheep, goats, pigs, deer, equines and camelids are to be stunned in accordance with Minimum Standard 6 prior to slaughter, and appropriate measures, including effective restraint, will be needed to minimise the risks. If the operator is concerned that the animal cannot be

stunned safely in its current location, then it is the responsibility of the owner of the animal to arrange for it to be transported to a place where it can be stunned safely.

3.4.1 Use of Captive Bolt Firearm for Large Mammals

Introduction

There are two types of captive bolt firearms that are used – penetrating and non-penetrating. A penetrating captive bolt enters the skull and comes into contact with brain tissue; a non-penetrative captive bolt employs a “mushroom” percussive head. Both methods provide a concussive blow to the skull resulting in insensibility because of brain tissue damage, although the damage caused by the penetrating captive bolt will result in less chance of the animal regaining sensibility. Insensibility will be permanent if the animal stops breathing and does not resume breathing. The same criteria for use apply to either method.

Minimum Standard No. 7 – Use of Captive Bolt Firearm for Large Mammals

- (a) When a captive bolt firearm is used, the appropriate model, calibre and cartridge size as recommended by the manufacturer must be selected for the particular animal.
- (b) The target must be as shown in Schedule II – Captive Bolt and Free-bullet Firearm Stunning Sites Schedule I – Interpretation and Definitions.
- (c) Animals must be effectively stunned and insensible (in accordance with the signs of an effective stun as set out in Schedule III – Signs of an Effective Stun in Farmed Mammals) before the slaughter process can begin.
- (d) A captive bolt firearm must be cleaned and maintained in accordance with the manufacturer’s instructions to ensure that it functions effectively.

Recommended Best Practice

Captive bolt firearms should be used on a rotational basis, regularly cleaned during use and maintained to ensure that there is no reduction in bolt speed from friction due to carbon accumulation in their chambers. Cartridges should be kept in a dry place.

General Information

To ensure compliance with Minimum Standard No. 7, the captive bolt firearm must be applied to the head of the animal at the position shown in Schedule II – Captive Bolt and Free-bullet Firearm Stunning Sites. This will ensure that the brain tissue of the cerebral hemisphere and the brainstem are sufficiently disrupted by the projectile to induce sudden loss of consciousness and subsequent death.

Only penetrating type captive bolt firearms should be used on pigs.

3.4.2 Electrical Stunning of Large Mammals

A number of electrical stunners and stun conditions have been developed, with a variety of electrodes and electrode placement, and the use of water or saline for conductivity and cooling purposes. Head-only and head-to-body (cardiac arrest) methods have specific variables that need to be understood by the operator.

Electrical stunning methods which induce cardiac arrest at the same time as, or immediately after, loss of consciousness result in permanent insensibility due to failure of blood supply to the brain. With these methods, the risk of an animal recovering sensibility during the slaughter process is minimal, and the animal will die regardless of whether or not blood vessels are severed.

Minimum Standard No. 8 – Electrical Stunning of Large Mammals

- (a) Electrical stunners must be capable of supplying a regulated current which will induce an immediate stun.
- (b) The apparatus must be fitted with an automatic timing device to determine the duration of the stun and a calibrated meter positioned to enable the operator to observe the amperage and duration of the stun.
- (c) When using head-only reversible stunning, the electrodes must be placed so as to span all or part of the brain of the animal to be stunned.
- (d) Animals must be effectively stunned and insensible (in accordance with the signs of an effective stun as set out in Schedule III – Signs of an Effective Stun in Farmed Mammals, to this Code) before the slaughter process can begin.
- (e) Electrical stunners must generate sufficient power to achieve continuously the minimum current level recommended for stunning.
- (f) The correct current level must be attained within 1 second of the initiation of the stun and must be maintained for at least 1 – 3 seconds.
- (g) Animals must not be so wet as to cause part of the stunning current to flow over the surface of the body instead of through the head, resulting in an ineffective stun.
- (h) Animals must not experience any electric shocks from the stunning equipment before stunning.
- (i) Electrical stunning equipment must be maintained in good condition in accordance with the manufacturer's recommendations.

Recommended Best Practice

- a) Except for pigs, head-to-body electrical stunning which induces cardiac dysfunction should be used as the preferred method because stun-to-stick intervals are then no longer critical.
- b) In the event of any system failure, animals should be able to be evacuated from the stunning box without causing undue stress.

General Information

Except for pigs, head-to-body electrode placement includes head-to-back, head-to-chest and head-to-legs.

The OIE recommends that stunning apparatus required for electrical stunning should be provided with sufficient power to achieve continuously the minimum current level recommended for stunning as indicated in the following table. The minimum level should be achieved within 1 second and be maintained for 1–3 seconds.

Species	Minimum Current Levels
Cattle	1.5 amps
Calves	1.0 amp
Pigs*	1.25 amps
Sheep and goats	1.0 amp
Lambs	0.7 amps
Deer	1.0 amp (not available from OIE)

**Pigs - A minimum current of 1.3 amps is required for pigs which are stunned with calliper-type electrodes because of the greater likelihood that for some pigs the electrodes will be placed across the neck instead of the head.*

3.4.3 Use of Firearms for Large Mammals

Introduction

Firearms provide a method of stunning that results in immediate insensibility and death. Firearms are often used outside slaughter premises by homekill service providers and pet food operators, and may be used in slaughter premises in an emergency (subject to health and safety requirements).

Minimum Standard No. 9 – Use of Firearms for Large Mammals

- (a) When a free-bullet firearm is used, it must be of a calibre and range appropriate for the particular species and class of animal.
- (b) The target must be as shown in Schedule II – Captive Bolt and Free-bullet Firearm Stunning Sites to this Code.
- (c) When a firearm is used, the bullet or shot must penetrate the cranial cavity to cause an irreversible state of insensibility before the slaughter process can begin.
- (d) A firearm must be cleaned and maintained to ensure that it functions effectively.

General Information

Whenever a firearm is used, it is very important that the operator:

- is competent to use the gun
- takes care in ensuring the safety of other animals.

3.5 Stunning to Bleeding Out of Large Mammals

Introduction

Severance of major arteries supplying the brain and heart is an acceptable method of slaughter, provided that the animal has been first rendered insensible to pain by stunning. There are two basic methods of bleeding an animal:

- A transverse incision of the ventral surface of the neck, which severs all soft tissue below the spinal column including the jugular veins and common carotid arteries. With this method, it is important to ensure that both common carotid arteries are severed. If only one of these arteries is severed, the onset of cerebral hypoxia (lack of oxygen to the brain) and insensibility may be delayed. In cattle, particularly calves, the severed ends of the carotid arteries may become blocked, delaying the onset of brain failure. In some cases, the skin is “opened” (incised) separately before the underlying blood vessels are severed.
- A thoracic (chest) stick, which severs the large blood vessels that give rise to the jugular veins and carotid arteries. This method of slaughter is achieved by running a knife down one jugular furrow of the neck and then into the opening of the chest between the first pair of ribs. A successful incision is denoted by an obvious gush of blood, both venous and arterial.

Bleeding times can vary between species, and as a result of operator technique and the effectiveness of the cut performed, the stun technique, and the position of the animal and the effects of gravity. A thoracic stick can be performed shortly after a transverse neck cut. This helps to reduce the opportunity for blood to flow to the brain through the blood vessels in the muscles surrounding the vertebrae of the neck.

The time interval between stunning and bleeding out is particularly important when methods of stunning are employed which are only temporary in nature (e.g. head-only electrical stunning). The operator needs to be aware of the parameters of the particular stunning method that is being applied, to ensure that the insensibility

caused by the initial stun is continued until death due to bleeding. The method of stunning and slaughter should be specified in the quality management programme (see Part 8: Quality Assurance Programme) and the efficiency of the operator monitored.

