



Euthanasia and Animal Disposal

Beneficial Categories



Background

Death is an inevitable part of raising cattle. Some animals may be found dead and other times producers have to make a decision to humanely euthanize an animal because of severe injury or disease. Even at the end of an animal's life, animal welfare is important on farms and ranches. Best management practices include euthanasia and animal disposal, and the method of euthanasia will influence proper disposal.

The National Farm Animal Care Council's [Code of Practice for the Care and Handling of Beef Cattle](#) recommends having a euthanasia decision-making process that includes consultation with a veterinarian and providing appropriate training to all applicable personnel. Once euthanasia has been deemed necessary, it must be performed in a way that minimizes the animal's fear and anxiety.

Methods of Euthanasia

When choosing a method of euthanasia, the Codes of Practice list a few considerations:

- Welfare of the animal
- Skill level of the person performing the euthanasia
- Human safety
- Method of carcass disposal
- Potential need to preserve brain tissue for diagnostic purposes

There are three main options available for appropriate on-farm euthanasia. Each method has advantages and disadvantages laid out in the table below.

	Procedure	Suitable for	Human Safety Considerations	Animal Welfare Rating	Skills Required	Cost	Additional Considerations
Overdose of	Intravenous administration	All weight and age	Restrain the animal	Excellent rating	Can only be administered	Veterinary fee	Carcass disposal options are limited

an anesthetic	of an anesthetic	classes			by a licensed veterinarian		
Use of penetrating captive bolt	Penetration of the skull and brain by captive bolt followed by a secondary procedure to ensure death	All weight and age classes	Restrain the animal and be cautious of possible falling or thrashing	Good rating when performed correctly	Ability to use a captive bolt pistol correctly and safely	Initial purchase of a captive bolt pistol and ongoing purchase of cartridges as required	Requires a secondary procedure to ensure death such as bleeding out or pithing. Results in a large amount of blood (if bled out).
Gunshot	Penetration of the skull and brain by a .22 magnum caliber or higher	All weight and age classes	Restrain the animal and be cautious of them falling or thrashing. Use extreme caution for bullet ricochet.	Good rating when performed correctly	Ability to use a firearm correctly and safely	Initial purchase of a firearm and ongoing purchase of bullets as required	Requires a possession and acquisition license (PAL) to purchase a firearm and bullets. Local bylaws may prohibit firearm use depending on location.

Table adapted from Government of Ontario – On-Farm Euthanasia of Cattle and Calves

Target Site and Penetration Angle for Gunshot and Penetrating Captive Bolt Options

For both gunshot and penetrating captive bolt methods of euthanasia, the same target site and penetration angle is used. The target area is high up on the head, not between the eyes. An imaginary X can be made on the animal's head using lines between the outside corner of the eye to the horn as illustrated below.

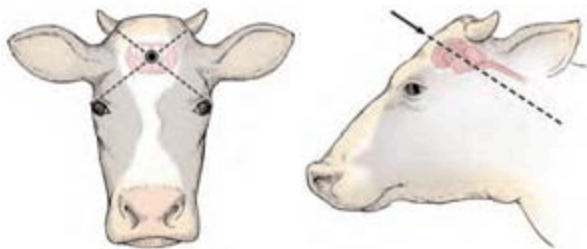


Image available at: <https://vetmed.iastate.edu/vdpam/about/food-supply/dairy/dairy-extension/humane-euthanasia/euthanasia-downloads>. (Accessed February 5, 2023)

Confirmation of death is essential regardless of method used and should be done immediately following euthanasia. The animal should be checked to ensure it is not breathing, has no heartbeat, does not lift its head, and has no corneal reflex (blinking response) when the surface of the eye is touched.

Options for Animal Disposal

Provincial requirements for the disposal of dead livestock vary. Typically disposal is required within 48 hours of death, with exceptions for freezing or waiting for post-mortem analysis. Regulations will also vary depending on the method of disposal. There are a variety of options available for on-farm animal disposal including:

- Collection on-farm for rendering
- Burial in a 1–1.2 metre pit
- Composting

- Rendering

In addition to provincial regulations, there are positives and negatives for each disposal method. Visit the [Beef Cattle Research Council \(BCRC\) website](#) for a good list of pros and cons for the different methods of disposal.

Select your province on the list below to check your local government regulations on disposal of dead livestock.

[Alberta](#)

[British Columbia](#)

[Manitoba](#)

[New Brunswick](#)

[Newfoundland and Labrador](#)

[Nova Scotia](#)

[Ontario](#)

[Prince Edward Island](#)

[Quebec](#)

[Saskatchewan](#)

Potential Economic Costs/Benefits

Using better euthanasia methods and improved methods of animal disposal will not have a direct economic impact on an operation, however, they can improve human and animal welfare. Costs for euthanasia methods are listed in the table above and will vary depending on local prices.

Costs associated with disposal methods will vary depending on the method(s) used and available equipment. Proper disposal is beneficial for:

- Preventing livestock disease transmission to the rest of the herd and potentially wildlife
- Protecting air and water quality in the surrounding area
- Preventing scavenger and predator activity

Financial Incentives

Not applicable.

For more specific information on euthanasia and animal disposal, visit the links below:

[Government of Ontario – On-farm euthanasia of cattle and calves](#)

[Government of Ontario – Deadstock management of farm animals in Ontario](#)

[Government of Alberta – Livestock mortality management](#)

[Code of Practice for the Care and Handling of Beef Cattle](#)

[Beef Cattle Research Council – Disposal of cattle mortalities](#)

[Shearer, J. Euthanasia of cattle: practical considerations and application. 2018. Animals, 8\(4\): 1-17.](#)