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Calf Enteritis (Scours)

Cooperative Extension South Dakota State University

FS 486

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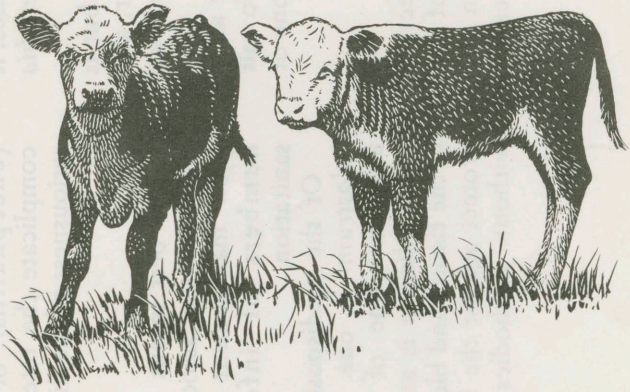

Cooperative Extension Service: South Dakota State University and U. S. Department of Agriculture

Calf Enteritis (Scours)

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Enteritis is an acute, infectious disease of the intestinal tract which is characterized by profuse diarrhea. It is a common condition seen in calves during the first month of life.

Cause and Occurrence

Calf scours is a complex disease and the causes are many and varied. Several different types of bacteria and viruses by themselves, or in conjuction with one another, have been incriminated. In addition to those infectious agents, certain factors such as exposure to extremes of weather, overcrowding, insufficiency of colostrum, improper feeding, specific vitamin deficiencies, and possibly others are of utmost importance.

The most common accepted cause of the disease is the bacteria, *Escherichia coli.* This bacteria is extremely variable and several hundred different strains have been recognized, some of which are normal inhabitants of the digestive tract. Some of the strains are definitely known to be associated with calf scours but most are relatively unimportant in the normal animal. However, even the unimportant strains can produce disease when their numbers become overwhelming or when the animal is weakened by predisposing factors.

Recent research indicates that there are several viruses associated with calf scours. Most of these viruses produce only a mild diarrhea in young calves and usually do not cause death. However, when a calf is infected with one of these viruses, it is more susceptible to infection with *Escherichia coli,* and serious consequences may occur.

Calf scours can occur during any season but is most commonly seen during the fall, winter, and spring calving seasons when there is an abundance of young animals.

Some calves may become infected shortly after birth and others at 4 to 20 days of age. No calf should be considered safe until it is at least one or two months of age.

Spread

The organisms causing this type of infection most commonly enter the animal by way of the mouth and are shed by the sick animal in the manure. Consequently, areas where scouring calves are, or have been, often are heavily contaminated with these germs. The nature of the causal organisms is such that, as they go from calf to calf, they increase in their ability to produce disease. Therefore, as the disease spreads it tends to get more severe.

Symptoms

Symptoms observed in a calf with scours will vary depending on the invasive power and numbers of the infecting organisms and the resistance or healthiness of the calf. Consequently the disease may be extremely acute and calves may die before any symptoms are seen, or it may be more chronic and calves may show a variety of symptoms.

In the acute disease, the calf appears normal until it is suddenly found in a state of shock with cold muzzle, ears and legs. A watery diarrhea may be seen but some calves may die with little or no evidence of scours. Calves may escape this acute type of infection and show evidence of diarrhea for several days. These will pass large quantities of fluid feces, which may be yellowish-brown, greyish-white, green or tinged with blood.

The color of the diarrhea is influenced by the characteristics of the infecting agent and the length the calf has had the disease. A large amount of water is lost from the body because of diarrhea and calves dehydrate and loose weight rapidly. Infection of the lungs (pneumonia), brain (encephalitis) or joints (arthritis) commonly complicate the intestinal infection and add to the seriousness of the disease complex.

Control

The best means of controling calf scours is to eliminate the associated predisposing factors by good management practices and to reduce the numbers of infecting organisms with strict sanitation.

Of the predisposing factors, *an insufficiency of colostrum* is one of the most important. An important line of defense of the animal body against disease is antibodies. These are substances in the tissues and blood stream of the animal which protect against the infecting agent. Calves are born without antibodies in their body. Antibodies,

which the cow has developed by exposure to germs, are secreted into the colostrum and supply the calf from this first milk. They are absorbed into the calf's system through the intestinal tract much in the same way as it absorbs food. However, the calf is unable to absorb this antibody after the first 48 hours of life and if it takes other nourishment before it receives colostrum, it may not be able to absorb antibodies at all. Consequently, it is extremely important that the calf nurse its mother as soon as possible after birth.

One of the most important dietary errors is the *improper feeding of milk to bucket calves.* Often calves are fed large amounts of milk at infrequent intervals. When this is done, much of the milk spills over and enters the wrong portion of the stomach. These misplaced curds are acted upon by bacteria, which are normally present in the digestive tract. The bacteria increase to overwhelming numbers and produce a putrifcation which may lead to scours.

Vitamin A is known as the anti-infection vitamin and calves which have an insufficiency of this vitamin are more prone to intestinal infections. The calf is born with a scant supply of this vitamin; it receives adequate amounts in the colostrum from a well nourished cow. However, it is not unusual for the cow to have an insufficient supply of this vitamin during the winter and early spring. Consequently, the colostrum does not contain enough vitamin A to overcome the deficiency and the calf is more prone to infection. In such instances it may be wise to supplement the cow herd with vitamin A just prior to the calving season.

Exposure to extremes of weather is difficult to control. However, when changes in weather are forecast, take appropriate measures to provide adequate shelter.

The most important factor in controlling calf scours is *sanitation* to prevent the build-up of infecting organisms. This is best done by providing a clean place for the cow to calve and by preventing overcrowding of the herd. Buildings where cows calve or where calves are kept should be thoroughly cleaned and disinfected. If scours has been a problem in a particular building, lot or pasture, it is wise to utilize a different location. A calf scour problem may be stopped by simply moving the herd to a different pasture or by allowing them a larger area in which to browse. Feeding buckets should be cleaned and disinfected daily. Sick animals should be separated from healthy ones to prevent spread of the infecting agent.

Diagnosis

The diagnosis of calf scours is not difficult in cases where diarrhea is present. The difficulty arises in determining the causal agent of the infection. Scours caused by a variety of agents appear similar. The cause should be determined in order to institute proper treatment. Specimens can be submitted for laboratory tests to determine the cause. The organisms causing scours may be resistant to some drugs, and a laboratory test can give an indication of the proper type of medication that should be used. Your veterinarian is familiar with this disease. Ask for his assistance.

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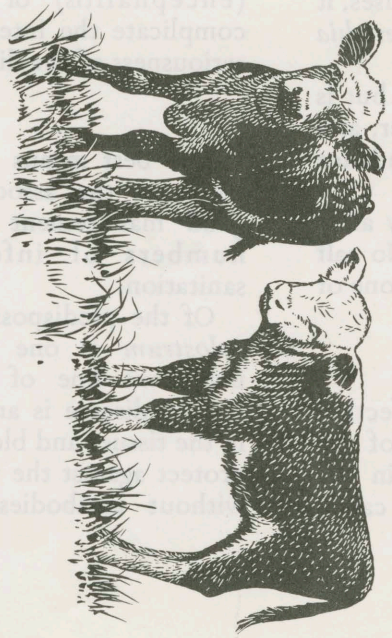

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