Minimum Standard No. 10 – Stunning to Bleeding Out of Large Mammal

- (a) An animal must not be bled or manipulated ready for bleeding out unless it has been effectively stunned.
- (b) The time between stunning and effective bleeding out must be kept to a minimum in all cases.
- (c) Slaughter by bleeding (following stunning) must be carried out using one of the following methods:
 - i) the thoracic stick, i.e. the severance of the major arterial and venous blood vessels of the anterior thorax; or
 - ii) a transverse incision in the neck that severs both the carotid arteries.
- (d) When head-only reversible electrical stunning is used, the slaughter method must include bilateral severance of carotid arteries within 20 seconds of stunning for sheep, goats, or deer.
- (e) In the case of head-only reversible electrically stunned cattle and pigs, the severance of the carotid arteries must be followed by one of the following:
 - i) a heart-stopping electrical current; or
 - ii) a thoracic stick; or
 - iii) a scientifically validated method which ensures that the animal does not recover breathing or sensibility prior to bleeding to death.

Both the severance of the carotid arteries and the secondary procedure must be completed within 40 seconds of stunning for adult cattle, within 30 seconds of stunning for bobby calves and vealers, and within 15 seconds of stunning for pigs.
- (f) If during the bleeding out process any animal shows signs of regaining sensibility, the stunning and slaughter of other animals must stop immediately and the animal that is showing signs of regaining sensibility must be rendered insensible. No further animals may be stunned until the reason is identified and corrective action, including action to prevent a recurrence, implemented.
- (g) The sticking incision must be adequate to allow rapid voiding of the blood and to prevent occlusion of blood flow during bleeding out.
- (h) In the case of heavily pregnant animals being slaughtered, the foetus must not be removed from the uterus sooner than 5 minutes after the maternal neck cut or thoracic stick.
- (i) Any living foetus removed from the uterus must be killed or prevented from inflating its lungs with air and breathing.

Recommended Best Practice

Foetuses should not be removed from the uterus until at least 15 – 20 minutes after the maternal neck cut or thoracic stick.

Part 4: Small Mammals

Introduction

Small mammals include rabbits, hares, wallabies, mustelids and possums that are farmed or are caught alive and taken into a person's care to be killed. Large mammals such as cattle, sheep, goats, pigs, deer, equines and camelids are dealt with in Part 3: Large Mammals.

4.1 Facilities and Handling for Small Mammals

Introduction

Overall responsibility for the design, provision, operation and maintenance of suitable facilities and equipment rests with the owner and the person in charge of the slaughter premises.

Minimising stress during pre-slaughter lairage will facilitate handling and improve both handler safety and animal welfare. Where animals are distressed, in pain or suffering, action needs to be taken to alleviate or treat this, where practical and as appropriate to the situation. In situations where it is not practical to treat animals that are in pain or distress within appropriate time frames, the animal should be humanely killed.

See summary of regulations appended to this Code:

- Regulation 49 – Prodding animals in sensitive areas

Minimum Standard No. 11 – Facilities and Handling for Small Mammals
<p>(a) The design and construction of slaughter premises must be suitable for the species passing through the premises, and facilities must be maintained in such a condition as to minimise the likelihood of distress or injury.</p> <p>(b) If animals are moved from their place of rearing to separate slaughter premises, they must have access to an adequate supply of water that is palatable and not harmful to health.</p> <p>(c) If animals are held for more than 24 hours, they must be fed at least a maintenance ration.</p> <p>(d) All animal handling facilities must be operated so that they do not result in injury to animals.</p> <p>(e) Animals must be handled and moved in such a manner as to minimise distress.</p> <p>(f) Injured, abnormal or diseased animals must be treated appropriately to ensure their welfare.</p>

4.2 Stunning of Small Mammals

Introduction

Commercial slaughter of animals must be carried out by approved methods. Slaughter by severance of blood vessels supplying the brain or heart causes loss of sensibility and subsequent death due to anoxia. Animals killed by this method are conscious and may experience pain or distress for several seconds or minutes prior to death. Therefore, animals need to be rendered insensible by an approved stunning method prior to slaughter, unless the animal is slaughtered by an approved method which renders the animal instantaneously insensible. The time between rendering the animal insensible and its subsequent slaughter needs to be kept to a minimum.

Minimum Standard No. 12 – Stunning of Small Mammals

- (a) Prior to slaughter, all animals must be stunned so that they are immediately rendered insensible and must be maintained in that state until death supervenes. This includes a method of stunning that results in immediate insensibility and death.
- (b) Equipment used for stunning must be maintained in good working order and repair in accordance with the manufacturer's instructions to ensure that it functions effectively.
- (c) Stunning must be applied using one of the following:
 - i) a penetrating captive bolt firearm; or
 - ii) a blow to the frontal region of the head with a heavy object; or
 - iii) an electrical stunner.
- (d) Repetitive ineffective stunning requiring repeat stunning must be investigated and remedied immediately.
- (e) An effective backup stun method must be immediately available in the event that the primary stun method fails.

Captive Bolt Firearm

- (f) When a captive bolt firearm is used, the appropriate model, calibre and cartridge size as recommended by the manufacturer must be selected for the particular animal.

Electrical Stunning

- (g) Electrical stunners must be capable of supplying a regulated current which will induce an immediate stun.
- (h) The apparatus must be fitted with calibrated meters to indicate current at the time of stunning, and an automatic timing device to determine the duration of the stun so that the operator can observe the duration of actual current flow.
- (i) When using head-only reversible stunning, the electrodes must be placed so as to span all or part of the brain of the animal to be stunned.
- (j) Electrical stunners must generate sufficient power to achieve continuously the minimum current level required for effective stunning.
- (k) The correct current level must be attained within 1 second of the initiation of the stun and must be maintained for at least 1 – 2 seconds.
- (l) When using head-to-body stunning methods, currents designed to cause cardiac dysfunction must not precede the stunning current responsible for causing insensibility.
- (m) The minimum stunning current that must be used for rabbits and fur-bearing animals is 0.2 amps.
- (n) Animals must not be so wet as to cause part of the stunning current to flow over the surface of the body instead of through the head, resulting in an ineffective stun.
- (o) Animals must not experience any electric shocks before stunning.
- (p) Electrical stunning equipment must be maintained in good condition in accordance with the manufacturer's recommendations.

General Information

Ineffective stunning requiring repeat stunning in excess of 2% (i.e. 2 out of every 100 firings or 100 electrical discharges) needs to be investigated and remedied immediately.

Other methods of stunning to those listed in Minimum Standard 12(c) may, from time to time, be developed and recommended by NAWAC for inclusion in the Code.

Rabbits may be stunned using any of the following methods:

- Wall-mounted head-only electrodes, where the rabbit is held upside down with one hand spanning the loin and its head is inserted by hand between the two electrodes and held in position while the current is flowing. This electrical stunning system should only be used with isolated electrical circuits, otherwise there is a risk of current passing through the operator to earth.

- Cartridge or spring-fired captive bolt firearms, which are effective when operated correctly. However, care needs to be taken when placing the gun against the rabbit's head, as the skin over the head is loose and skin slip can spoil the aim.
- Manual concussion where the rabbit is held in one hand by the hind legs and struck on the back of the head with a heavy object held in the other hand.

Neck dislocation may be used for small rabbits, but only after they have been stunned using one of the above methods.

4.3 Bleeding Out of Small Mammals

Introduction

Severance of major arteries supplying the brain and heart is an acceptable method of slaughter, provided that the animal has been first rendered insensible to pain by stunning.

Minimum Standard No. 13 – Bleeding Out of Small Mammals

- (a) An animal must not be bled out or manipulated ready for bleeding out unless it has been effectively stunned.
- (b) The time between reversible stunning and effective bleeding out must be kept to a minimum in all cases.
- (c) The sticking incision must be adequate to allow rapid voiding of the blood and to prevent occlusion of blood flow during bleeding out.
- (d) If bleeding out is done by transverse incision of the neck, both carotid arteries must be severed.

Part 5: Birds

Introduction

There are several species of birds slaughtered commercially. Most are covered under the category of “poultry”, but the methods used for these smaller species of birds cannot be applied to the larger ostrich and emu. As a result, this part is divided to recognise the differences, with the major emphasis on “poultry” because this represents the majority of birds commercially slaughtered in New Zealand.

