# Dealing with Calf Scours

No matter what time of year, calf diarrhea is a constant challenge to the health and well-being of your calves.

Many talk about "nutritional scours." While there are certainly some situations where milk replacer, feed or a feed change may have a role in diarrhea in calves, by far, the majority of calf diarrhea is caused by infectious organisms such as viruses, bacteria and protozoal parasites. While many types of infectious organisms may play a role in calf scours, these are the most common:

**Bacteria:** While many bacteria in the environment could play a role in calf diarrhea, common bacterial causes of calf scours include *E. coli*, *Salmonella*, and some types of *Clostridia*. Some of these bacteria can also cause early death from blood borne infection (sepsis) or sudden death from toxins they produce.

**Viruses:** Coronavirus and Rotavirus are the two most prevalent viral diseases that cause bacterial scours in calves. Other viruses, such as BVDV, may play a role, but these are the most common primary causes of diarrhea.

**Protozoal parasites:** *Cryptosporidium parvum* is a protozoal parasite that causes severe diarrhea and dehydration in calves Coccidia are another type of parasite that causes bloody diarrhea, usually in calves several weeks to months of age.

**Treatment and Prevention of Scours Caused by Infectious Disease**

One common misconception is that you can tell what type of organism is causing scours by looking at the color, smell and overall appearance of the diarrhea. Unfortunately, this is not an accurate way of finding out what type of organism is causing the problem. If you experience an unexpected outbreak of more than normal scours, it is very important to consult your veterinarian to find out what type of diagnostic testing is indicated to find out what you are dealing with. It is difficult to solve a problem by just treating blindly because this diarrhea "looked like" the diarrhea from the last time without finding out exactly what it is.

**Treating and Preventing Calf Scours**

**Colostrum:** The number one best prevention for scours is making sure that the calf receives an adequate amount of colostrum in a timely manner. Mother Nature makes the best prevention of all.

**Nutrition:** If calves are not fed an adequate amount of calories and the proper balance of nutrients, their immune system does not work well. Many calf disease problems are a result of inadequate nutrition. Consult your nutritionist and veterinarian to make sure you have the best possible feeding program in place.

**Sanitation:** Any treatment/prevention program is doomed to fail if sanitation and good biosecurity practices are overlooked. Breakdowns in sanitation are a very common cause of calf scours.

**Antibiotic therapy:** Treatment with antibiotics may be beneficial if the organism is susceptible to the treatment. Lack of success of treatment with antibiotics does not mean that the medicine does not work, but rather that the organism is not sensitive to that antibiotic at that particular dose and route of administration. Antibiotics work on bacteria and coccidia, but not on *Cryptosporidium* or viruses. Your veterinarian may recommend testing the organism from your calf to see what type of antibiotics might be effective. Antibiotics fed in milk, milk replacer or calf starter may be beneficial as well. Your veterinarian is the best resource to help you determine appropriate antibiotic procedures on your facility.

**Electrolytes:** Treatment with electrolytes often greatly increases a calf's chance of recovering from scours. Diarrhea causes losses of essential salts and water from the calf, resulting in severe imbalances and dehydration that can kill the calf. Animals with severe scours should be treated with a good quality electrolyte to correct those imbalances.

**Vaccines:** Vaccines may be effective in preventing many diseases that cause scours. There are many choices of vaccines out there, and not all may be appropriate for your operation. Vaccines include those given to the cow prior to calving to enhance colostrum, and those given directly to young calves. Consult your veterinarian to find out what is best for your operation.

**Probiotics, Egg Yolk Antibodies and Other Additives**

Probiotics are "good" bacteria that colonize the calf's gut and stop "bad" bacteria from binding and causing disease. Sometimes treatment with antibiotics can remove "good" bacteria too, so it can be very helpful to also give probiotics.

Prebiotics are extracts from yeast or bacteria that contain extracts from beneficial bacteria and fungi. They serve to stimulate growth of "good bacteria" in the gut.

Egg yolk antibodies come from chickens that are specifically vaccinated against calf diseases. The antibodies are fed in the milk replacer and bind up infectious organisms before they can attach to the gut wall and cause disease.

Mannan-oligosaccharides (MOS) and similar types of products bind to bad bacteria in the gut so that they cannot attach and cause disease.

While this is a basic guide of some of the treatment and prevention methods for calf scours, it is by no means everything there is to know. Consult your veterinarian to help develop a comprehensive disease management program for your calves.

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