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Ionophores to Manage Coccidiosis

What a ride this weather roller coaster has been lately! Huge temperature swings can have a major impact on the health of livestock exposed to the swings. Watching my calves, we've gone from nearly frozen ears to panting in record heat within the same week! There are many challenges to livestock outside of weather extremes, coccidiosis can be one of those that rears its ugly head. Fortunately, there is a tool for the cattle producer that can help manage coccidiosis and bring additional performance too. What am I'm talking about? Ionophores. Let's take a look at this interaction today.

Likely the place to start in this discussion is, what is coccidiosis? Coccidiosis is an illness caused by protozoan parasites. Infections in cattle cause intestinal disease with signs of diarrhea (with or without the presence of blood), decreased appetite, and mild depression. Severe infections can lead to extreme weight loss, pale mucous membranes, and straining. Typically, these infections occur between 1 to 2 months of age, but it is possible to see infections in older cattle, particularly in the early feeding period. Protozoan oocysts are found in the environment, so it can be an ongoing challenge.

The next logical point in discussion then becomes, what is an ionophore? Ionophores are feed additives commonly used in cattle diets to increase feed efficiency and growth. Monensin (Rumensin), lasolocid (Bovatec), and laidlomycin propionate (Cattlyst) are ionophores that are on the market. These feed additives are classified as nontherapeutic antibiotics, not requiring a VFD. Ionophores work by shifting the populations of bacteria within the rumen from lactic and acetic acid producing colonies to propionic acid producing colonies. This improves the overall efficiency of the rumen. Ionophores can reduce occurrences of bloat and acidosis. Additionally, some ionophores aid in the control of coccidiosis.

Ionophores can be utilized to control coccidiosis in young calves until their natural immunity builds up to fight off infections. These additives work by killing coccidia at a specific stage of growth by changing the environment of the gut, leading to the death of these protozoa parasites. In mature cattle, feeding ionophores may reduce the number of coccidia shed through the animal's feces. This in turn may help reduce the number of coccidia oocysts spread into the calf's environment.

Most mature cows have low levels of coccidia oocysts in their digestive tracts that they shed into the environment through their manure. Even though the cows remain unaffected, they are unknowingly exposing their calves to this parasite. While the calves themselves are not ingesting the ionophore, lowering the levels of coccidia oocysts within the calf's environment limits exposure. Ionophores can safely be supplied to pregnant mature cows at least 30 days before calving through a total mixed ration to get a constant level of intake. If cows were consistently fed an ionophore for a 30-day minimum and are moved to a clean calving area, they will shed fewer oocysts in manure. Ionophore supplementation should be continued through the calving period. At this time, Monensin is the only ionophore approved for use in mature, reproducing beef cows.

Ionophores should not be the only approach in controlling coccidia populations. Environmental and cattle management are just as important in managing coccidiosis. Coccidia oocysts can survive for months in manure and environment. Proper pen management is paramount in limiting the number of oocysts that calves can encounter. This includes scraping pens of used bedding and cleaning waterers to prevent fecal contamination. Ideally, calves should be born on different soil from overwintering sites.

To summarize, ionophores are not the total fix for coccidiosis in young calves. When adding any feed additive to cattle rations, consult with a nutritionist and veterinarian to determine the best application for your situation. This ensures that all label directions are followed and utilizing the best additive for the issue at hand. To learn more about Coccidiosis visit the K-State Bookstore and look for the publication [MF2209 Coccidiosis](#).