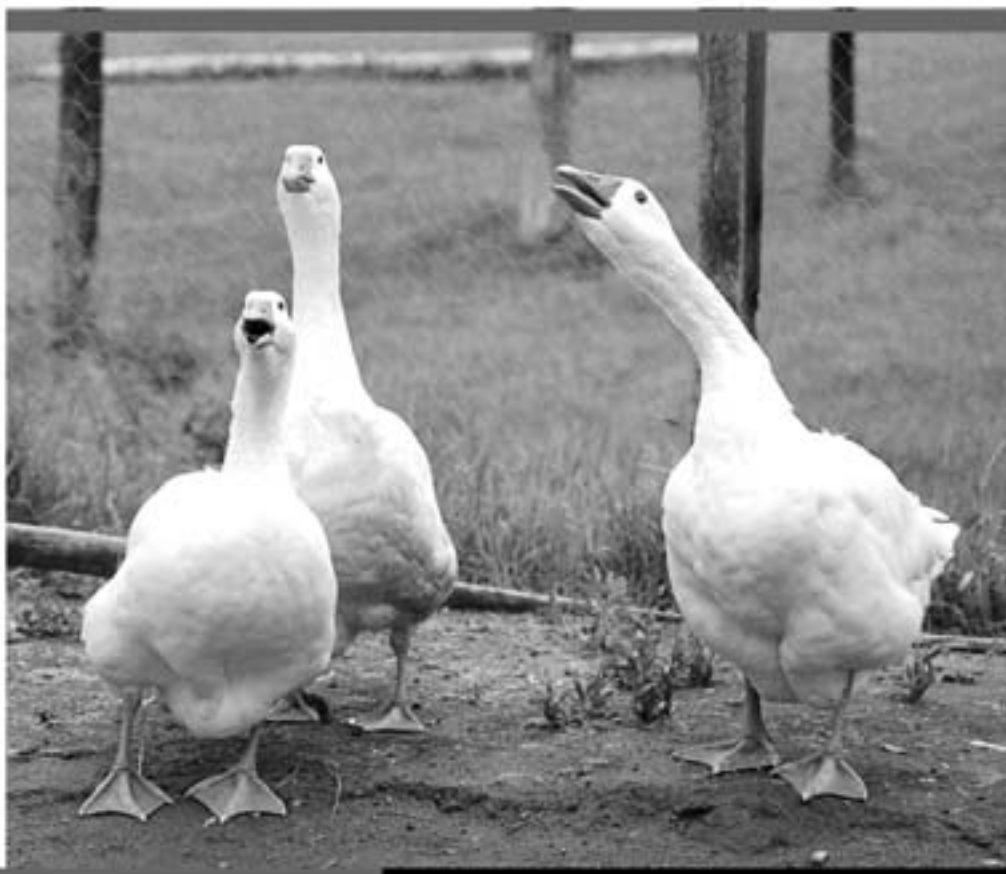


Animal welfare

Guide to on-farm stunning and euthanasia of specialty poultry and barnyard fowl



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INTRODUCTION

This guide to on-farm euthanasia is a practical tool for choosing the euthanasia and stunning methods best suited to your situation. The methods described here comply with the welfare standards for specialty poultry and barnyard fowl in force at the time of drafting. However, feel free to ask an expert, such as your veterinarian, for the required information or training.

Minimum requirement for animal stunning:

- Rapid onset of unconsciousness and insensitivity to pain while minimizing the animal's fear and distress as much as possible.

Minimum requirements for animal euthanasia:

- Least possible perception of pain, fear and distress by the animal, given the context and circumstances.
- Rapid onset of unconsciousness and insensitivity to pain, followed by respiratory, cardiac and brain arrest.

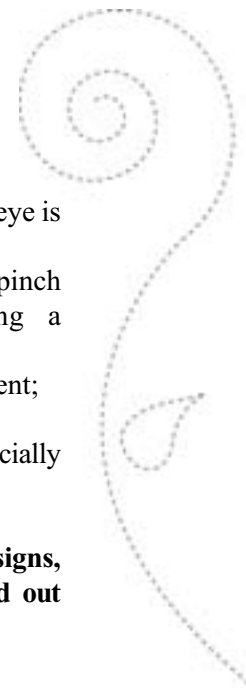
The animal's vital signs must be verified further to euthanasia. An animal euthanized according to the methods described in this guide **will not exhibit the following signs:**

- Alertness;

- Respiration;
- Corneal reflex (blink reflex when the eye is touched);
- Reaction to painful stimuli, e.g. hard pinch delivered to the comb, triggering a physical reaction;
- Erect head or voluntary head movement;
- Vocalization;
- Opening and closing of the beak (especially if gas is used).

