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Calf Note #24 – The Needle Versus the Shovel

Introduction. We spend a lot of time discussing colostrum feeding programs for newborn dairy calves. There is little question that it is the single most important component of calf raising prior to weaning. In addition, too many calves are fed too little colostrum and, consequently, have too little immunity to face the pathogens in the environment. However, it is also important to closely and critically evaluate the level of sanitation in your calf's environment. For lack of a better term, let's call it "pathogen management".

It is important to remember that the health of a calf is a balance between the immunity in the calf (innate and provided by colostrum) and the exposure of the calf to pathogens in the environment. When a calf is born into a dirty, pathogen-filled environment (the gutter, for example), the chances for survival are reduced, regardless of how good the colostrum feeding program is. On the other hand, when calves are born into a clean environment and are properly housed, fed, and managed, their immune systems will not be overwhelmed by the number of pathogens in the environment. Proper "pathogen management" can markedly reduce the need for dealing with scours and respiratory disease. When there are few disease causing organisms in the environment, calves are much less likely to be exposed and/or develop the disease.

Look at your calving areas. Are they clean and dry? Will the calf's first contact with the outside world be clean bedding or a pile of manure? Are the calf pens or hutches cleaned and sanitized between calves? Important scours-causing pathogens such as *Cryptosporidium*, rotavirus, and *Eimeria* (coccidia) are passed between calves by animal to animal contact or lack of sanitation between animals. Calf handlers are also a source of contamination. When an outbreak of calf scours occurs on a farm, some producers deal with the problem by moving calves to an area previously uninhabited by calves. This "clean" area is usually devoid of pathogens (or contains pathogens at a very low level), thereby breaking the cycle of infection and reinfection.

Disease causing organisms can exist in the environment for varying periods of time. Learn the characteristics of those organisms causing disease on your farm and learn how to fight them when they're still in the environment. Intelligent and careful "pathogen management" can eliminate many problems before they start.

Immunity can only protect a calf so far. You must do the rest. Cows should calve in a clean, dry environment. A well drained, clean pasture is excellent. Otherwise, use a clean, well bedded calving pen. There is a direct correlation between the amount of moisture in a calving area and death loss. That is, the wetter the calving environment, the better the chance of calves developing disease and dying.

At a veterinary meeting in New York, I was told by a wise veterinarian "Remember, you can do more to protect your calves with a shovel than you can with a needle...".

**Written by Dr. Jim Quigley (13 September 1997).
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