See summary of regulations appended to this Code:

- Regulation 49 – Prodding animals in sensitive areas

Minimum Standard No. 14 – Pre-slaughter Presentation and Handling of Birds

- (a) Birds must be protected from weather conditions that adversely affect their welfare while they are awaiting slaughter.
- (b) The slaughter premises must be suitably equipped to handle the size of birds to be processed.
- (c) Suitable facilities and arrangements must be in place for the slaughter of sick or injured birds.
- (d) The design and construction of facilities must be suitable for the species passing through the premises, and facilities must be maintained in such a condition as to minimise the likelihood of distress or injury.
- (e) All animal handling facilities must be operated so that they do not result in injury to animals.
- (f) There must be sufficient lighting to permit inspection of birds during unloading and handling prior to slaughter.
- (g) Personnel inspecting animals must be competent at recognising normal and abnormal behaviour that indicates distress or suffering due to injury, disease, physiological state or other abnormality.
- (h) Birds must be handled with care at all stages of the procedure in such a manner that distress is minimised and injury avoided. Containers or crates that contain birds must not be thrown or dropped, and must be moved smoothly during unloading.
- (i) Different species of birds must not be mixed in cages.
- (j) If live birds are held at the slaughter premises for longer than 18 hours, they must be placed in pens or cages with access to water and maintenance rations.
- (k) If they are not slaughtered immediately, birds must be assessed for the presence of injury, abnormality and disease within 6 hours of arrival at the slaughter premises. Injured, abnormal or diseased birds must be treated appropriately to ensure their welfare.
- (l) Ostriches and emus known to be aggressive must be penned separately if there is insufficient space for pen-mates to escape injury.
- (m) If problems of aggressive behaviour occur, the birds must be held separately and/or slaughtered as soon as practicable.
- (n) Birds must not be left alive in shackles during regular work breaks.

Recommended Best Practice

- a) Techniques for the handling of birds should be described in each facility’s quality assurance system.
- b) Poultry, except ducks, should be held by both legs, and care should be taken to prevent flapping wings hitting solid objects.
- c) Poultry should not be held by the head, neck, end of the wings or tail.

General Information

It is likely that suspending a bird upside down from a shackle will cause it some distress. For these reasons, the time between shackling and stunning should be minimised. However, it is also important that the wing

flapping which occurs at shackling has subsided by the time each bird reaches the water bath. For example, the “hang-on” period that allows wing flapping to subside in most broilers is 12 seconds and for turkeys is 25 seconds.

The use of breast comforters along the shackle line can greatly reduce flapping and can calm birds.

Blue light can have a calming effect on birds at the hang-on point.

5.1 Poultry

Introduction

The commercial slaughter of poultry in New Zealand is generally done on a large scale in purpose-built facilities with very large throughput. The majority of birds are only a few weeks old, although older culled breeding and laying birds are also slaughtered.

5.1.1 Stunning and Bleeding Out of Poultry

Minimum Standard No. 15 – Stunning and Bleeding Out of Poultry

- (a) Prior to slaughter, all birds must be stunned so that they are immediately rendered insensible and must be maintained in that state until death supervenes.
- (b) Each bird must be bled while it is in a stunned state, and it must not be allowed to regain consciousness during bleeding out.
- (c) Each bird must be dead by the time it enters the scalding tank.
- (d) Birds must not be decapitated if they have not been first stunned.

Minimum Standard No. 15A – Shechita of Poultry

- (a) Poultry may be slaughtered without prior stunning in accordance with the requirements of shechita (Jewish religious requirements) and the requirements of this minimum standard.
- (b) A competent shochet must carry out the slaughter of the poultry. The shochet must be approved by one or both of the Auckland Hebrew Congregation or the Wellington Jewish Community Centre. Before conducting shechita in New Zealand for the first time, the shochet must provide to the Director-General of the Ministry for Primary Industries written authorisation from one or both of the Auckland Hebrew Congregation or the Wellington Jewish Community Centre.
- (c) The Auckland Hebrew Congregation or the Wellington Jewish Community Centre will approve a shochet to undertake shechita in relation to poultry only.
- (d) The number of poultry that will be subject to shechita will not exceed the number necessary to meet the needs, within New Zealand, of the local Jewish community and kosher observant visitors to New Zealand. The Auckland Hebrew Congregation or the Wellington Jewish Community Centre acknowledge that present consumption is no more than 5,000 birds per year. The Minister and the Auckland Hebrew Congregation and the Wellington Jewish Community Centre will from time to time discuss the number of poultry required to meet the needs of the local Jewish community and kosher observant visitors to New Zealand.
- (e) The neck of any bird must be inspected immediately after the cutting of the throat to ensure that both carotid arteries are completely severed.

General Information

Minimum Standard 15A was originally made by an amendment notice dated 10 December 2010 issued by the Minister of Agriculture.

5.1.2 Automated Water Bath Stunning of Poultry

Minimum Standard No. 16 – Automated Water Bath Stunning of Poultry

- (a) Each bird must be presented to the electric stunner in a manner which ensures that current passes through the brain.
- (b) A bird must not experience any electric shocks before stunning.
- (c) An undersized or runt bird must not be hung on the line unless it will reach the water level in the water bath stunner and will be stunned.
- (d) There must be sufficient current to stun all birds within the bath effectively, taking into account that the current is not always equally divided between the birds due to differing levels of resistance of individual birds.
- (e) The supervisor of the water bath stunner must be familiar with the current that is necessary to stun different types and sizes of bird, and must adjust the stunner setting as necessary so that all birds are effectively stunned and remain stunned up to the time they die.
- (f) Birds must not be so wet as to cause part of the stunning current to flow over the surface of the body instead of through the head, resulting in an ineffective stun.

Recommended Best Practice

- a) Birds should be stunned with a current that results in cardiac arrest.
- b) If birds are flapping their wings as they enter the water bath stunner or if they show any recoil from the surface of the water when they touch the surface, processing should cease until the problem is corrected.

General Information

The metal electrode which is submerged in the water bath and provides current to the water needs to span the whole length of the water bath. The electrode which makes contact with the shackles needs to make continuous uninterrupted contact with the shackles while the bird held in those shackles is conveyed through the water bath stunner.

Pre-stun shocks need to be controlled by ensuring that water does not overflow at the entrance to the water bath, and by ensuring that the entry ramp is electrically isolated from the water inside the water bath.

Two alternative approaches can be used in selecting the appropriate stunning current, frequency and waveform for water bath stunners. The first approach is to select a current which induces cardiac arrest at stunning. When using a 50 Hz sinusoidal AC, the average current per bird that will induce cardiac arrest is approximately:

Chickens	120 mA
Ducks	130 mA
Turkeys	150 mA

The second approach is to choose a stunning frequency or waveform that does not produce cardiac arrest at stunning, and to make sure that the birds are rendered unconscious by the stunning process and that they remain unconscious. One way of achieving this is to check that the birds are adequately stunned and that both carotid arteries are severed at neck cutting.

There are many types of electrical frequency and waveform that can be used for stunning, and it is not possible to specify minimum currents for every frequency and waveform. Instead, there should be routine inspection of the adequacy of the stunning and neck-cutting procedures. The key factor is that the chosen system should not allow birds to regain consciousness.

The current that is being used in the water bath stunner should be continuously displayed using an accurate ammeter and the display should be available for routine monitoring.

The characteristic signs of a stunned state following water bath stunning are an arched neck (dorsoflexion), wings held close to the body and tremoring in the wings with legs rigidly extended. When there is cardiac arrest at stunning these signs are less obvious, as the wings and neck quickly drop once the bird leaves the stunner, and the pupils dilate.