Should the animal display any of these signs, euthanasia has not been successfully carried out and must be repeated.

Note: Involuntary movements, such as wing flapping or spastic head bobbing, may occur even when euthanasia is successfully carried out, especially when cervical dislocation is the method used.



STUNNING

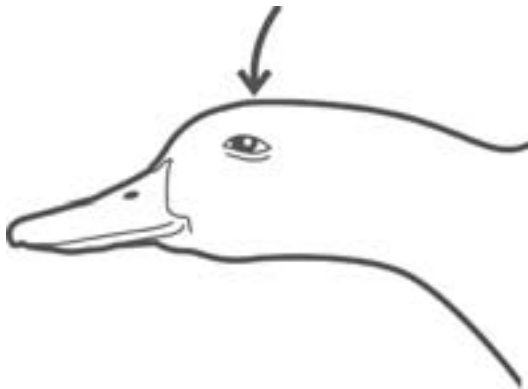
STUNNING INDUCED BY THE ADMINISTRATION OF A BLOW TO THE HEAD

For birds weighing more than 3 kilograms (6.5 pounds), as well as for birds euthanized through decapitation or exsanguination, stunning prior to euthanasia is strongly suggested. The administration of a blow to the head is the on-farm stunning method used for poultry.

Blow to the head with a blunt object

Method

- Immobilize the animal.
- Once the animal is calm and its head is still, deliver a sharp blow to the top of the head using a blunt object such as a stick, perpendicular to the frontal bone, in other words, between the eyes.



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- As soon as the animal is unconscious, carry out euthanasia immediately according to one of the recommended techniques. (See the Table.)

Main points to observe

- Use sufficient force to induce stunning in order to avoid repeating the operation.
- Euthanize the animal quickly after stunning.

Note: *Trying to stun a bird by holding it by the feet and hitting its head against a hard surface is not an acceptable form of stunning.*

EUTHANASIA

EUTHANASIA WITH A CAPTIVE BOLT PISTOL

This form of euthanasia requires use of a penetrating captive bolt pistol. The calibre of the pistol will depend on the type of poultry. Always check the condition of the pistol before firing it. Care must be taken to ensure worker safety when this method is used.

Method

- Immobilize the animal.
- When the bird is calm, hold it by the beak or by the back of the head with two fingers so as not to obstruct its airways. Make sure there is clear access to the posterior part of the skull.
- Position the pistol correctly.



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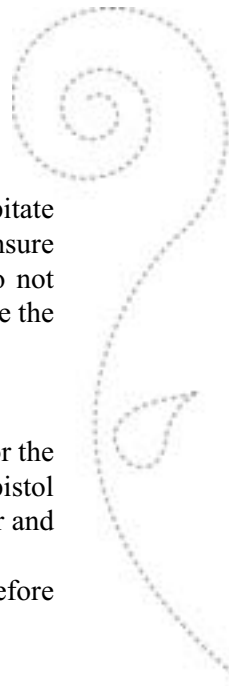
- Fire the pistol.
- By way of precaution, you may decapitate or bleed the animal after shooting to ensure that the subject is dead. However, do not perform this operation in an area where the blood could contaminate live birds.

Main points to observe

- Use the appropriate calibre of pistol for the type of poultry, e.g. for chickens, a pistol with a barrel at least 5 mm in diameter and a bolt 25 mm in length.
- Check the condition of the pistol before using it.
- Position the pistol correctly.
- Clean the pistol after use.

EUTHANASIA BY CERVICAL DISLOCATION

Cervical dislocation without prior stunning may be an appropriate method for birds that weigh less than 3 kilograms (6.5 pounds). For heavier poultry, it is strongly recommended that the bird be stunned before euthanasia is carried out because cervical dislocation on bigger subjects is a more difficult operation.

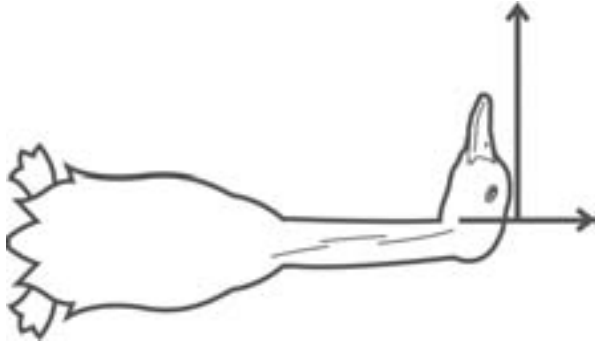


Method

- If the bird weighs more than 3 kilograms (6.5 pounds), stun it beforehand. (See Stunning induced by the administration of a blow to the head.)
- Hold the bird by the shanks to immobilize it by leaning it against your hip, with its wings under your arm, or by placing it on a flat surface with its wings immobilized.



