



# SUPPLEMENTAL GUIDELINES 2014



A SAFE, WHOLESOME AND  
HEALTHY BEEF SUPPLY

The following set of BQA Guidelines represent recommendations for selected BQA procedures and are the collaborative efforts of veterinarians, animal scientists, cattle industry leaders, production managers and producers to put forward a consensus opinion for achieving optimal outcomes. When reading these documents , it should be understood that several different applications and techniques exist for the performance of many of these procedures. This set of guidelines is not intended to be exclusive of any one specific technique over another. These guidelines focus on the animal and are aimed to satisfy scientifically valid and feasible approaches to meeting cattle health and welfare needs.

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## **Castration of Cattle**

Castration of beef cattle is performed in many production systems to reduce inter-animal aggression and injuries, improve human safety, and avoid the risk of unwanted pregnancies in the herd. Methods of castration used in beef cattle include surgical removal of the testes, ischaemic methods, and crushing and disruption of the spermatic cord.

Where practical, cattle should be castrated before the age of three months, or at the first available handling opportunity beyond this age. The use of method(s) that promote the well-being and comfort of cattle should be encouraged. It is recommended that all animals not used for breeding purposes be castrated and allowed to heal before ever leaving their farm of origin.

Producers may seek guidance from a veterinarian on the availability and advisability of analgesia or anesthesia for castration of beef cattle, particularly in older animals.

Operators performing castration of beef cattle should be trained and competent in the procedure used, and be able to recognize the signs of complications.

## **Dehorning of Cattle (including disbudding)**

Cattle that are naturally horned are commonly dehorned in order to reduce animal injuries and improve human safety. The selection of polled cattle is an alternative for horn management.

Where practical, cattle should be dehorned while horn development is still at the horn bud stage, or at the first available handling opportunity beyond this age. This is because the procedure involves less tissue trauma.

Methods of dehorning (disbudding) at the horn bud stage include removal of the horn buds with a knife or dehorning spoon, thermal cautery of the horn buds, or the application of chemical paste to cauterize the horn buds.

Producers may seek guidance from a veterinarian on the availability and advisability of analgesia or anesthesia for dehorning of beef cattle, particularly in older animals, where horn development is more advanced.

Operators performing dehorning of cattle should be trained and competent in the procedure, and be able to recognize the signs of complications.

## **Branding of Cattle**

Branding, ear-tagging, ear-notching, tattooing, and radio frequency identification devices (RFID) are methods of identifying cattle. Hot iron or freeze branding may be the only practical method of permanently identifying cattle. If cattle are hot iron or freeze branded, it should be accomplished quickly, expertly and with the proper equipment. BQA guidelines recommend branding on the hip area. Cattle should never be branded on the face or jaw.

Operators performing hot iron or freeze branding procedures may seek the guidance of a veterinarian, and should be trained and competent in the procedure, and be able to recognize the signs of complications.

## **Tail Docking of Beef Cattle**

Tail docking has been performed in beef cattle to prevent tail tip necrosis in confinement operations. Research shows that increasing space per animal and proper bedding are effective means in preventing tail tip necrosis. Therefore it is not recommended for producers to dock the tails of beef cattle.

## Neonatal Dairy Calf Management

### Navel Care

- Navels should be managed as directed by the consulting veterinarian.

### Residue avoidance

- Do not feed medicated milk-replacer or give antibiotics to calves that are sold direct to slaughter without observing appropriate withdrawal times.

### Colostrum/Clostrum Substitute

1. Colostrum feeding has an important influence on the health and well-being of calves. The quality, quantity, and timing of colostrum improves health.
2. Adequate passive immunity is best ensured by allowing the calves to consume at least 4 quarts of good quality colostrum within 12 hours, with the first meal occurring less than 2 hours after birth - this is particularly important since calves' ability to absorb colostrum is reduced 6-8 hours after birth.
3. Supplemental colostrum feeding is required even when calves are allowed to suckle from the cow.
4. Poor hygiene during colostrum collection and storage can result in bacterial contamination and reduced colostrum effectiveness.

### Environment

1. Housing calves individually or in small groups (less than about 7-10 calves) can reduce the transmission of infectious diseases.
2. Calves should be housed in a clean, dry, well-bedded area and these areas should be disinfected between each use.

### Transport/Marketing

1. Calves should be in good physical condition before transporting/marketing.
2. Calves being transported should be fed on arrival.
3. Transport vehicles should be clean, dry, well-bedded, and appropriately-ventilated.
4. NEVER market or transport calves that are sick or non-ambulatory.

### Euthanasia

- Calves that are severely injured, or terminally ill should be humanely euthanized according to the BQA BMP for Euthanasia of Cattle and Calves.

## Euthanasia of Cattle and Calves

Euthanasia should be utilized when an animal's condition is such that additional treatment options will not be effective. In these cases it is the only practical way to prevent unnecessary suffering. To that extent, it is the responsibility of all who own or work with livestock to have the proper equipment and knowledge to conduct this procedure effectively. Euthanasia is a Greek term meaning "good death". In this context, its objectives are met when death is induced which causes a minimum of pain and/or distress to an animal. Avoidance of pain and distress requires that euthanasia techniques cause immediate loss of consciousness followed by cardiac and respiratory arrest that ultimately results in loss of brain function. Persons who perform this task must be technically proficient and have an understanding of the relevant anatomical landmarks and the protocols used for humane euthanasia of animals.