5.1.3 Controlled Atmosphere Stunning of Poultry

Minimum Standard No. 17 – Controlled Atmosphere Stunning of Poultry

- (a) The chamber must be constructed so that the birds can be visually monitored during the procedure.
- (b) Provision of gas into the chamber must result in minimum discomfort to birds.
- (c) The procedure must be sufficient to ensure collapse of every bird within 35 seconds of exposure to the gas, and the birds must remain in the gas for at least a further two minutes following collapse to ensure all birds are dead.
- (d) Solid gases with freezing temperatures must not enter the chamber.
- (e) The chamber must be fitted with a system for flushing the gas unit to allow quick and easy access to the birds in the event of a breakdown.
- (f) Operators must be competent and must ensure that the birds are managed carefully and calmly at all stages of the process.
- (g) All equipment used must be well maintained in order to operate efficiently.

Recommended Best Practice

- a) When carrying out controlled atmosphere stunning of poultry the following points should be followed:
 - i) compressed gases should be vaporised before being released into the chamber
 - ii) gas mixtures should be humidified according to the supplier's specifications
 - iii) the concentration of gas in the chamber should be continuously monitored and displayed to ensure that it is appropriate
 - iv) under no circumstances should birds exposed to gas mixtures be allowed to regain consciousness. If necessary, the exposure time to the gas should be extended.
- b) Birds' reactions to induction of insensibility should be assessed.

General Information

Stunning with a mixture of inert gases plus up to 30% carbon dioxide to produce an atmosphere with less than 2% oxygen by volume, has welfare advantages over higher concentrations of carbon dioxide in air.

Indicators of distress in birds during exposure to gas include gasping and wing flapping until the point where they fall over (lose posture).

5.1.4 Automated Neck Cutting of Poultry

Minimum Standard No. 18 – Automated Neck Cutting of Poultry

- (a) All birds must be effectively bled out before they enter the scalding tank.
- (b) The chain must be designed and operated to ensure that all birds enter the guide bars to the automatic cutters in an orderly fashion and that they do not pile up at the entry to the guide bars.
- (c) When automated neck cutters are used there must always be an attendant, stationed before or alongside the bleeding tunnel, responsible for manually cutting the carotid arteries of any birds that were not cut by the automated neck cutter.

General Information

The optimum interval between stunning and neck cutting is determined by 3 factors:

- It should not be so long that it allows the birds to regain consciousness before they die.
- It should be long enough to allow the supervisor or attendant to assess whether the birds are stunned when they leave the water bath.
- The birds should be given sufficient time to allow their necks to relax and thus feed into the guide bars of the automatic neck cutter. On average, the time to neck relaxation after the end of stunning in birds which do not experience cardiac arrest at stunning is 9 seconds in broilers.

In order to consistently cut both carotid arteries and allow a rapid bleeding out, it may be necessary to cut the whole of the ventral aspect of the neck. This may introduce subsequent complications with the removal of parts of the oesophagus and trachea, but those complications have to be managed in a way that does not compromise the humaneness of the killing procedure.

In birds which are not subjected to cardiac arrest at stunning:

- It is not acceptable to sever the jugular veins without cutting the carotid arteries. Cutting the jugular veins does not provide a quick enough kill in every bird to avoid the recovery of consciousness before death occurs.

In addition, severing the jugular veins using a knife inserted through the back of the mouth (beak cut) should only be used in birds that have already developed cardiac arrest.

5.1.5 Hand-held Head-only Stunners for Poultry

Minimum Standard No. 19 – Hand-held Head-only Stunners for Poultry

- (a) Each bird must be presented to the electric stunner in a manner which ensures that current passes through the brain.
- (b) A bird must not experience any electric shocks before stunning.
- (c) Hand-held head-only stunners must be set to deliver at least 340 mA current.
- (d) The current must be applied for 5 seconds or longer, and both carotid arteries must be cut within 10 seconds of the end of stunning.
- (e) The equipment must be fitted with meters that show the voltage and the current under load, and there must be a mechanism which indicates that the current was applied for the required duration.

Recommended Best Practice

Birds should be stunned with a current that results in cardiac arrest.

5.2 Ostriches and Emus

Introduction

Ostriches and emus may be stunned using electrical stunning applied to the head, mechanical percussive stunning including the use of a mushroom-head captive bolt firearm, or a suitable firearm.

Minimum Standard No. 20 – Ostriches and Emus

- (a) Prior to slaughter, birds must be stunned so that they are immediately rendered insensible to pain and must be maintained in that state until death supervenes. This includes a method of stunning that results in immediate insensibility and death.
- (b) While an ostrich is hooded it must be kept under close observation and control to prevent it from injuring itself.
- (c) During mechanical percussive stunning the stunner must be applied to the dorsal aspect of the head behind the line joining the rear of each eye.
- (d) All birds must be effectively bled out. The neck must be cut so that both carotid arteries are completely severed, or a thoracic stick performed, within 1 minute of stunning.
- (e) Wing shackles must not be used for suspending or restraining conscious birds.
- (f) Wing shackles must be fitted with a quick-release mechanism in case of difficulties in holding a bird.
- (g) Leg clamps applied prior to stunning must not result in pain or injury.

Recommended Best Practice

A chest bleeding out (thoracic stick) should be performed after the neck cut.

General Information

Pre-slaughter handling needs to be quiet and calm under reduced light conditions. Handlers need to be aware that these are inquisitive animals likely to explore their surroundings and the people in contact with them. Birds should be kept in view to avoid surprise contact.

It is not necessary to apply severe restraint for the purpose of stunning. If required, an ostrich can be hooded before it is stunned. Upright panels in the shape of a wedge can be used as a restraining device to allow controlled application of the stunning electrodes or gun. The aim with wing shackles is to minimise skin damage during the convulsions that follow stunning and bleeding out.

Once the convulsive movements have finished, the bird should be moved to the bleeding area before the next bird is admitted into the stunning area.

The use of a penetrating captive bolt firearm may cause an excess amount of reflex movement, so a mushroom-head captive bolt firearm is preferred.

Neck breaking is not used as a method of killing (but may be included with other methods). Decapitation is not best practice at commercial slaughter operations due to contamination with proventriculus contents on inversion of the birds. Severance of the carotid arteries ("carotid slice") is sometimes done as an opening cut, but this can also be a problem with proventriculus regurgitation because it opens the oesophagus.

In the case of restraint for homekill:

- a trailer-mounted crate can be used to restrain one bird at a time; or
- a pair of gates can be formed into a forcing yard and the bird can be backed in; or
- a crook can be used to catch the neck to hold the head against a firm stunning surface; or
- the operator can hold the beak in one hand and shoot the bird with a mushroom-head captive bolt firearm.

Part 6: Aquatic Species

6.1 Farmed and Wild-captured Finfish (including Eels)

Introduction

This part applies to finfish which include eels. Minimum Standard No. 21 applies to farmed finfish, and all wild finfish that are caught and held for killing at a later time (such as in a restaurant). This part does not apply to finfish that are caught and immediately killed.

Minimum Standard No. 21 – Farmed and Wild-captured Finfish (including Eels)

- (a) Fish pumps, brailing equipment, nets and other fish handling equipment must be designed, maintained and used in a manner that minimises harm to the live finfish.
- (b) Where finfish are held in tanks, they must not be overcrowded to the extent that their welfare is compromised.
- (c) Manual concussion must not be used to stun unrestrained finfish.
- (d) Killing methods must result in rapid and irreversible loss of consciousness.
- (e) A person killing finfish using the brain spiking technique must be competent and experienced with the method to ensure that the awl or spike enters the head at the appropriate point.
- (f) Gill arches must not be ripped or severed in unstunned finfish.
- (g) When reversible electrical stunning is used, finfish must be bled by severing the blood vessels in the gill arches or by puncturing the heart before they regain consciousness.
- (h) When emersion is used as a killing method, finfish must be chilled to less than 4°C before they are taken out of the water and then they must be kept at a low temperature.
- (i) Eels must be rendered insensible for the duration of the desliming process or killed before they are deslimed.

General Information

Finfish excluding eels: Farmed and wild-captured finfish can be killed with an appropriate dose of iso-eugenol or other appropriate euthanasing drug, concussion, brain spiking or electrical stunning.