- Quickly pull the bird's head so that its neck is stretched as much as possible, then snap the head sharply to the left or the right. This will cause the vertebrae to separate and the spinal cord to sever.



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- Hold the bird down until all movement stops. Wing flapping and other involuntary muscle contractions usually occur when cervical dislocation is the method of euthanasia.

Main points to observe

- Stretch the animal's neck prior to dislocation.
- The stretching and rotational motion must be quick and smooth.
- Stretch the bird's neck by placing your fingers as close as possible to the head. Never pull at the mid-point of the neck.

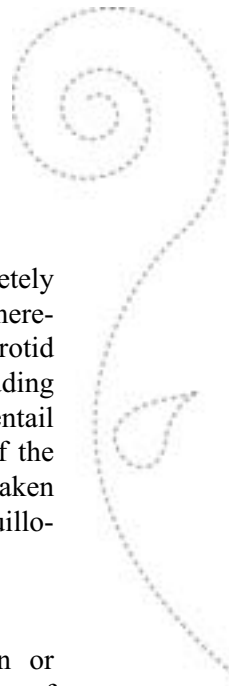
Note: Swinging the bird by the head is not an acceptable method for cervical dislocation.

EUTHANASIA BY DECAPITATION OR EXSANGUINATION

Decapitation consists of quickly and completely cutting the bird's throat in a single motion, whereas exsanguination consists of severing the carotid arteries only, leaving the spinal column, including the spinal cord, intact. These methods may entail certain health risks for other birds because of the extreme blood loss that occurs. Care must be taken to ensure that the workers safely handle the guillotine or knife.

Method

- Before proceeding with decapitation or exsanguination, stun the bird, regardless of its size. (See Stunning induced by the administration of a blow to the head.)
- Place the bird in the guillotine (for decapitation) or containment system, e.g. a cone.
- For decapitation, cut off the bird's head quickly in a single motion, as close as possible to where the head and the neck meet.
- For exsanguination, cut the bird's carotid arteries quickly in a single motion, as close as possible to where the head and the neck meet.





- Immobilize the bird until all movement stops because involuntary muscle contractions may occur.

Main points to observe

- Stun the bird before carrying out decapitation or exsanguination.
- Carry out decapitation or exsanguination quickly in a single motion.
- Decapitate by completely severing the bird's head from its neck.
- Use the right size of equipment.
- Sharpen blades regularly.
- Keep equipment in proper working order.
- Carry out decapitation or exsanguination in a place where live birds cannot become contaminated by the blood.

Note: Decapitation of older or bigger birds may be difficult, so exsanguination should be used instead.

EUTHANASIA OF DAY-OLD CHICKS AND EMBRYONATED EGGS

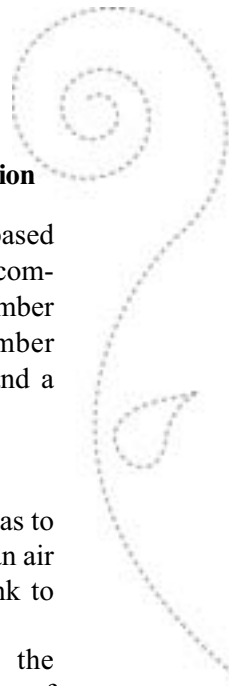
There are two recommended methods for euthanasia of chicks and embryonated eggs. However, mastery of these methods entails great attention to technical detail. We recommend that you talk to an expert about the required precautions.

1) Euthanasia by carbon dioxide (CO₂) inhalation

Euthanasia by carbon dioxide inhalation is based on the anaesthetic properties of the gas. Pure compressed gas is pumped into an airtight chamber designed for euthanasia. Ideally the chamber should be clear or have a viewing window and a monitor indicating gas concentration.

Method

- Make sure the chamber is filled with gas to at least bird-height. (CO₂ is heavier than air and can become stratified, that is, sink to the bottom of the chamber).
- Place the chicks side by side in the chamber or on trays in the case of multi-tiered equipment.
- Keep CO₂ concentrations at 70% or more for at least five minutes. Some other gases, such as argon, or gas mixtures, may also be used.
- Keep concentrations steady for at least one minute after the onset of clinical signs of death.



Main points to observe

- Provide a continuous flow of gas throughout the operation.
- Use recommended gases only.
- Do not pile and crowd the chicks.
- Make sure that the birds display clinical signs of death before they are removed from the chamber.
- Immediately euthanize any chicks that remain alive.
- Use properly calibrated equipment that is in good working order.
- Follow the manufacturer's instructions for cleaning the equipment and carrying out preventive maintenance.

