



Angus Advisor

► FEBRUARY herd management tips

Northwest Region

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Calf management

Calf scours. Calf scours, or diarrhea, is the largest problem cow-calf producers face relative to calf health. The causes of calf scours vary from bacterial to viral to protozoal infections.

Bacterial infections are caused by *E. coli*, salmonella or *Clostridium perfringens*. *E. coli* infections can appear in calves less than 24 hours of age. Salmonella infections are more common in calves a week of age or older. Both *E. coli* and salmonella outbreaks require the oral intake of the bacteria. Clostridial infections are associated with an event that disrupts or changes the milk or feed intake in a nursing calf.

Viral infections are caused by coronavirus, rotavirus, bovine viral diarrhea (BVD), and infectious bovine rhinotracheitis (IBR). These infections can occur very early in the newborn calf's life and require contact with viral agents from cattle secretions.

Cryptosporidium and *Eimeria* spp. are two protozoans that also cause scours.

Cryptosporidium infections are usually found in younger calves and are often found along with viral or bacterial scours pathogens.

Eimeria causes coccidiosis and is more common in older calves.

Fecal material from calves with an intestinal scours infection will have a foul smell, will be watery in consistency, black to yellow in color, and may contain strands of coagulated blood. Fecal material caused by an infectious agent should not be confused with that from nutritional scours, which is caused by an overload of milk, which creates a white chalky fecal material. Nutritional scours oftentimes requires no additional management or therapy and will not be the cause of calf mortality.

Scours prevention. Prevention of scours begins with the cow's colostrum. During the last trimester of pregnancy, maternal antibody concentration in colostrum is enhanced with vaccinations for bacterial and viral diseases, which cause scours. Proper cow nutrition is necessary so that maternal antibodies can be produced in response to the precalving vaccinations.

Adequate calf colostrum intake during the

first 12 hours of life is ideal, and within the first 24 hours is critical. Colostrum intake after 24 hours provides no maternal antibody protection to the calf.

Sanitation and protection from weather stress reduce the calf's chances of oral ingestion of infectious agents and does not allow the immune system to be compromised. Currently, a set of oral calf gel products is available. The therapeutic logic for these products is that the gels contain beneficial gut microbes. These microbes, when ingested, grow and proliferate in the small intestine. As they grow, they compete for space on the intestinal lining with pathogens, thus reducing the pathogen population. Furthermore, the "good" microbes secrete substances that inhibit pathogen growth.

Scours treatment. In most cases, treatment of viral and bacterial scours will be successful if the dehydration symptoms are treated. Protozoal infections will require therapeutic treatment. There are currently more than 40 vaccines marketed for diseases that can cause scours. The appropriate vaccination schedule prevention and treatment protocols should be addressed with your herd health veterinarian.

Pregnant cow management

- Feed 2- and 3-year-olds separately since their nutritional needs are different, and they have a different social order than mature cows.
- Keep females in a body condition score (BCS) range of 5 to 6.
- Keep heavy cows and heifers up close so they can be checked four to six times per day.
- Have the following calving items in your inventory:
 1. Record book
 2. Scale
 3. Ear tags, etc.
 4. Iodine
 5. Palpation sleeves
 6. Appropriate injectable vitamin and mineral packages
- Be prepared to handle dystocia and weak calf issues. This requires the appropriate equipment and working area, supplemental heat and extra colostrum.

Herd bulls

- Treat for lice if necessary.
- Complete a breeding soundness exam (sometimes referred to as a BSE) 60-90 days prior to turnout. This exam should include not only a reproductive evaluation, but also physical soundness.
- Begin selecting new herd bulls to add to your program.
- Have bulls gaining weight before the breeding season.

Replacement heifer management

- Be sure Bang's disease vaccination has been done.
- Provide reproductive vaccines (IBR, BVD, vibriosis and leptospirosis) 30-45 days before breeding.
- Heifers should be approaching 65% of their mature weight at the time of breeding. Feed appropriate levels of energy, protein, vitamins and minerals to optimize reproductive efficiency.

Midsouth Region

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The vast majority of spring-calving herds in the Southern Great Plains are bred to calve during the months of February, March and April. Most purebred herd managers choose to manage their herds for earlier calving compared to commercial herds. Therefore, many purebred cows will be in late gestation or early lactation during February.

A 1,200-lb. Angus cow in good body condition would be expected to consume around 27 pounds (lb.) per day of high-quality Bermuda grass hay [11% protein and 55% total digestible nutrients (TDN)]. This hay would have adequate protein and energy to maintain body condition prior to calving with no need for additional protein or energy supplementation. Note that lower-quality hay would result in weight and condition loss with no supplementation. Unfortunately, only about 50% of producers test their hay so they know what (or whether) they should be supplementing.