Although electrical stunning can be effective in stunning finfish, it is not always effective in killing them. Electrical currents need to be defined for each species. Electrical stunning is prone to cause bone fracturing, haemorrhaging and blood spotting.

Restraint before manual concussion can be applied by holding a finfish on an appropriate non-slip surface, or by securing the finfish in a funnel or wedge, or by suspending the finfish by one or both of its gill covers.

Brain spiking is an appropriate method of killing restrained finfish. The brain spiking technique should be learnt from an operator who is experienced with the method, as there is an appropriate entry point in the head for the awl or spike. The purpose is to pith the animal by macerating the brainstem.

Carbon dioxide-impregnated water causes distress before the narcotic action takes effect in finfish, so on its own is not a recommended method of stunning. When carbon dioxide-impregnated water is preceded by exposure to registered products containing iso-eugenol, however, it produces a deep anaesthesia in a very calm manner. The finfish can then be lifted from the water and killed by cutting their gills before placing them in ice.

Signs of welfare compromise may include changes in ventilation rate, changes in swimming and other behaviour patterns, and injury.

Eels: Electrical stunning can be an effective method of stunning eels and rendering them insensible prior to killing them. Electrical currents need to be defined for each species. Low current electrical stunning is recommended to prevent bone fracturing, haemorrhaging and blood spotting.

Eels can be stunned with an appropriate dose of iso-eugenol or other appropriate euthanasing drug prior to killing them.

As it is extremely difficult to restrain live eels effectively, manual concussion and brain spiking are not appropriate methods for killing eels.

Currently, successful desliming of eels using salt or similar chemicals requires the eels to be alive during the process but exposes them to a long period of stress (an hour or more) before death ensues. However, NAWAC adheres to the principle that animals should be rendered insensible before any painful or aversive procedure is commenced.

6.2 Crabs, Rock Lobsters (Crayfish) and Freshwater Crayfish (Kōura)

Introduction

Minimum Standard No. 22 applies to both commercially farmed and wild-caught crabs, rock lobsters (crayfish) and freshwater crayfish (Kōura) in seafood processing premises, commercial fishing vessels, seafood shops and restaurants. This part does not apply to crabs, rock lobsters (crayfish) or freshwater crayfish (Kōura) that are caught and immediately killed at the point of capture.

See summary of regulations appended to this Code:

- Regulation 11 – Killing of crabs, rock lobster, crayfish and kōura

Minimum Standard No. 22 – Crabs, Rock Lobsters (Crayfish) and Freshwater Crayfish (Kōura)

- (a) Crabs and rock lobsters (crayfish) held in a tank containing water must be supplied with natural or artificial seawater that is fresh, filtered and aerated.
- (b) Freshwater crayfish (Kōura) held in a tank containing water must be supplied with natural water that is fresh, filtered and aerated.
- (c) Where crabs, rock lobsters and crayfish are held in tanks, they must not be overcrowded to the extent that their welfare is compromised.
- (d) A person carrying out slaughter must be competent and experienced in the slaughter technique.
- (e) Crabs, rock lobsters and crayfish must either:
 - i) have been chilled to 4°C or less at the time they are killed; or
 - ii) have been electrically stunned before they are killed; or
 - iii) be otherwise insensible before they are killed.

Recommended Best Practice

The optimum water temperature range for displaying crabs, rock lobsters (crayfish) and freshwater crayfish (Kōura) is between 10 and 14°C.

General Information

Crustaceans are cold-blooded animals. When their temperature is reduced (4°C or less) their activity slows and eventually they become insensible. Live crustaceans that are reduced in temperature until no movement occurs on handling can then be further processed.

Other methods of inducing insensibility include electrical stunning and the use of anaesthetic agents (in accordance with the manufacturer's instructions).

Signs of insensibility vary from species to species but generally include the following:

- no resistance to handling (for example, the crustacean's abdomen or tail can be easily extended or manipulated, and the outer mouthparts can be moved without resistance)
- no control of limb movement
- no eye reactions when the shell is tapped
- no reaction when touched around the mouthparts
- loss of equilibrium indicated by the inability of the animal to exhibit righting movements when placed on one side.

Signs of stress in crustaceans may include thrashing and the casting off of body parts, such as limbs. This indicates that the animal has not been rendered insensible.

Once crustaceans are judged to be insensible based on the signs listed above, they should be killed as soon as possible to ensure that they do not recover sensibility.

Live crustaceans may be stored in tanks or refrigerated in chillers or cabinets. Signs of welfare compromise in a tank may include changes in vitality, ventilation rate, and physical damage or injury.

Part 7: Slaughter Outside of Slaughter Premises by Homekill Service Providers and Pet Food Operators

Introduction

Those minimum standards in this Code that are relevant apply equally to all animals killed outside of slaughter premises (e.g. on the farm) by a homekill service provider or a pet food operator (hereafter called homekill operators). However, the circumstances for slaughter are likely to vary from site to site and there may be some uncertainty as to when the obligations of the owner or person in charge as defined in the Animal Welfare Act are transferred to the homekill operator.

In being contracted to provide the service, the homekill operator assumes the responsibility and obligations of the person in charge for the stunning and slaughter processes provided for in this Code. Up to the point of slaughter, the owner or person in charge of the animal and, depending on circumstances, the homekill operator are responsible for the welfare of the animals. The homekill operator should give clear directions to the owner or person in charge of the animal, or their employee, regarding the form and degree of restraint of the animals they require before undertaking the stunning and slaughter processes and assuming responsibility for the welfare of the animals. The homekill operator should decline to proceed with the stunning and slaughter processes until their requirements have been met.

See summary of regulations appended to this Code:

- Regulation 8 – Prohibition on killing calves by blunt force to the head.

Minimum Standard No. 23 – Slaughter Outside of Slaughter Premises by Homekill Service Providers and Pet Food Operators

Homekill service providers and pet food operators carrying out commercial slaughter of animals outside of slaughter premises must comply with the following Minimum Standards of this Code:

- Minimum Standard No. 2 (a) to (c)
- Minimum Standard No. 3 (b), (d), (e), (f)
- Minimum Standard No. 4 (a), (b), (c), (d), (f), (g), (ga), (t), (ta), (u), (ua), (v)
- Minimum Standard No. 5 (a), (b), (c), (e), (f), (j)
- Minimum Standard No. 6 (a) to (e)
- Minimum Standard No. 7 (a) to (d)
- Minimum Standard No. 9 (a) to (d)
- Minimum Standard No. 10 (a), (b), (c), (f), (g), (h), (i)
- Minimum Standard No. 14 (e), (g), (l), (m)
- Minimum Standard No. 20 (a) to (g)

Part 8: Quality Assurance Programme

Introduction

To ensure that standards of animal welfare and husbandry are maintained, each slaughter premises will need to implement a quality assurance programme that provides written procedures.

The elements of the quality assurance programme will provide for the minimum standards and, where possible, the recommendations for best practice of this Code.

Such a programme should be based on written specifications of the process, and should be monitored. The programme should include information on action to be taken if the process does not operate according to specification.

Specifications should cover the equipment used, its operation, its maintenance and the effects to be monitored. The quality assurance programme should also specify criteria to be checked, the frequency of inspection and by whom, and action to be taken if faults occur. Such criteria should include verification that handling, stunning and bleeding out procedures are being performed competently.

Operators may find it helpful to adopt or adapt an industry-generic quality assurance programme.

While the quality assurance programme should be based on the general principles of Standard AS/NZ 9001 or similar, it is not essential that the quality assurance programme be certified under the JASANZ (Joint Accreditation Standards for Australia and New Zealand) certification scheme.

