

# NORTHWEST VETS NEWSLETTER

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## CALF SCOURS

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Neonatal diarrhea, more commonly known as calf scours, is the leading cause of death in dairy calves in the first month of life. In the hot summer weather calf scours commonly increases and treatment of scours often is even more difficult, labor intensive, and costly. That's why prevention of neonatal diarrhea through the implementation of best management practices is crucial.

When it comes to prevention there are two keys for the dairy producer: immunity and exposure. Therefore an effective scours prevention program can be simplified into two areas of focus: maximizing immune function in your calves and minimizing calf exposure to diseases.

Maximizing the immunity of the calf starts with the pregnant cow, with the dry period being important time to think about scours protection. An effective, broad-spectrum, scours vaccination program will help ensure high levels of antibodies be available in colostrum for the calf.

When the calf is born, getting the right amount of high-quality colostrum within the right amount of time is the most critical step in your scours prevention program.

The following colostrum management tips help maximize immunity:

- **Quantity** – a 90-lb dairy calf should be fed one gallon of colostrum as soon as possible after birth and another gallon 12 hours later. If the calf will not drink that volume of colostrum, it should be fed with a clean and sanitized tube feeder.
- **Quality** – monitor colostrum quality using a colostrometer, as antibody content can vary greatly from cow to cow. Colostrum quality can be improved significantly by vaccinating the dam prior to calving so that she produces more antibodies against the bacteria and viruses that commonly cause scours. Note that if feeding is delayed or if less colostrum is consumed, the quality of the colostrum is even more critical for the health of the calf.
- **Storage** – colostrum can be stored fresh in the refrigerator for up to 24 hours. In the summer colostrum handling and storage is even more crucial. Heat is the enemy and warm colostrum (80-100 degrees) is a perfect place for coliform bacteria to grow. If you do not prevent the coliform growth your calves are being fed bacteria soup rather than wholesome colostrum

### Ways to prevent growth include:

- Feed colostrum soon after it is harvested from the fresh cow- less than 20 minutes is excellent and ideal. More than one hour is not good as it can allow for three doublings in coliform bacteria counts.

- Rapidly chill the colostrum to at least 60 degrees F as soon as possible. Bacterial counts will double after 20 minutes at cow temperature versus 150 minutes at 60 degrees. Rapid cooling can be done by dividing the colostrum into a number of small containers (2 quarts or less) and refrigerating or by using an ice-water bath. Alternatively, you can take the cold to the bulk colostrum bucket (for example, 5-gallon pail) by dropping clean plastic milk or soft drink containers containing ice into the bucket of warm colostrum. By volume, one part ice to three parts warm colostrum will chill it adequately for at least four hours even on a hot summer day.

- Colostrum can also be frozen (once chilled) for use beyond 24 hours without significant loss of antibodies. An easy way to freeze chilled colostrum is to use self-sealing freezer-weight plastic bags. Fill the gallon-size bags with just one quart of colostrum. Then, when these are frozen laid flat in the freezer they are thin and thaw quickly for future feedings.

- **Nutrition** – feed calves for high performance. The immune system is driven by energy and protein, so if the diet of the calf is deficient in energy or protein, the level of protection from the immune system drops dramatically. Many 20/20 milk replacer fed according to label directions will not meet the calf's nutritional and immune requirements, especially during periods of stress.

- **BVD management** – bovine viral diarrhea can create immunosuppression that opens the door to other infectious agents. Whole herd vaccination against BVD and rapid removal of persistently infected calves from the premises are essential for good herd BVD control.

The second key to preventing scour is minimizing exposure to disease. Viruses, bacteria and protozoal parasites cause infectious diarrhea and are virtually everywhere on the dairy. Essential areas to focus on to minimize exposure to these pathogens include:

- **Maternity pens** – keep maternity areas clean and remove calves immediately from the cow and the calving pen. Both are significant sources of disease for a newborn.

- **Nursing** – do not allow the calf to nurse from its mother – the surface of the cow's teats likely is contaminated and can expose the calf to scours-causing pathogens. Johne's-positive cows also put the calf at risk.

- **Hutches** – place the calf in a dry, clean, individual hutch or pen. In an ideal world this would mean no contact with feces, urine or nasal discharge from other calves, including the last calf to use the hutch/pen.

- **Feeding equipment** – feed calves with clean, properly-stored colostrum in bottles and buckets that have been thoroughly washed, disinfected and dried.

An effective scours prevention program is critical to the success of raising healthy calves, and it's worth the investment in developing and maintaining protocols. Raising calves is not a place to cut corners, as they are the future of your dairy and worth the extra effort in giving them the best protection against scours and other diseases. Take the time with your herd health veterinarian to determine how you can do more to maximize immunity and minimize exposure in order to raise healthier, more productive calves. Northwest Veterinary Associates is excited to announce that we will soon be offering colostrum culturing in addition to our mastitis culturing services.