Calving Ease

November 2017

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Don't Fall Behind with Coccidiosis

Exposure rates are likely to be high

Shedding of coccidia "eggs" or oocysts by infected calves and heifers usually peaks about 3 weeks after initial exposure. In one study the peak numbers of oocysts shed per day by untreated infected calves was 50,000,000 on day 21! Older immune animals continue to contaminate their environment at a much lower but consistent rate. These facts tell us that from the moment a calf is born she is very likely to get some of these oocysts in her mouth.

Don't fall behind – reduce exposure of newborn and older calves

Once a newborn calf stands up she is in a perfect situation to begin getting coccidia eggs in her mouth. Licking the dam's hair coat, searching for a teat to suck, and licking on anything in her environment, unfortunately, all are generous sources of coccidia eggs. Moving her to a cleaner space does work to cut exposure.

Among older calves we should think about ways to reduce their shedding rates (that is, the rate that she passes coccidia eggs in her feces):

- Clean, well-bedded resting space for calves.
- Optimize ventilation in the barn and calf or heifer pens.
- Provide adequate feed space per animal.
- Minimize weight and age variation between animals in the group.
- Avoid feeding on the ground unless it is at a bunk.
- Provide 12" of linear water space per 10 animals.
- Treat infected animals.
- Maximize time between successive occupants of the same pen. (McGuirk)

Managing infections – building immunity

On nearly oll of our dairies all animals will eventually be exposed to coccidia. Through natural exposure they will build immunity that suppresses infection**. If the exposure of young calves can be managed to maintain a low level of infection they can build immunity without excessive damage to their gut and loss of normal growth.**

So, what can we do if natural exposure rates are uncontrolled (and likely to be high)? Use one of the feed additives that act to control coccidia activity in the calf after exposure. The four additives approved for use in the United States include: [on page two find the trade name first, chemical name second]

- Deccox-M [decoquinate] – available in milk replacer, or powder, mixed with milk to make suspension
- Bovatec [lasalocid] – available in milk replacer, liquid additive to mix with milk
- Rumensin [monensin] – added to dry feeds like calf starter grain
- Corid [amprolium] – liquid can be added to milk or milk replacer, or dry crumble

All of these additives when used as prescribed limit the population of coccidia in the gut. Their effectiveness is shown in studies where the shedding rates have been reduced about 96 to 98 percent.

Preclinical use of the additives is recommended. Damage in the gut due to uncontrolled growth of coccidia will occur as early as 5 days after coccidia exposure. Thus, don't wait until clinical symptoms are present to begin using the additive that you and your veterinarian believe is best for your situation.

Tips for reducing severity of clinical infections

- Reduce stress at weaning by using a "step-down" method of cutting back on milk rather than abruptly stopping milk feeding.
- Adopt heat abatement practices such as better use of natural ventilation and/or mechanical ventilation.
- When possible, avoid exposing calves and heifers to multiple stressors at the same time. Spread out over several weeks stressors like vaccinating, dehorning, ration changes, grouping changes, pen changes and loading animals on and off of trailers.
- Plan ahead to reduce crowding. Once cows are pregnant we know when calves are going to be born and we can reliably predict when we will need to take action to reduce crowding either as milk-fed calves or transition heifers.
- Provide a regular, daily source of additive to control the growth of coccidia. Work with the herd veterinarian to identify the preferred additive and route of administration (blended into liquid ration, mixed with grain ration, mixed with TMR).
- Monitor supplies of additive(s) so that there are no lapses in treatment. And routinely check each delivery of milk replacer, medicated grain and mineral mix to confirm that the desired additive was included at the prescribed rate. Remember "Murphy's Law" – if anything can go wrong it will!
- Monitor calf and heifer care workers to be certain additives are always provided every day – make sure that substitute workers are as well trained as those who provide daily care.

References: Constable, P.D.,"Overview of coccidiosis." Accessed 10/13/17 http://www.merckvetmanual.com/digestive-system/coccidiosis/overview-of-coccidiosis, Constable, P.D.,"Coccidiosis of Cattle." Accessed 10/13/17 http://www.merckvetmanual.com/digestive-system/coccidiosis/coccidiosis-of-cattle Stockdale, P.H.G. and Others, "Some pathophysiological changes associated with infection of *Eimeria zuernii* in Calves." Can.J.Comp.Med. 45:34-37(1981). Hughes, H.P. and Others, "Immunity patterns during acute infection by *Eimeria bovis.*" Journal of Parasitology 75:86-91(1989). Faber, J.E. and Others,"Eimeria infections in cows in the periparturient phase and their calves: oocyst excretion and levels of specific serum and colostrum antibodies." Vet. Parasitology 104:1-17(2002). Fiege, N. and Others, "Eimeria bovis in cattle: colostral transfer of antibodies and response to experimental infections." Parasitology Res. 78:32-38(1992). Daugschies, A. and M. Najdrowski, "Eimeriosis in cattle: current understanding." Journal of Vet. Medicine 52:417-27(2005). McGuirk, Sheila "Using a coccidiostat in my feed; why do I still have coccidiosis?" Proceedings of Dairy Calf and Heifer Conference, April 5, 2013, Lancaster, PA.

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