

## Cryptosporidiosis in Dairy Calves

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Cryptosporidiosis is a disease which causes scours (diarrhea) in dairy calves. Farmers need to catch calves scouring in the early stages, treat these calves with electrolytes, and prevent further outbreaks because diarrhea and the resulting dehydration is one of the leading causes of death among dairy calves.

Cryptosporidiosis is caused by a protozoan (parasite) called Cryptosporidium parvum. The C. parvum lives in an oocyst (egg) which is present in manure excreted from infected calves. It is usually found in calves 3 days to 3 weeks old. It can be passed from animal to animal, such as calf to calf and from animal to human. The calf comes into contact with the C. parvum eggs when it takes in water or food which is contaminated with manure from an infected calf. When the calf eats the egg, it goes to the calf's intestines and buries itself in the intestinal wall, releasing the disease-causing bug. As a result, the calf cannot properly absorb water, nutrients, and electrolytes (minerals such as sodium, potassium, and chloride) from the feed it eats. It then begins losing weight, and if not treated properly, or soon enough, it may die.

Recognizing cryptosporidiosis from other diseases which cause diarrhea is not easy with the naked eye. A fecal sample should be analyzed by a veterinarian to determine if the eggs are C. parvum. Identification of scouring calves should be done as early as possible since a calf can lose a great deal of fluid through its feces in a short amount of time; this can lead to dehydration and possibly death. If a calf is found to have very watery feces, it should be isolated from the other calves immediately. Treatment should begin as soon as possible to replace the lost fluids. This can be done by feeding the calf an electrolyte solution which contains the energy and minerals needed by the calf.

In the past, the recommendation was to take the calf off milk replacer or milk it was receiving for a day or two while giving an electrolyte solution. Now we know that removing the milk is harmful since the energy and protein provided in the milk is needed to help the calf fight the infection. It is now suggested that the amount of milk replacer or milk should remain the same, and, in addition, an electrolyte solution should be fed at around 2 quarts two or three times a day depending on the severity of diarrhea. In general, the amount of fluid lost in the feces should be the amount of electrolyte solution fed to the calf. Fresh water should be available for the calf to drink at all times. It is also important to feed the infected calves last so that eggs in the manure are not picked up on shoes and transferred to the environment of the healthy calves. In addition, all equipment used to feed calves should be cleaned thoroughly. Antibiotics should not be given to calves that have cryptosporidiosis because they do not kill protozoans such as C. parvum. The disease must simply run its course until it eventually goes away. People feeding and caring for calves should wash their hands immediately after feeding calves because humans can get cryptosporidiosis.

In order to prevent calves from getting infected with cryptosporidiosis, it is important to keep their environment as clean and stress free as possible. They should be housed individually to stop the likelihood of contamination. Their hutches or pens should be relatively free of manure and moisture.