How to Prevent Scours in Dairy Calves

College of Agriculture, Food and Environment
Cooperative Extension Service

By: Haley B. Reichenbach and Donna Amaral-Phillips, Ph.D.

The term “scours” refers to an all-encompassing word for diarrhea in many different species of animals. Scours is specifically cited as “a case of diarrhea that requires intervention for more than 24 hours,”. Scours can have life threatening effects, commonly in newborn animals. Scours is present in many different livestock industries however; the dairy sector is highly impacted. In 2007, it was reported that 57% of weaning-age dairy calf mortality was caused by scours.

Maintaining satisfactory standards of cleanliness and immunity are two key targets when preventing scours in calves. Common sense dictates that the best way to prevent bacterial or viral infections is to eliminate areas in which bacteria and viruses may thrive and to strengthen the immune defense of the susceptible animal.

Recognizing and Preventing Scours

Early detection is key in preventing death caused by scours. Rectal temperature can help determine the presence of scour-causing bacteria (temperatures exceeding 103° F for more than one day in a row). Reduced milk intake, weakness, or watery and/or bloody stool can indicate the presence of a disease which causes scours.

Colostrum. Calves are born without immunity or the ability to fight off a disease challenge. Calves acquire this immunity, called passive immunity, primarily through consumption of colostrum within the first six hours after birth. The current recommendation for colostrum consumption for Holsteins or other large breeds is 4 quarts given as 2 small bottles fed within this six-hour window. Immunoglobulins present in the colostrum, are used to fight the diarrhea-inducing bacteria that the calf may encounter and antibodies within colostrum will not be absorbed if not ingested soon after birth. Additionally, any vaccination protection injected into the dam pre-partum, will be delivered to the calf via the colostrum. Colostrum quality must be considered as well. A refractometer or colostrometer may be used to ensure this quality.

Health of Dam. Healthy cows rear healthy calves. Maintaining proper nutrition and vaccinations for dams provides the calf with a healthy start. This is simply another way to support the immune system of the calf. “Close-up” areas (a pre-partum area usually consisting of cows who will calve within the next three weeks) should provide adequate space (one cow, one bed), and effective heat abatement (heat stress abatement should begin at 65° F) as overheated cows are correlated with poor colostrum production. Vaccinating dams for protection against scours in their calves should follow vaccine label directions and generally occur 40 to 60 days prior to calving, and again three weeks prior to calving.

Calf Housing. Facility design has a profound impact on calf health. Air-flow resulting from proper ventilation is necessary to remove pathogens from the air. However, housing for calves should be draft-free at the level of the calf but still allowing for air movement. In the winter, calf facilities should have 4 air exchanges per hour. This value increases with age and warmer weather. Additionally, whether you prefer individual or group housing, overcrowding should be avoided. Each animal should have at least 30 square feet of space up to four months of age. This area however, does not include the additional space required for feeding.

General Sanitation. Common sense reminds that pathogens often thrive in unsanitary conditions. Cleaning and sanitizing equipment after every use can prevent the spread of scours. This pertains to calf

pails, bottles, watering pails and any related equipment. Hutches and individual calf pens should be washed and disinfected between calves. Group housing equipment, such as nipples should be replaced at least twice monthly and should be immediately replaced upon a scours outbreak. Bedding should be regularly replaced as well, more often for group housing.

Birthing Area. The first surfaces that the calf will encounter are those within the calving pen. A clean calving pen is vital to the healthy start of the calf. Calving pens that have been infected by manure slurry from many different animals will commonly infect newborn calves, as their gut is very absorptive during these first few hours of life. To maintain a clean calving pen, cows should not be brought into the pen multiple days prior to calving. Decreasing this waiting time will contribute to a cleaner pen.

While scours can often seem inevitable as so many farms are affected, following the aforementioned practices can have a large impact on decreasing incidences. The first step to reducing the impact of scours or any form of infectious disease in the dairy industry is prevention.