Scours: When and how it hits the fan

Courtney Carter for *Progressive Dairy*

When I visit a farm, my favorite question to ask is, "What part of the dairy you are most proud of?" Typically, the answers include some sort of cow performance measurements, such as milk production, pregnancy rates or genomics.

Seldom do I hear, "We really like what we are doing with the calf-heifer program." In fact, when I ask where farmers need to improve their operation, often it will be the calf and heifer area.

Most don't believe they can reach or exceed industry standards but will create their own goals based on their farm's performance. Those who send their calves to calf ranches often rely on the calf ranch to tell them how their calves perform.

Whether you raise your own calves or send them to a ranch, a good measuring stick for the overall performance of your replacement program is: calving at 22 months and at 85% of size and weight of the mature cows in the herd, plus first-lactation milk at 85% of the mature cows.

What I have found in my experiences from working on a calf ranch and talking with dairy industry professionals is that understanding scours symptoms and timing can help a dairy raise healthier calves and reach these numbers. I have also learned that a scours challenge normally includes a breakdown in the management of a certain area combined with a pathogen overload. It usually requires addressing both areas to be successful in overcoming the challenge. It really is a numbers game. When there are more good bugs than bad bugs, you win. When it is the opposite, your calves will struggle. To win the bug game, you need to first understand the problem and then prevent it.

Understand the problem: noninfectious vs infectious scours

Noninfectious scours

Most noninfectious scours relate to nutritional issues, which could include the following:

• *Inconsistent timing or volume of milk at feeding* – Strive to offer the same amount at the same time.

• *Incorrect temperature of milk at feeding or mixing* – Aim for a calf's body temperature, which is 101°F to 105°F.

• *Changes in total solids in milk* – Focus on consistency. Even a half-percent change can result in calves having loose feces.

When dealing with scours, it is always good to double-check nutrition to rule out a problem, especially if you are seeing scouring within all age groups. Nutritional scours can happen at any age of the calf.

You might notice fecal changes across multiple ages at the same time, as the feed tends to impact all calves that were fed inconsistent milk. Often, you will see a very milky-looking stool caused by partially digested milk moving through the calf. The inconsistency can also lead to bloat and create an environment for pathogens to thrive.

Infectious scours

When dealing with infectious scours, there are multiple pathogens that cause problems and, therefore, can seem difficult to manage. One of the best ways to diagnose which pathogen is giving you problems is to consult with your veterinarian and send in fecal samples for pathogen confirmation. Unfortunately, this process will take some investment and time, and the results aren't always definitive or tied to a specific problem.

To help identify pathogens, a calf operation can be proactive by analyzing the age of the scouring calves and the symptoms those calves are displaying. This on-farm analysis can help them decide how to treat those calves, plus the preventative measures to implement to reduce the risk of other calves getting scours.

If you are having issues with scours that are happening when the calves are 2 to 3 days old and the calf is depressed, lacking energy or acting like it is in a coma, then you probably are dealing with *E. coli*. One of the most common diseases in newborn calves, *E. coli* is bacteria, and therefore, antibiotics will work. However, the timing between symptoms and death tends to be very short, so quick action is often needed.

When a farm is dealing with an *E. coli* issue, it is important to check standard operating procedures (SOPs) because bacteria are building up somewhere. A few areas to investigate include:

• *Maternity* – A dirty, wet pen allows bacteria to thrive

• *Colostrum management* – Observe the cleanliness at harvest and timing to chill and reheat to feed.

