



Extension Notes

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AGRICULTURE & NATURAL RESOURCES

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Preventing Calf Scours

“Neonatal” calf diarrhea is defined as scours when it occurs within the first three weeks of a calf’s life. Bacteria, viruses, and parasites can attack the lining of the calf’s intestine and cause diarrhea. The decrease in absorption of essential nutrients from milk leads to weight loss and dehydration. If the disease level is severe, calves often die, but even calves that survive will perform poorly for the remainder of their lives when compared to healthy calves.

Preventing calf scours involves goes beyond the immune system of a newborn calf. Excellent cow nutrition during and after gestation, an easy calving process, and environmental management factors all contribute to a successful start. On the flip side, an inadequate quantity and/or quality of colostrum, difficulty calving, poor sanitation, cold, wet weather and overcrowding in calving areas all contribute to a higher risk of disease.

A good scours vaccine program in the cow herd is an important first step. Rotavirus, coronavirus, bacteria (K99 *E. coli*; *Clostridium perfringens* Type C, *Salmonella* spp.) and the parasite *Cryptosporidium* are the most common causes of neonatal calf diarrhea. Controlling rotavirus, coronavirus and *E. coli* with vaccines can help you significantly reduce or eliminate sickness and death losses due to calf scours. Most beef cows produce adequate colostrum, but sometimes they do not produce the correct antibodies to fight the specific bugs that cause diarrhea. Scours vaccines are formulated to be given to pregnant cows and heifers late in gestation, so they will make the correct antibodies as colostrum is being formed.

A first or primary dose followed by a booster dose is required the first year you use a scours vaccine. After that, just one annual revaccination is required. Product selection often depends on when you plan to work cattle; generally Scour Bos is administered earlier in pregnancy, followed by Guardian and then ScourGuar, which is given late in gestation. If the cow herd has not been vaccinated and calf scours develop, there are oral vaccines available to give to newborn calves, prior to nursing, which can provide some immediate protection in the gut.

Make sure newborn calves receive adequate colostrum within the first six hours after birth. Although colostrum can technically be absorbed up to 24 hours of age, the amount absorbed after 12 hours of life is considerably diminished.

Once the calf has received colostrum from the mother, it is essential to prevent the environmental load of pathogens or “bugs” from overwhelming the calf’s immune system. Generally, calf scour pathogens build up in the environment as the calving season progresses. Calving in the same area as older calves greatly increases the risk to the newborn calf, especially in wet or muddy conditions as we often see in the spring in

Kentucky. If possible, rotate cows onto clean pastures while cow-calf pairs remain on the old pasture. Additionally, keep the calving area as clean and dry as possible. Even the best calving management will have no effect if the first thing a calf ingests is manure from the calving area.

The cows' diet should provide adequate energy and protein. Calves born to energy deficient cows will have reduced amounts of brown fat, which supply energy for the calf to survive initially. Additionally, calves need adequate protein for vigor after birth. Weak calves cannot produce sufficient body heat and may be slow to stand and nurse. Remember up to 88 percent of fetal growth occurs in the last 50 days of gestation and cows should calve at a body condition score of 5 (heifers at BCS 6).

Calves that experience a difficult birth have a greater risk for subsequent disease, especially calf scours. Trauma associated with a difficult birth severely impacts the ability of that calf to nurse and absorb colostrum. It is important to provide these calves with colostrum quickly which usually means using an esophageal feeder rather than waiting for the calf to nurse on his own.

Even with prevention, you can have a scours outbreak. If this happens you need to reduce newborns' exposure to infectious agents, separate healthy pairs from sick calves immediately and make sure equipment, boots and hands are thoroughly cleaned after handling sick animals. You'll also need to move pregnant cows forward to a clean pasture, maintain clean pens and facilities, reduce stress on cows and calves and assist with calving early as necessary, especially with heifers. Keep animals as clean and dry as possible and provide windbreaks in cold weather. You need to have a good nutrition plan for cows and heifers and make sure calves start nursing as soon as possible after calving to get adequate colostrum (10 percent of the body weight in the first 24 hours with at least 2 quarts during the first 6 hours).

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Upcoming Events:

- **Woods & Wildlife for Your Wallet** – Thursday, February 22nd @ 5:30 PM – Greenup County High School
- **Strategies to Reduce Fertilizer Use on Eastern KY Cattle Farms** – Thursday, February 22nd @ 5:30 PM – Morehead State University Farm Classroom
- **Northeast Area Livestock Association Meeting** - Tuesday, February 27th @ 6:00 PM; Speaker: Dr. Phil Prater, Retired Morehead State University DVM; Topic: Calving Issues