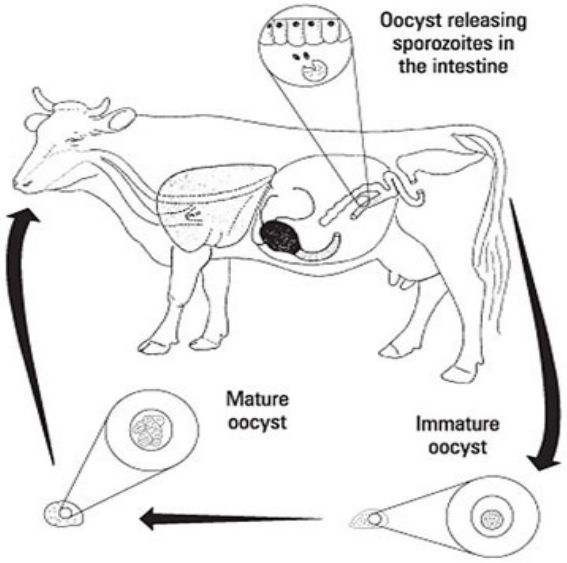
COCCIDIOSIS: CATTLE

Pathology description

Coccidiosis is a common parasitic protozoan disease of cattle, particularly of weaned calves. Bovine *coccidiosis* is seen most frequently in calves that are three weeks to six months of age. Calves become infected when placed on pastures or lots contaminated by older cattle or other infected calves. Mature cattle may become infected when they are brought in from pastures and crowded into feedlots or barns.

At least nine species of *coccidia* occur in cattle, but only two, *Eimeria zuernii* and *Eimeria bovis*, cause severe clinical disease. To a lesser extent, *Eimeria alabamensis* also can cause clinical disease. The prevalence of the different species of *coccidia* can vary considerably between farms, regions, seasons and age groups.

Bovine *coccidia* have in their life cycle stages both within the host animal as well as outside. The developmental stages in the animal give rise to a microscopic egg (called an oocyst), which is passed out in the manure.



Under proper conditions of temperature, moisture and oxygen, the oocyst develops within three to seven days and is now capable of infecting cattle.

Symptoms

Coccidiosis occurs mainly in calves that are three weeks to six months of age and is usually accompanied by *diarrhea* varying in severity from watery manure to one containing blood. Animals affected with *coccidiosis* often strain due to irritation of the lower bowel and rectum. Blood may appear in the manure after the second or third day of *diarrhea*. Dehydration, weight loss, depression, loss of appetite and occasionally death may also be observed.

Infections that fail to produce signs of disease may nevertheless affect the growth and health of an animal by impairing intestinal function and feed conversion. Calves with only a light infection usually show no signs of disease, but shed oocysts in manure, so the oocysts accumulate in pastures, yards, barns or on the hair coats so that severe *coccidiosis* may develop when new calves are placed in these areas.

Vectors

- **Environment**
  Initial exposure takes place when the calves are placed on a site that has been contaminated previously and they ingest oocysts. *Coccidiosis* can be spread between sites by man, animals, flies or wild birds.
- **Material**
  Contaminated equipment.
- **Animal**
  The main source of infection are the calves themselves, which are contaminating their own environment.
- **Feed and drinking water**
  Coccidiosis is spread between calves by the consumption of food or drinking water contaminated by faeces containing the infective stage of the *coccidia*.
- **Working method**
  Poor hygiene, placing calves on pastures infected by older cows, placing calves different ages together, overcrowding.
- **Transport**
  Calves that are transported in contaminated trucks can be easily infected.

➔ MAIN VECTOR: animals

Preventive action

The primary concern in coccidiosis outbreaks is the potential to spread the disease to other susceptible animals in the herd.

- Prevent drinking water and feed from becoming contaminated with manure.
- Heavily parasitized animals should be isolated from the rest of the herd and treated.
- Adequate housing and ventilation should be implemented.
- Feeding practices that avoid fecal contamination of feed must.
- Calves must be grouped by size.
- An "all-in-all-out" method of calf movement from pen to pen.
- Prevent overgrazing. Animals forced to graze down to the roots of plants may eat large numbers of parasites.

Controlling action

There are several anticoccidial drugs available that may be used. Outbreaks of *coccidiosis* in calves and feeder cattle may be handled by mass medication added to either the feed or water. Specific recommendations should be obtained from your veterinarian.

Advised Protocols

For every possible vector, a hygiene protocol must be implemented. See these Specific Purpose Protocol:


GENERAL HYGIENE


PERSONNAL HYGIENE


CALF MANAGEMENT

Source: www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/agdex3455