Minimum Standard No. 24 – Quality Assurance Programme

- (a) All commercial slaughter premises processing mammals and birds (except those operated by dual operator butchers) must have a fully documented and auditable quality assurance programme that ensures compliance with the minimum standards required by this Code of welfare.
- (b) The documented programme must identify the:
 - i) positions of individual persons who are responsible for carrying out specified tasks; and
 - ii) methods and procedures the owner or operator of the premises will implement to achieve specified tasks; and
 - iii) system and frequency of checks on facilities and equipment; and
 - iv) training, competence and supervision of persons carrying out specified tasks; and
 - v) procedure for recording numbers and circumstances for all animal deaths and injuries prior to slaughter and the corrective actions (if any) taken; and
 - vi) corrective actions that will be taken in the event of non-compliance with the requirements of the programme.
- (c) The documented programme must be independently verified using performance-based audits on at least an annual basis. Corrective actions must be completed as required by the audits.

Schedule I – Interpretation and Definitions

Act

The Animal Welfare Act 1999.

animal

As defined in the Act:

- 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 the 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) above, any animal in the pre-natal, pre-hatched, larval, or other such developmental stage.

available technology

NAWAC takes to mean technologies which are used practically to care for and manage animals, for example, existing chemicals, drugs, instruments, devices and facilities.

bleeding out

The act of causing blood loss sufficient to cause death.

bobby calf

A calf for which milk is its primary source of nutrition and is destined for slaughter before weaning.

brailing equipment

Used to lift fish aboard a catching vessel.

camelids

For the purposes of this Code, means *Lama* species (including alpacas and llamas).

captive bolt firearm

A firearm operated by explosive charge or by compressed air or spring powered, firing a penetrating captive bolt or non-penetrating “mushroom” percussive head.

cardiac arrest

Cessation of effective heart action.

commercial slaughter

The killing of animals to produce animal products where a business transaction takes place or for the purpose of a business, reward or trade.

competent

Proficient in a specific task, as demonstrated by having satisfied the requirements of any relevant qualification or possessing practical skills acquired by experience.

controlled atmosphere stunning

Stunning using a gas or a mixture of gases.

cryptorchid

An animal in which one or both testes have not normally descended from the abdominal cavity to the scrotum, and the colloquial term for short-scrotum males.

dual operator butcher

A retail butcher who operates as a homekill or recreational catch service provider at the same premises or place as the butcher processes or trades in animal product.

electric prodder

A device that is capable of delivering an electric shock to make an animal move.

Does not include electric stunners used to stun an animal immediately prior to slaughter.

emersion

For the purposes of this Code, means removal of a fish from water.

equine

Includes a horse, pony, mule, ass, hinny and donkey.

finfish

Includes all species of finfish of the classes Agnatha, Chondrichthyes and Osteichthyes (this includes eels), at any stage of their life cycle.

firearm

A free-bullet firearm or shotgun.

fish pump

A pump used for transferring fish from one point to another.

foetus

Unborn mammal in the last half of its period of gestation or development.

goad

An object used to make an animal move, but does not include an electric prodder.

good practice

NAWAC takes to mean a standard of care that has a general level of acceptance among knowledgeable practitioners and experts in the field; is based on good sense and sound judgement; is practical and thorough; has robust experiential or scientific foundations; and prevents unreasonable or unnecessary harm to, or promotes the interests of, the animals to which it is applied. Good practice also takes account of the evolution of attitudes about animals and their care.

holding paddock

An area of land used to supplement the lairage available at slaughter premises.

homekill service provider

A person who provides slaughter and/or processing services to animal owners and their employees where the resulting animal products are for the owners' or employees' own consumption.

horned cattle

For the purposes of this Code, means cattle that have not been disbudded, or have not had their horns removed or significantly modified to reduce risk to other animals or handlers.

ill-treat

As defined in the Act: "in relation to an animal, means causing the animal to suffer, by any act or omission, pain or distress that in its kind or degree, or in its object, or in the circumstances in which it is inflicted, is unreasonable or unnecessary."

lairage

Pens for holding animals awaiting slaughter at slaughter premises.

maintenance rations

The amount and quality of food required to maintain an adult animal.

milk lamb

A lamb for which milk is its primary source of nutrition and is destined for slaughter before weaning.

minimum standards

Minimum standards provide the details of specific actions people need to take in order to meet the obligations in the Act. They are identified in the text by a heading, and generally use the word "must" or similar. They are highlighted in boxes within the text.

mustelids

For the purposes of this Code, means ferrets, stoats and weasels.

OIE

World Organisation for Animal Health

owner

As defined in the Act: "in relation to an animal, includes the parent or guardian of a person under the age of 16 years who –

- 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 the Act: "in relation to an animal, includes a person who has an animal in that person's possession or custody, or under that person's care, control, or supervision."

pest

As defined in the Act: "means –

- a) Any animal in a wild state that, subject to subsection (2), the Minister of Conservation declares, by notice in the Gazette, to be a pest for the purposes of this Act:
- b) Any member of the family Mustelidae (except where held under a licence under regulations made under the Wildlife Act 1953):
- c) Any feral cat:
- d) Any feral dog:
- e) Any feral rodent:
- f) Any feral rabbit:
- g) Any feral hare:
- h) Any grass carp:
- i) Any Koi or European carp:
- j) Any silver carp:
- k) Any mosquito fish:
- l) Any animal in a wild state that is a pest or unwanted organism within the meaning of the Biosecurity Act 1993."

pet food operator

A person who slaughters farmed mammals for the purpose of processing them as pet food for trade.

physiological state

Relates to the functioning of the body, its organs and body systems.

poultry

Includes chickens, ducks and turkeys; and, for the purposes of this Code, includes other small birds such as partridges, pheasants, quail, guineafowl and geese.

proventriculus

The elongated glandular stomach of birds.

recommended best practice

NAWAC takes to mean the best practice agreed at a particular time, following consideration of scientific information, accumulated experience and public submissions on this Code. It is usually a higher standard of practice than the minimum standard, except where the minimum standard is best practice. It is a practice that can be varied as new information comes to light. Recommendations for best practice will be particularly appropriate where it is desirable to promote or encourage better care for animals than is provided as a minimum standard.

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

scientific knowledge

NAWAC takes to mean knowledge within animal-based scientific disciplines, especially those that deal with nutritional, environmental, health, behavioural and cognitive/neural functions, which are relevant to understanding the physical, health and behavioural needs of animals. Such knowledge is not haphazard or anecdotal; it is generated by rigorous and systematic application of the scientific method, and the results are objectively and critically reviewed before acceptance.

slaughter

Killing of animals to produce animal products. It may be used interchangeably with “killing”.

slaughter premises

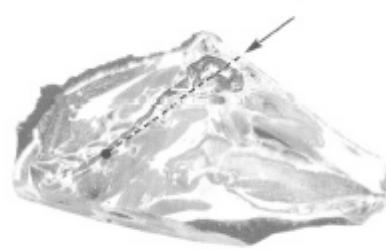
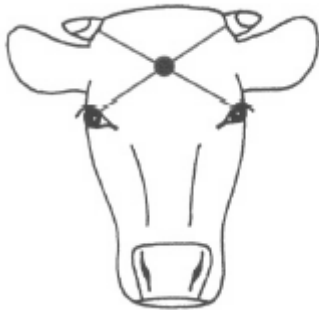
Premises designed and operated for the purpose of, or for purposes that include, slaughtering animals.

stun

Render an animal insensible. Includes the use of reversible methods (e.g. electrical) and irreversible methods (e.g. free bullet firearm).

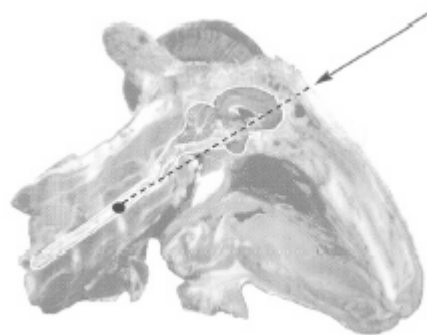
Schedule II – Captive Bolt and Free-bullet Firearm Stunning Sites

Cattle



The optimum position for cattle is at the intersection of two imaginary lines drawn from the rear of the eyes to the opposite horn buds.