Note: Use of carbon dioxide from a fire extinguisher (carbonic anhydride), dry ice or antacids is unacceptable.

Method

- Ensure steady rotational speed (usually over 5,000 revolutions per minute) by following the manufacturer's instructions.
- Put the chicks in the grinder steadily one after another.

Main points to observe

- To achieve optimal efficiency, take the capacity of the equipment into account and do not overload it.
- Use equipment specifically designed for bird euthanasia.
- Use properly calibrated equipment that is in good working order.
- Follow the manufacturer's instructions for cleaning the equipment and carrying out preventive maintenance.

2) Maceration

Maceration is a standard and very effective form of euthanasia that consists of high-speed grinding of embryonated eggs and chicks 72 hours old or less with multiple rotating blades using equipment specifically designed for that purpose.

UNACCEPTABLE FORMS OF EUTHANASIA

Methods involving any of the following are considered unacceptable:

- Suffocation, e.g. crushing of the windpipe;
- Drowning;
- Contact with an irritant, e.g. bleach;
- Hypothermia;
- Euthanasia without the required stunning.

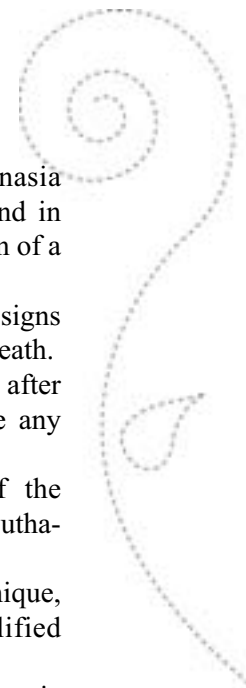
The following three methods are also considered unacceptable:

- Electrocution when not carried out according to standard protocol and with equipment designed for the purpose;
- Euthanasia with hot gas, e.g. gas from a vehicle exhaust pipe;
- Injection of substances unintended for purposes of euthanasia or according to a method unapproved by the manufacturer.

RESPONSIBILITY OF OWNERS AND CUSTODIANS OF ANIMALS TO BE EUTHANIZED

Animal welfare standards are likely to change over time, so, in the long term, acceptable methods of euthanasia may differ from those described in this guide. Ultimately, poultry owners and custodians are responsible for ensuring that the form of euthanasia they employ is acceptable. Here are a few pointers:

- Ideally, learn and practice euthanasia techniques on anaesthetized birds, and in the presence and under the supervision of a qualified person.
- Be capable of assessing a bird's vital signs after euthanasia in order to confirm death.
- Always euthanize a bird immediately after a failed attempt at euthanasia. Make any corrections needed.
- Always check the effectiveness of the techniques used during and after euthanasia.
- Have a periodic spot check for technique, preferably carried out by a qualified person.
- Draft specifications describing euthanasia methods so as to standardize procedure.





SUMMARY OF STUNNING AND EUTHANASIA METHODS FOR SPECIALTY POULTRY AND BARNYARD FOWL, BY BIRD CATEGORY

The following table presents the appropriate methods of stunning and euthanasia described above.

Bird category	Prior stunning	Acceptable euthanasia method	Equipment or material required	Cost	Worker safety
Day-old chicks or ducklings (72 hours old) or less) and embryonated eggs	None	Maceration	Special equipment required	High start-up costs	Low risk if the equipment is used correctly
	None	Gas inhalation (CO ₂)	Special equipment required	Medium to high cost	Appropriate ventilation required
Birds weighing less than 250 g (0.5 lb)	None	Cervical dislocation	No special equipment required	Low cost	Low risk
	Stunning with a blunt object	Decapitation	Guillotine or knife and cone	Low to medium cost	Medium to high risk
Birds weighing from 250 g to 3 kg (0.5 lb to 6.5 lb)	None	Cervical dislocation	No equipment or material required	Low cost	Low risk
	Stunning with a blunt object	Decapitation	Guillotine or knife and cone	Medium cost	Medium to high risk
	None	Captive bolt	Captive bolt pistol	Medium cost	Medium to high risk
Birds weighing more than 3 kg (6.5 lb)	None	Captive bolt	Captive bolt pistol	Medium cost	Medium to high risk
	Stunning with a blunt object	Exsanguination	Knife and cone	Low cost	Medium to high risk


CONCLUSION

Whether you raise birds for pleasure or profit, you have responsibilities regarding their welfare, including proper euthanasia. This is why care must be taken to ensure that death is delivered quickly, effectively and humanely.

This guide, written for people who own or tend specialty poultry or barnyard fowl, is not exhaustive. Please feel free to ask experts, such as your veterinarian, for advice and information about euthanasia, or for the appropriate training.



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