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## Guidelines for the Emergency Euthanasia of Cattle

The following information provided courtesy of California Department of Agriculture.

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### Introduction

Catastrophic illness and accidents involving livestock can happen at any time. This may require that an animal be humanely destroyed. The purpose of these guidelines is to suggest how that may be done as humanely as possible. It is always best to seek assistance from a veterinarian when considering euthanasia. However, in some circumstances a veterinarian may not be available. If a veterinarian is not available to assist in the evaluation and euthanasia of an animal, this responsibility will fall on those present. It will be in the animals' best interest to provide a swift and humane death to prevent or minimize suffering. These guidelines are a summary of the current, best known practices for providing a humane death to cattle, in the absence of a veterinarian. Situations that may require emergency euthanasia:

- road accident
- injuries in transit
- injuries in sales yard or at packing plants
- severe injuries or disease on the farm
- natural or man-made disasters (floods, fires)

Emergency euthanasia should be undertaken when there may be an unacceptable delay in treating the condition, the source of the pain or disease is incurable, or where transportation of the animal would perpetuate or significantly aggravate the condition. There may be times when none of these situations is clearly present. If you are in doubt, you should contact a licensed veterinarian. However, if you are isolated from expert assistance, the following are some examples of incurable conditions that indicate euthanasia may be necessary to avoid or terminate incurable or excessive suffering:

- violent or self destructive thrashing (is the animal a hazard to itself or others?)
- evidence of severe shock
- abdominal contents exposed
- animals with chronic and incurable conditions
- open fracture of a long bone (leg bone below the shoulder or hip)

Penetrating captive bolt gun and gunshot are the only two available methods for emergency euthanasia available to non-veterinarians. The 1993 Report of the American Veterinary Medical Association Panel on Euthanasia classifies barbiturate (injectable) euthanasia of ruminants as acceptable and penetrating captive bolt gun, gunshot, and electrocution as conditionally acceptable. Only veterinarians have access to barbiturates. Regardless of the method chosen, logistics and verification of death are important considerations.

### Euthanasia By Gunshot

This should only be attempted by individuals well trained in firearm safety and who understand the potential for ricochet. Great care must be taken to minimize danger to the operator, the people, and/or other animals. Death is by direct destruction of the brain, inducing immediate unconsciousness, and permanent destruction of the cardiac and respiratory centers of the brain. Advantages of a firearm are that it leads to instantaneous death, is inexpensive, and does not require contact with the animal. Confirmation of death should occur as described in the section titled "Confirmation of Death."

### Firearm

A .22 caliber firearm is sufficient for most cattle. At least a .22 magnum or 9 mm round should be used on large bulls. If in doubt, the use of a larger caliber firearm is recommended. The weapon muzzle should be held 2-10 inches from the intended point of impact.

### Ammunition

The use of a hollow-point or soft nose bullet is recommended to increase tissue destruction and decrease the risk of the bullet passing through the skull (ricochet).

### Placement and Aim

The bullet's entry site should be at the intersection of two imaginary lines drawn from the inside corner of the eye to the point at the top of the opposite ear (or base of the opposite horn). This point is exactly on midline. Bullet entry should be perpendicular (90 degrees) to the skull and aimed down the neck of the animal.

## Logistics

When practical, choose a location where the body 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 should collapse and may experience a period of intense muscle contraction (usually no longer than 20 seconds). This will be followed by a period of relaxation and some poorly coordinated kicking or paddling movements. The pupils of the eyes should be totally dilated. The animal must be checked in 5 minutes to ensure death. Absence of rhythmic breathing, heartbeat, and corneal reflex (a blink) confirm death. To check a corneal reflex, touch the animal's cornea (surface of the eye). There should be no blinking (or eye movement) in response to the touch, if the animal is deceased. 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. Evaluate the placement and aim of your initial shot and adjust as necessary.

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## Guidelines for the Emergency Euthanasia of Equine

### Introduction

In certain emergency situations, there may be a need to euthanize a horse in order to prevent unnecessary pain and suffering from injuries for which there is no treatment that will save the animal's life. In most circumstances, there is adequate time to call a licensed veterinarian to determine if there is a hopeless prognosis for life and to euthanize the horse, if necessary. The following guidelines should be used when considering the need to euthanize a horse for humane reasons:

### Guidelines for Recommending Euthanasia

The following criteria should be considered in evaluating the immediate necessity for euthanasia of the horse to avoid incurable, excessive, and unnecessary suffering:

- Is the condition chronic and incurable? (To be determined only by a licensed veterinarian)
- Does the immediate condition carry a hopeless prognosis for life? Examples include, but are not limited to, open long bone fractures, evisceration with rupture of the bowel, dismemberment.
- Is the horse a hazard to itself or its handlers? Examples include, but are not limited to, uncontrollable struggling/thrashing in traffic or crowded area.
- Will the horse require continuous medication for the relief of pain for the remainder of its life? (To be determined only by a licensed veterinarian)

### Euthanasia Procedures

- Whenever possible, euthanasia of horses should be performed by a licensed veterinarian working under a valid veterinarian/client/patient relationship.
- The prime consideration in selection of a drug for euthanasia purposes should concern the capacity of that drug or combination of drugs to produce painless death. Any method or compound used must conform to the guidelines set forth by the AVMA Panel on Euthanasia (1993 Report of the AVMA Panel on Euthanasia. *Journal of the American Veterinary Medical Association*, Vol. 202, No. 2, January 15, 1993).
- If euthanasia of a horse by an individual other than a licensed veterinarian becomes necessary during certain emergency circumstances, gunshot is the only practical method of euthanasia.
  - a. The decision to euthanize a horse by an individual other than a licensed veterinarian should only be made when the criteria for euthanasia, listed previously have been fulfilled. Items 2 and 3 are the only criteria for euthanasia, which can be determined by anyone other than a licensed veterinarian.
  - b. It should be performed by highly skilled personnel using a firearm appropriate for the situation. Personnel should be experienced in the proper and safe use of firearms and must comply with laws and regulations governing their possession and use.
  - c. Whenever possible, the horse should be properly restrained prior to euthanasia by gunshot. This includes placement of a halter with appropriate length lead rope attached and any other device which will insure the target described below is able to be visualized (e.g.: hobbles).
  - d. The firearm should be aimed so that the projectile enters the (1) brain, head-on approach; Figure (A), or (2) spinal cord, side approach; Figure (B), thus causing instant unconsciousness. The correct site for the head on approach is the intersection of lines drawn from the base of the ear to the center of the orbit of the opposite eye (A). The correct site for the side approach is between the base of the ear and the wing of the atlas (B).