Sheep

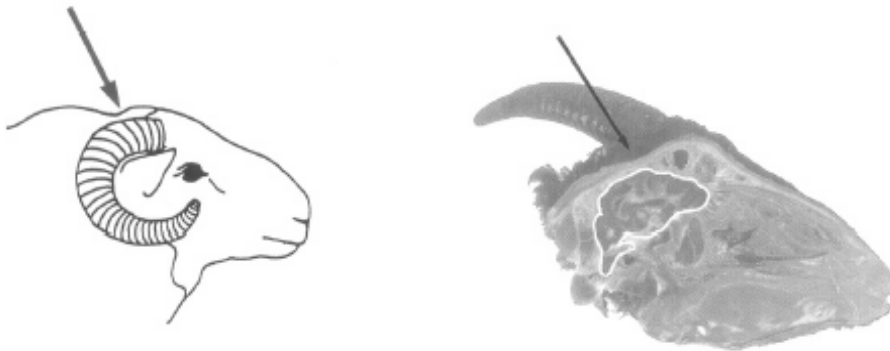


The optimum free-bullet firearm position for hornless sheep and goats is on the midline.



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

Goats



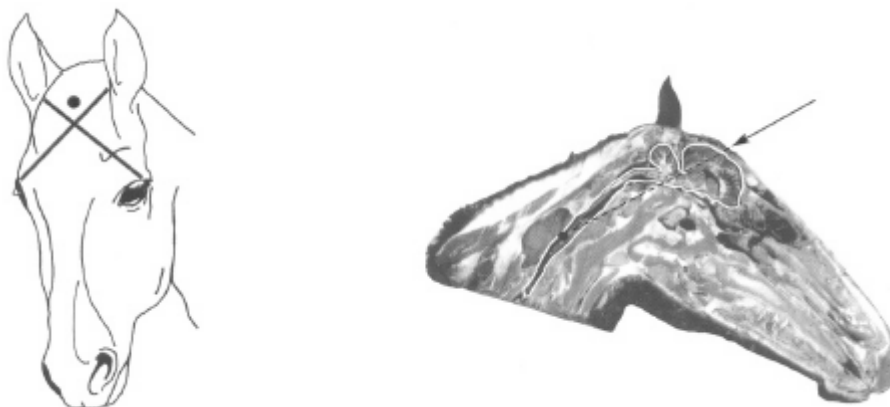
The optimum free-bullet firearm position for heavily horned sheep and horned goats, and for all goats for captive-bolt stunning, is behind the poll, aiming towards the angle of the jaw.

Pigs



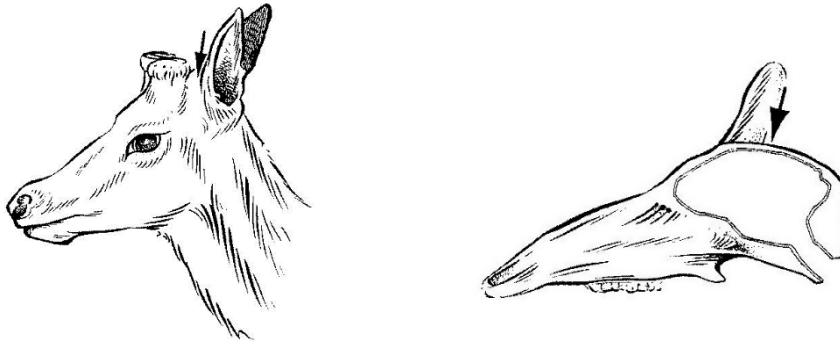
The optimum position for pigs is on the midline just above eye level, with the shot directed down the line of the spinal cord.

Equines



The optimum position for equines is at right angles to the frontal surface, well above the point where imaginary lines from eye to ear cross.

Deer



The optimum position for deer is slightly lateral to the intersection of two lines drawn from the ear to the opposing antler base (or its equivalent position in a female), angled slightly forward.

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

Schedule III – Signs of an Effective Stun in Farmed Mammals

Percussive Stun (Penetrating and Non-Penetrating)

- Immediate collapse
- Tonic (rigid) immobility for 10 – 15 seconds
- Immediate loss of normal rhythmic breathing
- Immediate loss of corneal reflex

Head-Only Electrical Stun

There are three phases to the physical seizures:

- Immediate rigid immobility with either extension or rigid flexion of the front legs, and cessation of respiration and normal reflexes. This phase persists for 15 – 25 seconds.
- Clonic convulsions with uncoordinated kicking or paddling movements, and return of respiration and some reflexes. Possible vocalisation in calves. This phase persists for 20 – 40 seconds.
- If the animal is not slaughtered, signs of the phase of recovery as exhibited by voluntary head righting should not occur before 40 seconds after the stun.

Note:

- Abnormal vocalisation synchronised with respiration can occur following stunning and is not necessarily a sign of consciousness. However, vocalisation may be a sign of ineffective stunning.
- In red deer after head-only electrical stunning, the initial phase of the epileptiform seizure, characterised by rigid immobility and rigid muscle spasm, is present for a very short duration. Vocalisation may often occur at this stage.

Violent kicking movements of all four legs usually occurs for 30 – 45 seconds.

Fallow deer show similar signs to other animals following head-only electrical stunning.

Head-to-Body Electrical Stun

The first two phases of an epileptiform seizure as described for head-only electrical stunning should occur. However, the degree and duration of clonic convulsions in the second phase is often reduced.

Normal cardiac activity will immediately cease. In smaller animals such as sheep, goats and calves, this can be detected by palpation of the lower anterior chest wall. In cattle, pigs and deer, such manual detection of whether or not the heart is beating is more difficult. In these species, a lack of cardiac activity can be assessed by a lack of pulsatile blood flow from the severed arteries.

Note:

- Abnormal vocalisation synchronised with respiration can occur following stunning and is not necessarily a sign of consciousness. However, vocalisation may be a sign of ineffective stunning.
- Intermittent breathing movements and corneal reflexes may occur after the tonic phase in sheep and cattle in the presence of an effective stun.
- When using head-to-body stunning methods, currents designed to cause cardiac dysfunction must not precede the stunning current responsible for causing insensibility.

Appendix of extracts from the Animal Welfare (Care and Procedures) Regulations 2018

Although efforts to include relevant regulations within this Code have been made, there may be other regulations which are relevant to you. The full list of all animal welfare regulations should be consulted where appropriate (see www.legislation.govt.nz).

3 Interpretation

In these regulations, unless the context otherwise requires,—

horse, —

- a) except in regulation 54, means any equid, including any horse, pony or donkey, and any of their hybrids; but
- b) in any case does not include a zebra.

off farm, in relation to a calf, means off the property on which the calf was born or resides

slaughter premises means premises designed and operated for the purpose of, or for purposes that include, slaughtering animals

young calf means a bovine that is up to 14 days of age and has been separated from its mother.

8 Prohibition on killing calves by blunt force to head

- (1) A person must not kill a calf by using blunt force to the head unless—
 - a) the calf is in severe pain or distress and, as a result, requires immediate humane destruction; and
 - b) there is no reasonably practicable alternative to the use of blunt force available.
- (2) A person who fails to comply with this regulation commits an offence and is liable on conviction,—
 - a) in the case of an individual, to a fine not exceeding \$3,000;
 - b) in the case of a body corporate, to a fine not exceeding \$15,000.
- (3) In this regulation,—

blunt force does not include the firing of a firearm (as defined in section 2(1) of the Arms Act 1983)

calf means a bovine that has not had milk (or milk replacer) permanently removed from its diet.

