



Coccidiosis in Cattle

Christine B. Navarre, D.V.M., M.S., School of Animal Sciences, LSU AgCenter

What Is Coccidiosis?

Coccidiosis is a parasitic disease of the intestines caused by microscopic organisms called coccidia. It causes millions of dollars in losses to the cattle industry each year. While more common in confined cattle, it also occurs in pastured cattle.

Cause

Coccidiosis is caused by *Eimeria* species, which are host specific. Each animal species has its own species of coccidia that are pathogenic. Cattle cannot transmit coccidia to sheep, goats, horses or poultry, and vice versa. They are not worms and cannot be treated with standard dewormers.

Transmission

Cattle become infected by ingesting feed, water or pasture that is contaminated with manure containing infective oocysts (eggs). Once inside the gut, coccidia multiply and damage the intestinal lining, then pass out in feces, continuing the cycle. Young animals shed the most oocysts, but older cattle also contribute. Oocysts can survive for years in the environment.

Clinical Disease

Most infected cattle show no signs but still shed oocysts. Disease is most common in young, stressed animals with limited immunity, especially at weaning.

- **Subclinical disease:** poor growth, weight loss, rough hair coat
- **Clinical disease:** diarrhea (mild to bloody and foul-smelling), loss of appetite, dehydration, straining, possible rectal prolapse

Diagnosis

Diagnosis is based on herd history, clinical signs and fecal exams. However, interpreting fecal results is difficult for several reasons including:

- Healthy cattle often shed small numbers of oocysts.
- Negative fecals can occur early or late in disease.
- Pathogenic and nonpathogenic species must be distinguished.

Fecal exams from multiple animals and necropsies of deaths help confirm the problem.

Treatment and Prevention

Anticoccidial drugs slow parasite growth but have little effect once gut damage occurs. Cattle already showing signs often respond poorly, especially if they are too sick to consume medicated feed or water. Supportive care including fluids and treatment of secondary infections may be needed.

If some animals are sick, others are likely incubating the disease. In these cases, anticoccidials may reduce new cases and environmental contamination.

Prevention is more effective than treatment. Subclinical losses and permanent gut damage are costly. Exposure is needed for immunity, but it should be controlled. Key strategies include:

- Reduce stress and other diseases.
- Provide good nutrition.
- Avoid overcrowding.
- Keep feed and water clean.
- Limit grazing near natural water sources.
- Move feeding and mineral sites and use portable shade to prevent manure buildup.
- Avoid overgrazing, wet and muddy conditions.
- Sunlight and drying reduce oocyst survival.

When environmental measures are insufficient, anticoccidials can aid prevention, but should be used sparingly to avoid resistance to the drugs that can come with continuous use. Delivery method (feed, water, bolus), dosing accuracy, stress of handling, effectiveness and cost must all be considered. Some drugs are highly toxic if misused. Consult your veterinarian for a treatment and prevention plan that is suitable for your unique situation.

Selected References

- Merck Veterinary Manual. (2024). "Coccidiosis in Cattle." Retrieved from www.merckvetmanual.com
- Smith, B.P. (2015). Large Animal Internal Medicine (5th ed.). Mosby Elsevier.
- Stokka, G. (2017). Coccidiosis in Beef Calves. North Dakota State University Extension