



PHOTOS BY SHAUNA ROSE HERMEL

Whether mingling children or calves, sharing germs and parasites is a concern.

by *Corinne Blender*

It's that time of year again. Children are rushing off to their first day of classes, anxious to see old friends. Friends, however, might not be the only ones to greet these children this fall.

Parents know that when their children step onto the school bus, toys and secrets will not be the only things they share.

It's true. When children share a classroom, it's nearly inevitable that if one child is carrying a germ, many will follow. The close-knit environment of a classroom is the perfect atmosphere in which to spread infectious diseases and parasites.

As children file into classrooms, producers will be collecting weaned calves for shipping and backgrounding. They, too, will be in the perfect environment for disease and parasite spread.

"When you group cattle, the infection pressure increases," says Mike Sanderson, veterinarian and associate professor of beef production at Kansas State University (K-State), Manhattan. "The closer the cattle are together, the more likely they will be involved in a disease outbreak such as coccidiosis."

Congregating cattle is not the only contributing factor, especially in the fall when coccidiosis is common, Sanderson warns. Typical of the next couple of months, cool, moist conditions increase the risk for coccidiosis to manifest itself and for an outbreak to affect the entire herd.

Coccidiosis is an intracellular protozoan parasite that grows in the cells that line the intestine. As the parasite grows, it eventually ruptures those cells, spilling into the intestine and taking the cells with it. The parasite is then excreted in the feces.

Its effects on gain, immune suppression and possible death loss make it one of the most economically important parasitic diseases of beef cattle.

Measuring losses

"You don't have to lose livestock to lose profits," says Gary Johnson of Dwight, Kan. He backgrounds several hundred yearlings on Johnson Farms. "Even if the cattle don't show signs, [coccidiosis] retards their chance to grow, and it does hold them back. Critters sure don't gain as well. And if we happen to not observe it, they can even succumb to it and die."

Although death from coccidiosis is uncommon, Sanderson says, cattle will suffer important losses in gain. These losses can be critical for seedstock producers who are backgrounding bulls for sale.

"One of the things they are trying to look for is impressive gains. That's what you sell," Sanderson says. "If clinical coccidiosis exists, it is not going to do anything to improve their gains and will cause significant trouble there."

Sanderson says this is also true for replacement heifers. "You are looking for the same sort of things, trying to get an appropriate amount of gain as economically as you can. For both, there is a concern for immune [suppression], pneumonia and respiratory disease that will affect gains dramatically."

A weakened immune system, which encourages the onset of more-serious diseases, is a real concern, Sanderson says. The stressful time calves experience during weaning and shipping is a critical period in which to be aware of coccidiosis and overall herd health.

"Many times calves can have it and won't show visible signs. A person has to watch for it pretty closely," Johnson warns. "It would definitely depend on how recently the cattle have been shipped. Once cattle have acclimated to their transition, it seems there is less and less of a chance for them to come down with coccidiosis."

Sanderson says that it is difficult to find a calf that doesn't have coccidia present in its system. Many animals commonly shed coccidia in their feces.

The first sign most producers observe when coccidiosis becomes clinical is the onset of diarrhea containing blood or mucus. The fecal matter serves as a source of infection in the environment, opening the door to an outbreak within the entire herd.

A calf that consumes fecal matter harboring the parasite spreads the disease throughout a pen or a group of cattle. The parasite commonly is spread when calves consume feces in the feedbunk or drink standing water from ruts.

When clinical coccidiosis has set in, Johnson says his first concern is "to certainly treat groups with visible signs and even treat animals on an individual basis." But, more





► Producers developing replacement heifers target an appropriate amount of gain as economically as possible. Coccidia-induced immune suppression, which can foster development of pneumonia and respiratory disease, can affect gains dramatically.

importantly, if coccidiosis is a problem in the herd, he says, “we would really want to step it up on preventative measures.”

Ahead of the game

Sanderson says adopting preventive measures is a good way to maintain control of coccidiosis and its negative effects on profits. There are several medications that can prevent it if given to cattle in the early stages — before clinical signs are evident.

Feed or water additives commonly are used on weaned and newly received cattle. Johnson feeds an additive to control coccidiosis when cattle first arrive at his pens. “We will feed it for 28 days to break the life cycle.”

Because coccidia do flourish throughout a lengthy life cycle of 21 days, Sanderson says it probably pays to use a preventive product on every animal. The duration of outbreaks is variable, with some clearing up in a month, but Sanderson warns that it can be misleading. He says it is simply a matter of management in most cases.

Good management should include preventive treatments and effective drylot preparation. Avoid mud and manure buildup and standing water holes.

“It is important to have good drainage so that when it does rain, it drains instead of standing. Frankly, that all by itself can help,” Sanderson says.

Studies show that calves standing in mud typically gain less. Keeping feed off the ground and having the bunk elevated are easy measures he recommends to help prevent fecal matter in the feed.

Elevating the bunk helps to keep cattle from defecating directly into the feedbunk. When the cattle turn around and stand with their tails to the bunk, their tails would be



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uphill, which might prevent them from defecating on the feed.

“It’s fairly easy,” Sanderson says of the protection from an outbreak of coccidiosis. “Most of it comes back to lot management and how the calves are managed.”

When that last calf jumps off the trailer or is weaned from its mother, it likely will join others in a backgrounding lot. Don’t leave your herd vulnerable to sharing more

than just a feedbunk. Use preventive measures to ensure your operation will not suffer from a full-fledged outbreak of coccidiosis.

“Every year we have a certain amount of coccidia. But we are able to keep it under control by using preventative measures,” Johnson says.

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Protect your operation

Whether you are backgrounding several hundred calves or wintering five head in a drylot, coccidia will be present at some level. Coccidia are parasites that, by themselves and through other avenues, can cause coccidiosis to infect an entire herd.

“If we look at disease from a multicausal standpoint — recognizing component causes — we begin to see ways to control disease by changing our management, even though we can’t really do anything about the actual coccidia. They are everywhere, and we are not going to be able to just get rid of them,” says Mike Sanderson, a veterinarian and associate professor of beef production at Kansas State University.

Manage your herd to avoid possible coccidiosis outbreaks.

Factors contributing to a coccidiosis outbreak:

- ▶ Decreased immune response due to stress.
- ▶ Individual immune status of a calf that may be related to genetic factors.
- ▶ Nutritional status.
- ▶ Stress level.
- ▶ Level of infestation a calf receives can affect its ability to develop some immunities.

Management techniques to avoid coccidiosis outbreaks:

- ▶ Practice good feedbunk and lot hygiene.
- ▶ Keep feeding aprons clean and dry.
- ▶ Keep feed off the ground in an elevated bunk.
- ▶ Use preventive feed additives on stressed calves.
- ▶ Allow feedlots to drain so water is not standing.
- ▶ Treat calves with known infestation with oral drugs.
- ▶ Monitor herd health closely, looking for early signs of a coccidiosis outbreak.

Source: Mike Sanderson, DVM, Kansas State University