

6 Humane destruction

Objective

Where it is necessary to destroy livestock, it is done promptly, safely and humanely.

Standards

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| SA6.1 | Humane destruction methods must result in immediate loss of consciousness followed by death while unconscious. |
| SA6.2 | Humane destruction must be carried out: <ul style="list-style-type: none">i) on moribund livestockii) by a competent person or under direct supervision of a competent personiii) using an approved method for the speciesiv) at the first opportunity. |
| SA6.3 | Where a competent person is not immediately available to humanely destroy an animal, a competent person must be contacted to carry out the procedure at the first opportunity. |
| SA6.4 | A person humanely destroying an animal must take reasonable action to confirm the animal is dead and to ensure death. |
| SA6.5 | Firearm use must be in the frontal or poll positions, except for cattle and pigs. |
| SA6.6 | Captive bolt use must be in the frontal or poll positions, be accompanied by appropriate restraint, and be followed by an effective procedure to ensure death. |
| SA6.7 | Blunt trauma to the brain must only be used on specified newborn livestock less than 24 hours old or piglets up to 15 kilograms liveweight, and must be followed by an effective procedure to ensure death. |
| SA6.8 | Animals must be assessed to be unconscious before pithing. |
| SA6.9 | Lethal injection is an approved method for all species but must be performed by a veterinarian or an approved person. |

Note

Points of aim for firearms and captive bolts are shown in a diagram for each species, as relevant.

Guidelines

Humane destruction methods

- GA6.1 Humane destruction should be done with the minimum number of people present, and other distractions should be minimised.
- GA6.2 The animal should be handled carefully and be appropriately restrained so that it is not unnecessarily distressed or alarmed. Where livestock are able to walk, they should be handled in a race or crush.

- GA6.3 Livestock (excluding poultry) should be brain-shot by rifle or captive bolt in the approved positions, according to the species standards.

Note

The primary consideration in humane destruction is to prevent the animal from suffering further pain or distress. Each species and class of livestock has approved methods for humane destruction defined in Part B.

In the context of the transport process, humane destruction is an emergency procedure. Many practical, safety and legal considerations will influence the choice of a humane destruction method. In the context of transport, it is accepted that livestock to be destroyed will be appropriately restrained for close handling. The most prompt, approved method to relieve suffering is recommended.

Observing livestock after humane destruction

- GA6.4 Following use of a humane destruction method, livestock should be monitored for at least three minutes to ensure that death has occurred.

- GA6.5 To determine whether humane destruction has caused death, two or more of the following signs should be observed (the first four signs are usually the most useful:

- loss of consciousness and deliberate movement (this sign alone is not sufficient, as the animal may just be stunned; involuntary movements may occur in a dead animal)
- absence of rhythmic respiratory movements (this sign alone is not sufficient, as there may be temporary respiratory failure)
- absence of corneal ‘blink’ reflex when the eyeball is touched
- maximum dilation of the pupil, nonresponsive to light
- absence of response to painful stimuli (although the withdrawal reflex is not reliable)
- absence of intentional vocalisation (animal may gasp but this should not be in a consistent pattern)
- tongue becomes limp (in some species) and absence of jaw muscle tension (may be difficult to judge)
- absence of heartbeat (requires expertise to detect; heartbeat may persist for some minutes in an animal that is brain dead)
- absence of a pulse (requires expertise to detect, as for heartbeat)
- loss of colour in the mucous membranes, which become pale and mottled
- glazing of the eyes, where the cornea becomes opaque, dry and wrinkled (onset after some time, therefore not immediately useful)
- rigor mortis (onset after several hours, therefore not immediately useful).

- GA6.6 Return of rhythmic breathing, corneal reflex, vocalisation or deliberate movement are the main signs that an animal is only stunned and requires the application of an approved method to ensure death.

- GA6.7 If it is not certain that an animal is dead, then an approved method should be used immediately to ensure death in a rapid and humane manner.

Note

The confirmation of an animal’s death following a humane destruction procedure can be a difficult task to judge, and requires training and experience of species differences in responses. It is important that an animal

is monitored in the three minutes immediately following the humane destruction procedure.

Approved methods and procedures for humane destruction

Note

The following guidelines provide information on the approved methods for humane destruction. Further detail on specific practices and applying methods to particular species is presented in Part B.

Firearms

- GA6.8 Firearms should be regularly cleaned and maintained in optimal working condition.
- GA6.9 To ensure maximum impact and the least possibility of misdirection, projectiles should be fired at the shortest range possible, but not with the barrel in contact with the animal's head.
- GA6.10 Suitable projectiles and propellant charges (loads) for the species and class of livestock and situation should be used to always achieve humane destruction with reasonable personal safety if carried out correctly.

