COLD WEATHER CONCERNS ON THE DAIRY

Wintertime in northern Utah presents unique quandaries to dairy producers. It is always a challenge to protect the mammary system when cows are exposed to the climatic elements of extensive cold and wind. Dairy producers are always fully awake, however, when walking to the barn on early winter mornings.

Any time the wind chill ranges between 0 degrees F and minus 25 degrees F, frostbite is a possibility. Below that threshold, frostbite is a certainty, if exposure is prolonged. At wind speeds of five mph or less, temperatures as low as minus 20 degree F can be tolerated. However, temperatures as high as 15 degrees F can be a concern if accompanied by high winds.

Protecting the udder and teats is imperative to assure a cow's longevity in the herd. Damage to the mammary gland, in any form, can be devastating to the usefulness of the dairy cow. Lactating dairy cows that suffer frostbite to teats often end up with mastitis. Treatment of frostbite is usually ineffective in dairy cattle because the injury is rarely noticed before irreparable damage has been done. Avoiding injury is always more economical than treatment. The best recommendations continue to be keeping animals clean, dry and out of the wind. Cold weather calls for copious amount of bedding material.

A common milking routine includes washing teat ends with water or a pre-dip, drying the teats and udder, milking the cow and then applying a post-dip following milking. Teat dips are routinely used to prevent bacterial growth on teat ends, thus reducing the incidence of mastitis in high producing dairy cows. Often, when cows exit the milking parlor following milking, their teats are still wet. Severe cold temperatures, combined with wind, quickly increase the possibility of frostbite. Skin surfaces that are frequently washed or wet are obviously more vulnerable to frostbite than skin that is kept dry.

Local dairymen, who typically house their cows in cold free-stall dairies, frequently consider the question. "Should we continue to use teat dip during severe cold weather?" Some concerned dairymen logically reason that teat dips are not needed during severe cold weather because bacterial growth is inhibited by cooler temperatures and teats not treated with a post-dip will likely be drier when the cows exit the parlor.

Research, however, shows that omitting teat dipping does not assure that teats are completely dry at the end of the milking cycle. There is also ample evidence that contagious mastitis pathogens spread rapidly, even in cold weather. Discontinuing the use of teat dips only creates bigger problems.

The National Mastitis Council offers some cold weather hints. (1) In very cold weather, it may be advisable to dip just the teat end. (2) When teats are dipped, dip only the end and blot off any excess with a single service paper towel. (3) Teats should be dry before turning cows out of the barn. (4) Warming the teat dip reduces drying time. (5) Windbreaks in outside holding areas provide some protection. (6) Fresh cows, with swollen udders are more susceptible to chapping.

I have heard some professionals teach that “barrier” teat dips should not be used during times of extreme cold, because these dips are slow to dry. Dips with over 50 percent emollients have also been slow to dry and often leave teats sticky and wet. “Powder” dips have shown minimal activity against pathogens, but they do dry teats. Use of powder products has been suggested as an alternative during cold weather snaps.

Dr Jeffrey K. Reneau, University of Minnesota, St Paul, also warns of another factor that needs to be carefully monitored. Teat dips that are stored in unheated dairy barns may become frozen. Occasionally containers are even frozen while being transported to the dairy. Freezing and subsequent thawing causes the active ingredients of some teat dip solutions to partially precipitate out of solution. Thus, active ingredients in the lower levels of the storage containers are more concentrated. Without thorough mixing of storage containers, teat-dip solutions in the top of a container may prove to be an ineffective disinfectant while the bottom portion of the container may be so strong that teat irritation occurs.