

CALVING EASE

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Disinfecting to Improve Calf Health: Part 1

Summary:

Too busy to read this newsletter? Then get your basic review on disinfectants from: <http://www.dairyherd.com/dairy-herd/health/Disinfectants-101-121153289.html>. This short 60-second summary by Dr. Daniels hits the highlights on disinfecting.

Make disinfection part of your biosecurity program

The economic justification for “disinfecting” housing and equipment is based on prevention of illness. It is nearly always less expensive to contain or prevent the spread of disease than to treat sick animals. However, buying and using disinfectants can be a poor investment of time and money **IF** their use is not part of a larger livestock biosecurity program. In addition to sanitation to reduce exposure, Dr. Meiring with the Ohio State University Department of Veterinary Preventive Medicine suggests:

- Testing new arrivals for highly contagious diseases such as BVDV
- Culling chronically sick animals
- Isolating sick calves
- Practicing “all-in, all-out” grouping strategies
- Getting a prompt diagnosis of diseases
- Avoiding contamination of feed and water with feces and urine
- Controlling insects, feral animals and birds
- Controlling exposure by visitors, veterinarians, and salespersons

Clean first, then disinfect

As Dr. Daniels very aptly states in her article, “Disinfectants 101,” before you use a disinfectant the organic material has to be removed (for example, manure, bedding, dirt, milk). She says, “You cannot disinfect manure. It is plain and simple. Don’t try it” This equally true for colostrum and milk and their residues on collection, mixing and feeding equipment. [See Internet link above to her article.]

The disinfection resource from the Iowa State Univ. Center for Food Safety and Public Health, “Disinfection 101” starts out their discussion of disinfecting saying, “**thorough cleaning and washing prior to the application of any disinfectant is essential.**” [The Internet link to this resource is <http://www.cfsph.iastate.edu/Disinfection/index.php>.]

Cleaning strategies for calf housing

“Dry” cleaning often involves tearing down pens or moving hutches. Get rid of the accumulated manure. Scrape down to the concrete base. Or, for hutches or pens on a stone or sand base remove a small amount of the base along with the manure. Physically scrape off chunks of manure from pens and gates. Remember that all waterers need to be included in this step as well.

“Wet” cleaning we usually call washing or sanitizing. When done well this step can get rid of nearly 99 percent of our pathogen load. Soaking with water, scrubbing, brushing, scraping all work well in getting rid of all kinds of organic matter.

Using a pressure washer can save a lot of hard scrubbing. Remember not to use this equipment in buildings occupied by calves and heifers. The high-pressure water aerosolizes the manure solids. These solids can contain pathogens. They remain in the air long enough for animals to breathe them in and potentially become infected. If you have a choice of high-pressure washers, choose one that heats the water above 160°. This hot water not only washes pathogens away but also kills many of them.

Always let housing equipment and pens dry before applying the disinfectant. Wet surfaces dilute the disinfectant and lower its effectiveness.

Cleaning strategies for feeding equipment

When done well, washing removes nearly all organic matter and biofilms that reduce the effectiveness of disinfectants. Plus, most of the pathogens will go down the drain with the rinse and wash water. Follow these steps before using a disinfectant:

- **RINSE** - using lukewarm water rinse the equipment to remove manure, urine, dirt, milk, colostrum.
- **WASH** – for water and grain pails brush in a warm chlorinated detergent solution. For colostrum and milk equipment brush in a hot (above 120°F) chlorinated detergent solution.

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