Note

In general, firearms are the most acceptable method of humane destruction for livestock. In transport situations, the distance between the end of the firearm barrel and the animal is expected to be between 10 and 100 cm. The only approved target organ is the brain. There are three effective aiming points at the head: frontal, poll and temporal. These positions are covered in the species standards in Part B. Before firing, the animal's head must be still.

For the frontal method, the firearm or captive bolt should be directed at a point midway across the forehead where two lines from the topside of the base of the ears and top of the eyes intersect (pigs – from the bottom side of the ears to the eyes). The line of fire should be aimed horizontally into the skull towards the centre of the brain or spinal cord.

For the poll method, the animal is shot through the skull just behind the base of the antlers or horns. The line of fire should be in line with the animal's muzzle. Generally, the poll method is preferred for horned livestock, such as goats and sheep.

For the temporal method (firearm only), the animal is shot from the side of the head so that the projectile enters the skull at a point midway between the eye and the base of the ear on the same side of the head. The projectile should be directed horizontally into the skull. This method is an option for adult livestock due to the heavier bone structure of the front of the skull but should be avoided if horn structures interfere with the aim point. A firearms safety consideration is that projectiles may exit the skull.

Firearms energy specifications are as follows:

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

Captive bolt devices

- GA6.11 The captive bolt stunner should be pressed firmly on the head before being discharged, and should be positioned as described in the approved positions for each species of livestock. The temporal position is not an option.
- GA6.12 For penetrating captive bolt stunners, the cartridge power and length of bolt should be appropriate to the species and class of livestock. Non-penetrating captive bolt stunners are not recommended.
- GA6.13 Operators should make sure that charges intended for use are appropriate for the species and class of livestock.
- GA6.14 Captive bolts should be regularly cleaned and maintained in optimal working condition according to the manufacturer's instructions.

Note

Two types of captive bolt stunners powered by an explosive cartridge are available:

- the *concussion stunner* (non-penetrating) has a wide mushroom-shaped head that delivers a blow to the skull, causing unconsciousness
- the *penetrating captive bolt stunner* has a narrow bolt that is driven a short distance into the brain.

Both types of stunner only cause a stun, or loss of consciousness, that may be temporary and not lead to death. The penetrating captive bolt stunner is recommended because it is more reliable at delivering an effective stun in livestock. The concussion stunner is not recommended for destruction of livestock during transport. Captive bolt stunning should be followed by an effective procedure to cause death, such as bleeding out or pithing.

Anaesthetic overdose

- GA6.15 Veterinarians or approved persons should perform anaesthetic overdose as appropriate.

Note

Anaesthetic overdose depresses the central nervous system causing deep anaesthesia, leading to respiratory and cardiac arrest. Many different drugs are available, but only for use by veterinarians. The method is appropriate for all species that can be handled.

Stunning by blunt trauma to the head

- GA6.16 A single, sharp blow should be delivered to the centre of the forehead.

Note

Blunt trauma to the brain using a hammer or other suitable solid, heavy object may be used to render unconscious small and easily controlled piglets (up to 15 kilograms liveweight), or other livestock less than 24 hours old, as permitted in Part B. Blunt trauma must be applied properly to be effective and humane; therefore, the training and skill of the operator is essential. A follow-up procedure, such as bleeding out or pithing, must be used immediately after stunning to ensure death.

Bleeding out (exsanguination)

- GA6.18 Bleeding out of sheep and goats without prestunning using the neck cut should only be done as a last resort by a skilled person using a suitable, sharp knife and adequate restraint of the animal.
- GA6.19 The animal should be monitored to ensure that death has occurred from effective blood loss.

Note

Bleeding out of stunned livestock is a method to cause death. Bleeding out (exsanguination) is performed by cutting the main blood vessels; at the top of the heart via the thoracic inlet (chest stick), in the neck (neck cut) or in other locations. The neck cut is the only method to be used where permitted in conscious livestock.

Pithing

- GA6.20 Pithing should be done to ensure death after stunning, particularly where blood loss is to be avoided.

Note

Pithing is permitted only after an effective stunning method has been used and animals have been assessed to be unconscious.

Pithing is the process of destroying nervous tissue in and around the brainstem to ensure death. Pithing is carried out by inserting a metal or plastic rod through a hole made with a captive bolt pistol in the animal's head. The rod is pushed down through the foramen magnum and into the spinal cord. Pithing can also involve severing the spinal cord between the atlas and axis (the first and second bones of the neck). The pithing process can stimulate violent involuntary movements of the animal's legs and head.

Pithing is not permitted at a registered livestock processing establishment. Any livestock dispatched in this manner must not be used for human consumption.