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COCCIDIOSIS IN CATTLE

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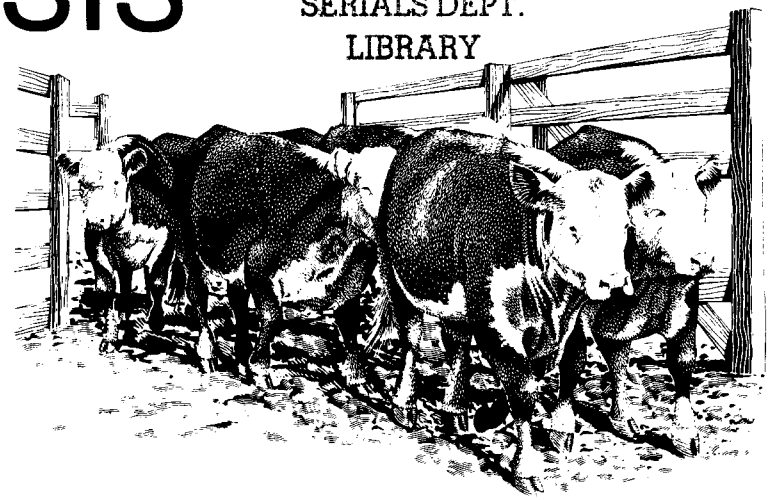

What is Cattle Coccidiosis?

Coccidiosis is an intestinal disease of cattle. It affects mainly young or growing animals, particularly those raised in confinement. Coccidiosis is caused by very small protozoan parasites which have the ability to multiply themselves profusely inside the animal. They damage the intestinal walls during the first two to three weeks of their life cycle, and in the next week they turn into free-living organisms known as **oocysts**. Once excreted in the feces, coccidial **oocysts** are hardy and resistant to a wide range of environmental conditions. Excreted **oocysts** often contaminate water or feed and, if ingested by other animals, start the cycle of infection all over again. Several species of coccidia may affect cattle.

What are the Symptoms of Coccidiosis?

Diarrhea which contains variable amounts of blood (either bright red or at times brown-tarry in color) is a common sign of coccidiosis. Many animals exhibit repeated straining and their rectum may prolapse. Weakness, dehydration and anemia are typical results of the infection. Weight loss or poor gains are noticed consistently. Secondary pneumonia is often a complicating factor. Some animals have signs of encephalitis, usually during the begining of an outbreak of coccidiosis.

Which Factors Influence Outbreaks of Coccidiosis?

Outbreaks of coccidiosis depend on various factors:

The number of infective oocysts ingested. Coccidiosis differs from most other infectious diseases in that the severity of the infection is dependent upon the number of organisms which initiate the infection. The larger the number of oocysts ingested, the greater the likelihood that a susceptible animal will come down with coccidiosis.

The susceptibility of an animal to coccidiosis. The mere fact that oocysts are ingested does not necessarily mean that an outbreak will occur; the animals must be susceptible to the disease. Stress, in the form of fatigue from shipping, weather changes, sudden feed changes, and other factors, predisposes animals to coccidiosis. The first few weeks of confined feeding usually constitute the period of higher susceptibility. Coccidial infections are usually self limiting and subside to a low grade infection in 10 to 14 days. Recovered animals usually have lasting immunity, but they often remain potential "carriers" of the disease. "Carriers" may act as source of infection for other animals.

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Internal parasites. Calves which are infected by worms may be stressed and have a comprised immune system. Clinical outbreaks of coccidiosis tend to be more common and more severe in "wormy" calves.

Treatment of Coccidiosis

Numerous drugs, including sulfonamides (sulfas), antibiotics, and various coccidiostats, are useful in treating animals with coccidiosis. To be effective, treatment must be initiated as early as possible. Many cases of coccidiosis may not be noticed until the life cycle of the parasite is nearly completed and the damage to the intestinal lining has already occurred.

The use of any medication against coccidiosis must be justified by proper diagnosis. In other words, be sure that the problem is indeed coccidiosis. This may be done by either the local veterinarian or the diagnostic laboratory. Approximately one teaspoon of manure from a sick animal, collected in a clean container, is sufficient to perform confirmatory examinations. Postmortem examination of animals suspected of dying from coccidiosis is an excellent way to confirm the presence or absence of the disease.

It is imperative to isolate infected animals, otherwise they will shed organisms into the environment and act as spreaders among other animals.

Prevention of Coccidiosis

It may be easier to discuss prevention of coccidiosis than to implement it. Feedlot conditions in particular often offer ideal circumstances for the spread of this disease.

Prevention and control of coccidiosis depend on efforts to reduce, if not eliminate, the factors which influence outbreaks; number of infective oocysts ingested, and the susceptibility of an individual animal to coccidiosis.

Most outbreaks of coccidiosis occur under overcrowded and/or unsanitary conditions, and all possible efforts should be made to eliminate these environmental factors. Necessary steps must be taken to keep manure out of feed and water. Feeding on the ground often spreads coccidiosis and should definitely be avoided.

Avoidance of stressing factors is essential in any control program. Just as important is to slowly adjust animals to high-concentration rations and avoid sudden or drastic changes in diet.

Several approved medications may be used, either in the feed or water, to inhibit the multiplication of coccidia before the intestinal lining becomes severely damaged. In addition, ionophors (e.g.: monensin, lasolacid) when used according to label instructions are reported helpful in preventing coccidiosis.

Deworming calves has proven effective in reducing the incidence and severity of outbreaks.

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