Continued on back

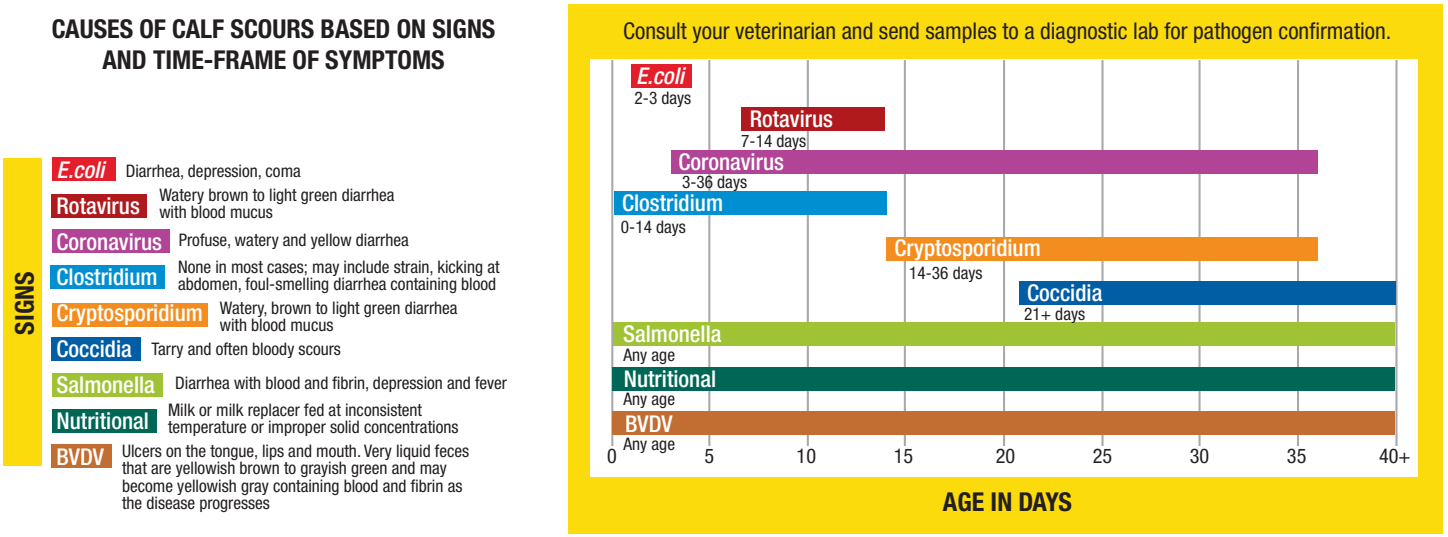

Figure provided by First Defense.

Don't let scours hit the fan – detection is a key to success. This chart outlines the signs and causes of scours based on a calf's age and symptoms. Work with your veterinarian to develop a detection and prevention program that best fits your operation. Visit firstdefensecalfhealth.com/scours-chart to download a copy.

Scours: When and how it hits the fan, cont'd from front

• *Bottles and nipples* – Are these properly cleaned and are old ones rotated out of service?

• *Calf-holding zones* – Is there unnecessary traffic or exposure to these areas?

• *Calf transport* – Is it cleaned and sanitized on a regular basis?

There are two main viruses that can cause scours in baby calves: coronavirus and rotavirus. If you have issues with calves becoming sick at 7 to 14 days old, and the diarrhea is a brown to light green color and has signs of blood, you are probably dealing with rotavirus. If the calves are 3 days old or older and have yellow, watery diarrhea, you are probably dealing with coronavirus.

If these calves do not have a secondary bacterial infection, antibiotics will not help them. The best way to help is to make sure they drink their milk and provide them with electrolytes. These scouring calves need to receive sufficient liquid and electrolytes to replace those lost in the feces.

Prevent the problem

A key step to preventing scours is to provide high-quality colostrum immediately following birth. It provides protective antibodies and helps reduce the risk of calves contracting scours. However, research shows that a good dose of colostrum is often not enough to prevent scours. To help boost the immune system, calf raisers can provide specifically verified colostrum antibodies to calves on their first day of life, in addition to quality colostrum.

Another critical step is keeping things clean. Pathogen exposure happens the moment a calf hits the ground. Clean everything and everywhere the calf will be, including maternity pens, hutches, pens and transport vehicles in between each calf or group of calves. Clean as if you were putting your own baby there.

Also, to help reduce the viral load and potential shedding within the environment, rotate hutches or pens to a different location that didn't just have calves, allowing the area to remain vacant for about two weeks.

It would be nice to only deal with one pathogen at a time; however, this is not usually the case. Most farms struggle with more than one pathogen, making prevention even more critical. To keep these bugs from wreaking havoc, make sure your colostrum management is a priority, give every calf a fighting chance with immediate immune protection, and keep all areas where calves are housed clean and sanitized. These steps will help you win the bug game and reduce both calf mortality and morbidity.

Courtney Carter
Western Region Sales and Marketing Manager
ImmuCell Corporation
ccarter@immucell.com

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