

# CALVING EASE

September 2012

Sam Leadley, Attica Veterinary Associates

## Coccidiosis: Our Constant Companion

- **The chances of 100 percent of our calves in their first week of life avoiding an infective dose of coccidia oocysts is close to zero.**
- **Coccidia infections, called coccidiosis, may begin to decrease feed efficiency as early as the first week of life.**
- **Immunity to coccidia comes from successful response of calves' immune system, not from colostrum.**
- **Successful immune response to coccidia depends on limiting the infection and keeping the calves well fed and healthy.**
- **Treating all calves with anti-coccidial drugs to limit infections before some of them get sick is more cost effective than waiting to treat the clinically ill calves.**

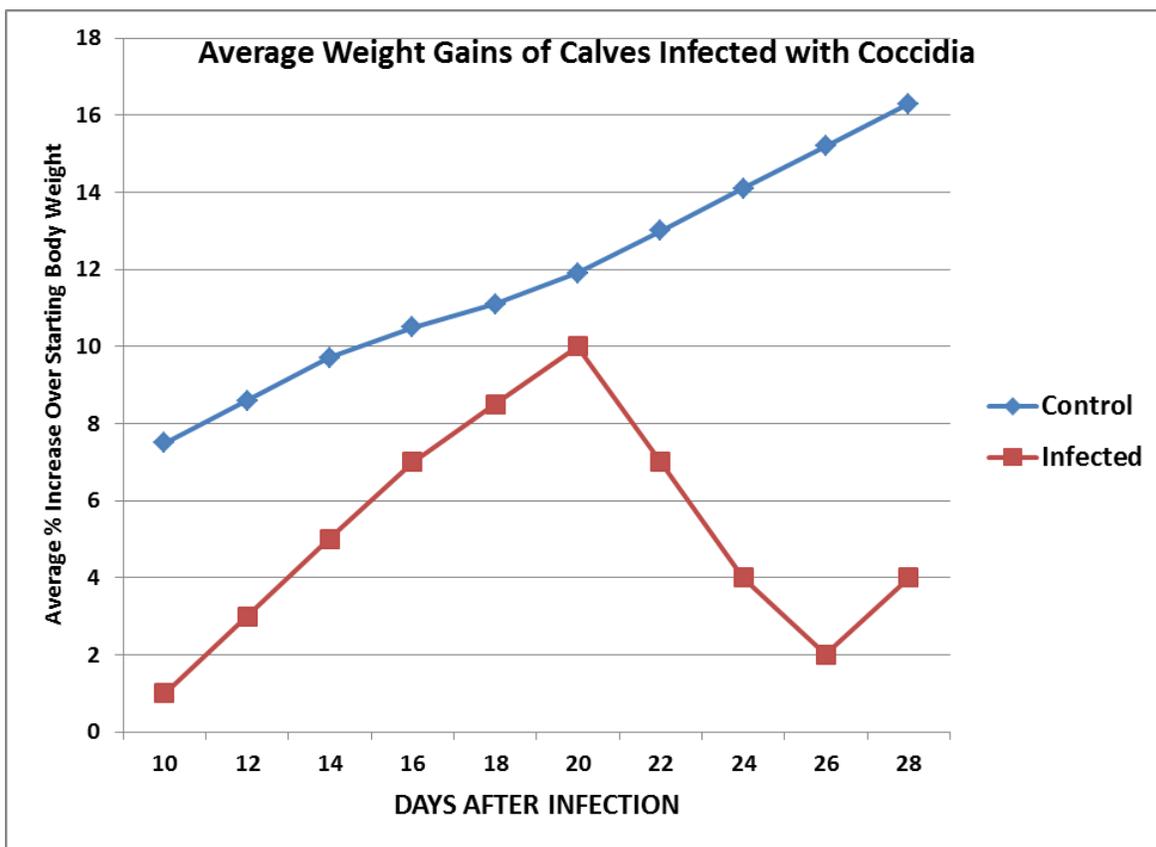
All dairy animals infected with coccidia shed parasite eggs or oocysts in their feces. Shedding by adult cows peaks at the time of calving. Shedding by infected calves often peaks in the range of 18 to 22 days of age. The peak numbers of oocysts shed per day by untreated infected calves in one study was 50,000,000 on day 21 of age. In the same study the average calf produce an estimated 143,000,000 oocysts between 18 and 22 days old. Unfortunately, these oocysts have excellent survival capability. They usually are capable of causing infection a year or more after they are shed.

The chances of all our calves not coming in contact with coccidia oocysts in the first few days of life are very, very low. The intensity of the resulting infection has been shown to be directly related to the number of oocysts that get into the calf's mouth. Avoid manure meals; especially adult cow manure. Keep calf housing clean.

Studies show that calves vary widely in their ability to resist a coccidia infection. Thus, what may be an infective dose for one calf may not result in an infection in the next calf. This variation does not come from coccidia-specific antibodies in colostrum. The immunity present at birth will start to protect the calf against coccidia. But, the calf has to be fed enough energy and protein to support a strong immune response. That means plenty of clean colostrum at birth. It means feeding an environmentally-appropriate quantity of clean milk/milk replacer every day.

Given that some calves will successfully resist having coccidiosis while other will get sick, then we have to decide how to medicate the calves. Do we treat all of them early in life

before some of them become ill? Or, do we wait until the susceptible calves become ill and treat only those? Note in the chart below how much less the infected calves gained



compared to the uninfected control group as early as 10 days after the experimental exposure to coccidia. Start treatment early in life. Talk with your herd veterinarian about the alternative products available to keep coccidia under control among your calves and heifers. Also remember that immunity to coccidia may be compromised among stressed animals. Additional care needs to be taken to prevent these stress-related infections. For additional information on coccidiosis control and treatment see [http://www.vetmed.ucdavis.edu/vetext/INF-BE\\_cca/INF-BE\\_cca96/INF-BE\\_cca9611.html](http://www.vetmed.ucdavis.edu/vetext/INF-BE_cca/INF-BE_cca96/INF-BE_cca9611.html)

References: 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: colostrum transfer of antibodies and response to experimental infections." *Parasitology Res.* 78:32-38(1992). Dauschies, A. and M. Najdrowski, "Eimeriosis in cattle: current understanding." *Journal of Vet. Medicine* 52:417-27(2005).

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