9 Maximum time young calves may be off feed before slaughter

- (1) A person in charge of a young calf being held at slaughter premises for slaughter must ensure that the calf is slaughtered as soon as possible after its arrival at the premises.
- (2) If it is not possible to slaughter a young calf within 24 hours after the calf was last fed on the farm on which it resided, the person in charge of the calf at the slaughter premises must,—
 - a) if the calf is able and willing to feed,—
 - i) ensure that the calf is fed a volume of colostrum, milk, or milk replacer that equates to at least 5% of the calf's body weight no more than 24 hours after the calf was last fed on the farm; and
 - ii) ensure that the calf is slaughtered as soon as possible after it is fed; or
 - b) if the calf is unable or unwilling to feed, humanely euthanise or slaughter the calf without delay.
- (3) A person in charge of a young calf being held at slaughter premises for slaughter must have a system in place that, if followed, will ensure compliance with subclauses (1) and (2).
- (4) A person who fails to comply with subclause (1) or (2) commits an offence and is liable on conviction,—

- a) in the case of an individual, to a fine not exceeding \$5,000;
- b) in the case of a body corporate, to a fine not exceeding \$25,000.

10 Shelter requirements for young calves before transportation and at points of sale or slaughter

- (1) This regulation applies if a young calf—
 - a) is being held at a location before being transported off farm for the purpose of sale or slaughter or as a result of sale (other than the location at which the calf is normally housed on the farm); or
 - b) is being held at a location off farm while awaiting sale or slaughter.
- (2) The owner of, and every person in charge of, the calf must—
 - a) ensure that the calf has access to shelter that—
 - i) is ventilated to the extent that there is no threat to the health or welfare of the calf due to insufficient ventilation; and
 - ii) provides protection from adverse weather, including precipitation and extremes of heat and cold; and
 - iii) enables the calf to stand up and lie down in a natural posture; and
 - b) ensure that faeces and urine do not accumulate in the shelter to an extent that may pose a threat to the health or welfare of the calf.
- (3) A person who fails to comply with this regulation commits an offence and is liable on conviction,—
 - a) in the case of an individual, to a fine not exceeding \$2,000;
 - b) in the case of a body corporate, to a fine not exceeding \$10,000.

11 Killing of crabs, rock lobster, crayfish, and kōura

- (1) A person must not kill for commercial purposes any crab, rock lobster, crayfish, or kōura (freshwater crayfish) that is farmed or caught for commercial purposes unless the animal is insensible before it is killed.
- (2) However, subclause (1) does not apply if a person has captured the animal in a wild state for the purpose of facilitating its imminent destruction.
- (3) A person who fails to comply with this regulation commits an offence and is liable on conviction,—
 - a) in the case of an individual, to a fine not exceeding \$5,000; or
 - b) in the case of a body corporate, to a fine not exceeding \$25,000.

12 Muzzles on dogs

- (1) The owner of, and every person in charge of, a dog that is muzzled must ensure that the muzzle does not—
 - a) cause a cut that bleeds or discharges; or
 - b) cause a skin abrasion that bleeds or discharges; or
 - c) cause a swelling; or
 - d) prevent the dog from breathing normally, panting, drinking, or vomiting.
- (2) However, a muzzle that restricts panting, drinking, or vomiting may be used if—
 - a) the muzzle is used under constant supervision to prevent injury to any human or animal during veterinary treatment or handling; or
 - b) the muzzle is used by—
 - i) an inspector or auxiliary officer while performing or exercising his or her functions, duties, or powers under the Animal Welfare Act 1999; or
 - ii) a dog control officer, dog ranger, or warranted officer performing or exercising his or her functions, duties, or powers under the Dog Control Act 1996; or

- c) the muzzle is used under constant supervision to facilitate handling of the dog for therapeutic purposes, including preventative treatment.
- (3) A person who fails to comply with this regulation commits an offence and is liable on conviction to a fine not exceeding \$900.
- (4) The offence in subclause (3) is an infringement offence with an infringement fee of \$300.

20 Persons must not strike horse on its head

- (1) A person must not strike a horse on its head.
- (2) A person who fails to comply with this regulation commits an offence and is liable on conviction to a fine not exceeding \$1,500.
- (3) The offence in subclause (2) is an infringement offence with an infringement fee of \$500.

35 Requirements for loading and unloading facilities used with young calves

- (1) Subclause (2) applies to a person who is, or will be, the owner of, or a person in charge of, a young calf at a place at which the calf is intended to be—
 - a) loaded onto a stock transport vehicle for transport off farm or from a place of sale for the purpose of sale or slaughter or as a result of sale; or
 - b) unloaded from a stock transport vehicle used to transport the calf off farm or from a place of sale for the purpose of sale or slaughter or as a result of sale.
- (2) A person to whom this subclause applies must provide facilities designed to, or make available other means that,—
 - a) enable the calf to walk onto (if subclause (1)(a) applies) or off (if subclause (1)(b) applies) the stock transport vehicle by its own action; and
 - b) minimise the risk of a calf slipping and injuring itself, falling off the facilities or other means, or becoming otherwise injured or distressed.
- (3) A person in charge of a young calf must take all reasonable and practicable steps to ensure that the calf is not, while the person is in charge of the calf,—
 - a) loaded onto a stock transport vehicle for transport off farm or from a place of sale, for the purpose of sale or slaughter or as a result of sale, otherwise than through the use of the facilities or means referred to in subclause (2); or
 - b) unloaded from a stock transport vehicle used to transport the calf off farm or from a place of sale, for the purpose of sale or slaughter or as a result of sale, other than through the use of such facilities or means.
- (4) In this regulation, **stock transport vehicle** means a vehicle that has a loading height of 90 cm or more from the lowest point of the tyres to the height of the deck or body of the vehicle onto which a calf will be loaded.
- (5) A person who fails to comply with subclause (2) commits an offence and is liable on conviction to a fine not exceeding \$1,500.
- (6) The offence in subclause (5) is an infringement offence with an infringement fee of \$500.
- (7) A person who fails to comply with subclause (3) commits an offence and is liable on conviction,—
 - a) in the case of an individual, to a fine not exceeding \$2,000;
 - b) in the case of a body corporate, to a fine not exceeding \$10,000.

47 Collars and tethers

- (1) The owner of, and every person in charge of, an animal must ensure that any collar or tether on the animal (whether on the neck or on any other part of the animal) does not—

- a) cause a cut that bleeds or discharges; or
 - b) cause a skin abrasion that bleeds or discharges; or
 - c) cause a swelling; or
 - d) prevent the animal from breathing normally, panting, or drinking.
- (2) A person who fails to comply with this regulation commits an offence and is liable on conviction to a fine not exceeding \$900.
- (3) The offence in subclause (2) is an infringement offence with an infringement fee of \$300.

48 Use of electric prodders

- (1) A person must not use an electric prodder on any animal, except—
- a) on cattle that weigh over 150 kg; or
 - b) during loading or unloading for transport, on pigs that weigh over 150 kg; or
 - c) during loading of a stunning pen at any slaughter premises, on pigs that weigh over 150 kg; or
 - d) during loading of a stunning pen at any slaughter premises, on deer of any weight.
- (2) If an electric prodder is used on an animal where permitted by subclause (1),—
- a) the prodder may be used only on the muscled areas of the animal's hindquarters or forequarters; and
 - b) the animal must have sufficient room to move away from the prodder.
- (3) A person who fails to comply with this regulation commits an offence and is liable on conviction to a fine not exceeding,—
- a) in the case of an individual, \$1,500; or
 - b) in the case of a body corporate that has been issued an infringement notice for the offence, \$1,500; or
 - c) in the case of a body corporate that has not been issued an infringement notice for the offence (because proceedings in respect of the infringement offence have been commenced by filing a charging document), \$7,500.
- (4) The offence in subclause (3) is an infringement offence with an infringement fee of \$500.
- (5) In this regulation, **electric prodder**—
- a) means a device that is capable of delivering an electric shock to make an animal move; but
 - b) does not include electric stunners used to stun an animal immediately prior to slaughter.

49 Prodding animals in sensitive areas

- (1) A person must not strike or prod an animal with a goad in the udder, anus, genitals, or eyes.
- (2) A person who fails to comply with this regulation commits an offence and is liable on conviction to a fine not exceeding \$1,500.
- (3) The offence in subclause (2) is an infringement offence with an infringement fee of \$500.
- (4) In this regulation, goad means an object used to make an animal move, but does not include an electric prodder as defined in regulation 48(5).