We encourage all individuals involved in performing any euthanasia procedure of cattle or calves to be familiar with the contents and understand the principles of the following educational guidance document for Euthanasia of Cattle and Calves.

### Important Considerations

The loss of productive function due to disease or injury in livestock presents at least two options: slaughter or euthanasia. Slaughter should be considered for animals that are not in severe pain, freely able to stand, and walk, capable of being transported, and free of disease and drug residues that would constitute a public health risk. Euthanasia, death induced by methods that do not cause pain or distress to an animal, is the appropriate choice whenever the above conditions cannot be met.

### Indications for Euthanasia

- Fractures of the legs, hip or spine that are not repairable and result in immobility or inability to stand
- Emergency medical conditions that result in excruciating pain that cannot be relieved by treatment
- Animals that are too weak to be transported due to debilitation from disease or injury
- Paralysis from traumatic injuries or disease that result in immobility
- Disease conditions where no effective treatment is known, prognosis is terminal, or a significant threat to human health is present. For more information refer to: [www.BQA.org](http://www.BQA.org)

### Methods of Euthanasia in Cattle

Acceptable methods for conducting euthanasia in cattle include gunshot and penetrating captive bolt with a secondary step to insure death.

#### Firearms for Conducting Euthanasia in Cattle

Gunshot is the most common method used for on-farm euthanasia of cattle. Effectiveness depends upon selection of the appropriate caliber of firearm, type of bullet or shot/shell, and accuracy of aim.

Animal/Firearm	Handgun	Rifle	Shotgun
<b>Calves</b>	.32 to .45 caliber Solid-point bullet	.22 LR caliber or larger Solid-point bullet	.410 to 12 gauge #4-6 birdshot or slug
<b>Adult</b>	.38 to .45 caliber Solid-point bullet	.22 magnum or higher caliber <sup>1</sup> Solid-point bullet	20 to 12 gauge #4-6 birdshot or slug (within 3 feet)

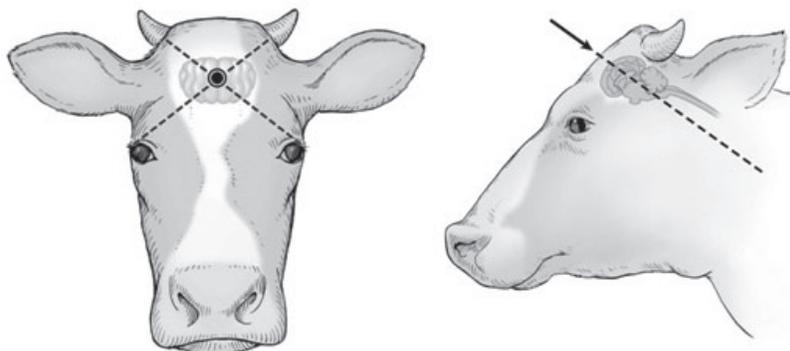
<sup>1</sup>.22 LR is discouraged for use in euthanasia of adult cattle because it lacks sufficient ballistic energy to yield consistent results. Higher caliber rifles should be avoided as bullets may exit the body and place by-standers in danger.

#### Penetrating Captive Bolt for Conducting Euthanasia of Cattle

Captive bolt guns are designed to cause damage to the brain sufficient to cause an immediate loss of consciousness. However, death is not certain in all cases. Therefore use of penetrating captive bolt should be followed with a secondary step to assure death. Methods used to assure death include a second or third shot if necessary, exsanguination (bleeding out), or use of a pithing rod.

## Anatomical Landmarks

Current information for adult cattle and calves indicates that the point of entry of the projectile should be at (or slightly above) 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. If a firearm is used it should be used within 3 feet of the target when possible and positioned so that the muzzle is perpendicular to the skull to avoid ricochet. When using penetrating captive bolt, operators are advised to restrain the head so that the captive bolt may be held flush with the skull.



## Indications of Unconsciousness

When conducting euthanasia procedures one should always observe animals for the following behaviors:

- Animal collapses immediately when shot and makes no attempt to right itself
- Body and muscles become rigid immediately upon collapse followed by relaxation of the body, brief tetanic spasms and eventually uncoordinated hind limb movements
- An absence of vocalization
- An absence of eye reflexes and eyelids remain open facing straight forward
- Immediate and sustained cessation of rhythmic breathing

These signs should be observed and monitored in all animals for which euthanasia procedures have been applied. Animals that attempt to right themselves, vocalize, blink with their eyes or begin rhythmic breathing are likely returning to a conscious state. In these cases one should immediately recheck the anatomical site used and re-shoot or re-apply the captive bolt.

## Confirmation of Death

Criteria to be used for confirmation of death include lack of pulse, breathing, lack of corneal reflex, response to firm toe pinch (as with a hoof tester), failure to detect/hear respiratory sounds or heart beat by use of a stethoscope, graying of the mucous membranes, and rigor mortis. None of these signs alone, with exception of rigor mortis, confirms death. Rechecking of the animal for these parameters after a period of 20 minutes is a very useful method for confirmation of death.

***The document does not cover all situations. When situations arise that are not addressed in the guidelines the well-being of the animal should be evaluated and appropriate actions should be taken. Other acceptable methods may be used by a licensed veterinarian.***



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