

Dairy Cattle Necropsy On the Farm

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One of the foremost concerns of dairy producers is the health of their herd. So when an animal dies unexpectedly, it becomes imperative to know the cause of death in case it affects the rest of the herd. The ideal situation would be to have a veterinarian readily available to perform any and all diagnostic work, including a necropsy if necessary. In reality though, it may be difficult to have a veterinarian available at the optimal time to perform a necropsy, which is immediately after the animal's death. In this case, the producer may be able to do a field necropsy in order to gather information and tissue samples for his veterinarian to evaluate, and assist the producer in the treatment of other animals if needed.

The Dairy Cattle Necropsy Manual is available both on CD or on the internet at: www.cvmb.colostate.edu/ilm/necropsy/_notes/index.html and. Learning to perform a basic necropsy will enable the dairy producer to work more closely with his/her veterinarian for the well-being of the herd. It is not our intention to turn the producer into a veterinarian or diagnostician, but rather to put them in a position to collect samples correctly for a veterinarian to analyze and make a diagnosis. In this insert the biosecurity aspects of on-farm necropsies will be reviewed with emphasis on the need for appropriate cleanliness and disposal arrangements.

Where should I perform a necropsy?

It is important that you keep biosecurity in mind when performing a necropsy. The best place to necropsy an animal is:

- * Away from other animals, food storage areas, and workers on the property.
- * An area that can be easily and thoroughly disinfected.
- * Easily accessible for the rendering truck to enter without having to drive through animal pens or feed areas.
- * Preferably it is a concrete pad, which can be cleaned fairly easily with a good disinfectant. If you have a concrete pad, try to work in an area that is rough. Smooth concrete may pose a safety hazard once it gets wet with water and/or blood.
- * If you do not have access to such a concrete pad, a dirt area would be the next best area. Like the pad, the dirt area should be away from other animals on the property and accessible for the rendering truck. Unlike concrete, the dirt area cannot be easily disinfected. For this reason it is best to have the area in direct sunlight because the heat and light will help kill many pathogens.
- * For both areas it may be beneficial to put up a fence, preferably one that is buried a few feet under ground. This will help to keep out wildlife that may serve as a vector for the spread of disease.

Always be cautious of disease. Not only should you be cautious of passing disease to other animals, but many diseases can also affect humans. Always wear protective clothing (coveralls, boots, gloves, etc.) when doing any necropsy. The use of good hygiene practices will greatly reduce the risk of infection and spread of disease.

Clean hands, coverall, boots, and area before contact with other animals or people.

Types of Disinfectants

There are many disinfectants on the market, so it is important to know what each is active against. It is best to choose one that kills a wide spectrum of microorganisms. For many disinfectants, it is necessary to wash away large amounts of organic material (blood, feces, tissue, etc....) for the chemical to work properly. Be sure that any water used is not able to contact the animal pens or feed areas.

A few examples of disinfectants you may want to utilize are listed below. All of these compounds may cause damage to your skin or eyes and may be fatal if swallowed. Handle these chemicals with care.

Phenolics - General disinfectant. These are active against most bacteria except for spore forming bacteria, such as Anthrax and Clostridium. Some viruses may be sensitive to these compounds.

Alkalis - Examples: Lye, Lime, and Sodium Carbonate. These act against most bacteria as well as spore forming bacteria (i.e. Anthrax, Clostridium) as well as some viruses.

Chlorine compounds -Hypochlorites - Examples: Sodium hypochlorite and Chlorinated lime. These chemicals have a wide antibacterial spectrum, but have little activity against spore forming bacteria and Mycobacterium (eg. the causative agent of Johne's disease). They are active against viruses and protozoa. The activity of the chemical is greatly reduced by organic material and high pH (Alkali environments).

Chloramine -Active against most bacteria including spore forming bacteria and Mycobacterium. Can be used in the presence of a small amount of organic matter.

Quaternary Ammonium -Active against most bacteria, except Mycobacterium. Will also act against some viruses. Activity is greatly reduced by the presence of organic matter.

Chlorhexidine -Active against most bacteria and fungi, but not against spore forming bacteria or viruses. Activity greatly reduced by the presence of organic matter.

Hydrogen peroxide -Active against bacteria, spore forming bacteria and viruses.

Virkon-Active against many viruses, bacteria including some spore forming bacteria such as Clostridium, and fungi.

Tips on Reading a Disinfectant Label

There are many chemicals on the market that claim to be a disinfectant, so it is important to know what to look at on the label to find out if the chemical is the best to use.

1. The first thing you should do is look for an EPA registration number. This shows that the disinfectant has been approved by the Environmental Protection Agency.

2. Check to see if it has been tested with hard water and in 5% plasma. This will tell you if the disinfectant will work on organic material or if you need to thoroughly clean the area prior to use.

3. Check to see what microorganisms the chemical is active against. The best chemicals are active against Pseudomonas, Salmonella, and Staphylococcus. These are usually labeled for hospital use. Those that are labeled for industrial use will also work well.