



Emergency Euthanasia Guidelines for Cattle

Severe illness and accidents involving livestock may happen at any time which may require the animal to be humanely destroyed including:

- Injuries in transit
- Severe injuries or illness on the farm, and/or
- Natural, man-made disasters (flood/fires) and road accidents.

It is always best to seek assistance from a veterinarian when considering euthanasia. However, in some circumstances a veterinarian may not be readily available to assist in the evaluation and euthanasia of an animal. The aim of emergency euthanasia to provide a quick and humane death to prevent or minimize suffering.

Emergency euthanasia should be performed when there is an unacceptable delay in treating the animal that would perpetuate or significantly aggravate the condition. If you are in doubt about whether euthanasia is necessary, you should contact a licensed veterinarian.

The 2013 Report of the American Veterinary Medical Association Panel on Euthanasia classifies barbiturate (injectable) euthanasia of ruminants as **acceptable**, and gunshot and penetrating captive bolts as **conditionally acceptable**. Only veterinarians have access to barbiturates.

Penetrating captive bolt and gunshot are the best two options for emergency euthanasia available to non-veterinarians. Regardless of the method chosen, human and animal safety, logistics and verification of death are critical considerations.

Indications for Emergency Euthanasia

- Violent or self-destructive thrashing (the animal is a hazard to itself or others),
- Evidence of severe shock (animal non-responsive to stimuli),
- Abdominal contents or organs are exposed,
- Open fracture a long bone (leg bone below the shoulder or hip), and/or
- Animals with chronic and/or incurable conditions.

Calves and bulls require special consideration in selecting the proper method of euthanasia.

Euthanasia by Gunshot

This should only be performed by individuals well trained in firearm use and safety, with an understanding of ricochet potential. Care must be taken to minimize danger to the operator, bystanders, and/or other animals.

Advantages of a firearm are that it leads to instantaneous death, is inexpensive, and does not require physical contact with the animal.

Death is caused by the direct destruction of the brain, inducing immediate unconsciousness, and permanent destruction of the cardiac and respiratory centers of the brain. Death should be confirmed within five minutes.

Many cities have laws prohibiting the discharge of a firearm within city limits. Be aware of local laws and ordinances.



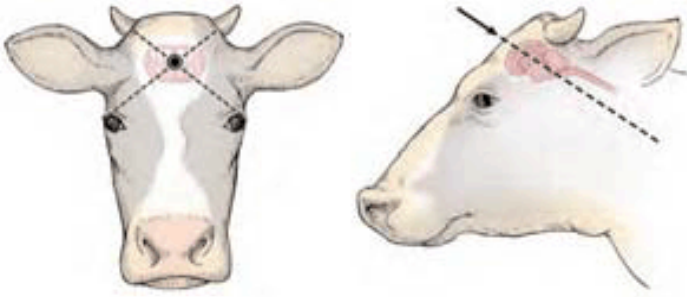
Firearms

- Handguns - Calibers ranging from .32 to .45 fired within 1 to 2 feet are recommended for euthanasia of cattle.
- Rifles - Information indicates that .22 Magnum or larger caliber firearms provide higher muzzle energies and more consistent results when delivered to the proper anatomic site.
- Shotguns - Loaded with birdshot or slugs, they are appropriate from a distance of 1 to 2 yards. Preferred gauges—20, 16, and 12—with number six or larger birdshot or slugs are the best choices for euthanizing cattle.

Ammunition

Solid-point lead bullets are preferable to hollow-point bullets because they are more likely to traverse the skull.

Placement and Aim*



*Diagram - Anatomical Landmarks, Iowa State University College of Veterinary Medicine, Veterinary Diagnostic and Production Animal Medicine

Diagram shows the anatomic site for gunshot or placement of a captive bolt and desired path of the projectile in cattle. The point of entry of the projectile should be at the intersection of two imaginary lines, each drawn from the **outside corner of the eye to the center of the base of the opposite horn**, or equivalent position in polled animals.

Euthanasia by Captive Bolt

As with a gunshot, the penetrating captive bolt kills by physical destruction of the brain. A penetrating captive bolt gun can be used for euthanasia but must not be used as the sole method and **must be followed** with a secondary method such as exsanguination.

Placement and aim are the same as for a gunshot, except that the captive bolt gun must be firmly placed perpendicular against the animal's head at the point of impact. Use of this method eliminates the potential for ricochet. Death should be confirmed within five minutes.

The selection of the cartridge strength must be appropriate for the size of the animal and these vary among manufacturers; therefore, it is important to follow the specific manufacturers' recommendations. To ensure maximum concussive power, routine cleaning and maintenance should be performed. Inadequate gun care can lead to poor performance requiring more than one shot to kill the animal.

Care and caution should be used when handling a captive bolt gun to ensure human and animal safety.

For information and ordering of a captive bolt gun for emergency euthanasia, contact the following manufacturers:

- **Koch Supplies:** (800) 456-5624
- **Hantover:** (800) 821-2227
- **Packers Engineering Equipment Company:** (800) 279-7326

Logistics

When practical, choose a location where the carcass can be easily reached by removal equipment. Remember, livestock should be handled so that no unnecessary pain or suffering is imposed prior to euthanasia.

Confirmation of Death

Immediately following the shot, the animal will collapse and may experience a period of intense muscle contraction (usually no longer than 20 seconds) followed by a period of relaxation and some poorly coordinated kicking or paddling movements. Death can be confirmed by the absence of rhythmic breathing, heartbeat, and corneal reflex (a blink). Touch the cornea to ensure no corneal reflex. The presence of any eye movement or blinking, at this point, should be viewed as evidence of sustained or recovering brain activity and should be dealt with by a repeat shot.



Disclaimer: The California Department of Food and Agriculture (CDFA) does not intend the release of these guidelines to affect the legal issue of criminal responsibility in any way.

CDFA Animal Health Branch
Headquarters - (916) 900-5002
Redding District - (530) 225-2140
Modesto District - (209) 491-9350
Tulare District - (559) 685-3500
Ontario District - (909) 947-4462
USDA-APHIS-VS (916) 854-3950 or (877) 741-3690

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