With the tremendous shortage of forage resources this winter, many producers have been forced to feed more concentrate and limit hay consumption. Limiting access to hay feeders (placed in a drylot pen) for four hours

each day reduces hay consumption by about 40%. In this scenario, cows would consume around 16 lb. of hay. Of course, consumption of hay can be managed by hand-feeding where daily feeding is practical. Replace these nutrients with 7 lb. of a commercial feed product containing a minimum of 12% protein and 72% TDN, which should result in a slightly positive weight and condition gain.

During early lactation, energy and protein requirements increase dramatically. Assuming above-average genetic potential for milk production and the luxury of having enough high-quality hay available to feed free-choice, the lactating cows would require about 27 lb. of the high-quality grass hay and 7 lb. of the commercial supplement. If using the limit-fed hay strategy (reducing hay consumption by 40%), about 16 lb. of hay and 13 lb. of the 12% TDN commercial feed would be necessary to maintain weight and condition score. The amount of feed could gradually be reduced as new grass becomes available.

When cows graze abundant (low-quality) native range as the primary forage base during early lactation, 8 lb. of a high-energy concentrate feed containing 20%-24% protein and about 5 lb. of good-quality alfalfa hay is one common method to meet requirements and to minimize weight loss prior to the breeding season.

These are limited examples of virtually unlimited possibilities. Most Extension services provide spreadsheets or other software to assist in making calculations for feeding programs.

For access to extensive drought management information, go to www.ansi.okstate.edu and click on "Drought Management."

A high-calcium (Ca), high-magnesium (Mg) mineral supplement should be provided to lactating cows grazing small-grains forage. Similarly, for cattle consuming more than 5 lb. of almost any concentrate feed source, a high-calcium mineral supplement should be provided rather than the traditional high-phosphorus mineral supplement.

Fertilize fescue and small-grain pastures depending on moisture, soil test and forage production needs.

Midwest Region

by **Twig Marston**, Kansas State University, tmarston@oznet.ksu.edu

- ▶ Monitor cow BCS. Once calving begins, body condition is tough to maintain, and even more difficult to gain. Review nutritional management, diet ingredients and formulation. Balancing energy and protein will often maximize efficiency.
- ▶ Separate the cow herd into management groups. Examples would be: gestating, lactating, young, old, moderate to heavy

condition and poor condition groups.

Group feeding allows producers to better utilize available feed resources, improve herd health and produce a more consistent product.

- ▶ Minimize cold stress. Windbreaks greatly reduce maintenance energy demands. Hypothermia is a major cause of neonatal calf loss.
- ▶ If appropriate, vaccinate the cow herd for calf scours and other diseases. Consult your veterinarian. Three factors that improve herd health are high immunity, low stress and excellent sanitation practices.
- ▶ Consider using the Sandhills Calving System developed by the University of Nebraska. This system has been proven to essentially eliminate scours. (For details see <http://vbms.unl.edu/extension/sandhills%20scours%20paper%20smith.pdf>.)
- ▶ Check calving heifers and cows regularly. Adhere to a herd-monitoring program. Give timely assistance when needed; call for help before problems have progressed beyond control.
- ▶ Feeding calving cows in the evening and at night will increase the percentage of calves born in daylight hours.
- ▶ Udder and teat scores should be recorded within 24 hours of calving.
- ▶ Birth dates, birth weights and calving ease scores should be recorded.
- ▶ Source and age verification will be necessary for some marketing plans. Make sure you stay in compliance.
- ▶ Control lice. Hair coat condition is important for insulation value. Sale cattle — bulls and females — that will be offered this coming spring need healthy-looking hair to demand top dollars.
- ▶ Collect and report weights, ultrasound and linear data on last year's calf crop if their age is appropriate. The future of beef production is in data collection and genetic information development.
- ▶ Attend beef industry educational and policy events. Be informed and proactive within the industry you work.

Southeast Region

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Spring-calving herds

- ▶ Have all calving supplies on hand, and review calving assistance procedures.
- ▶ Move pregnant heifers and early-calving cows to calving area about 2 weeks before due date.
- ▶ Begin calving late in month (some herds).
- ▶ Check cows three to four times per day, heifers more often — assist early if needed.
- ▶ Keep calving area clean and well-drained; move healthy pairs out to large pastures three days after calving.

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- ▶ Ear tag and dehorn all calves at birth; castrate male calves in commercial herds.
- ▶ Give selenium (Se) and vitamin A and D injections to newborn calves.
- ▶ Keep late pregnant cows gaining 1.0 lb. per day.
- ▶ Pregnant heifers and 3-year-olds should gain 2.0-2.5 lb. per day.
- ▶ Keep high-quality, high-magnesium minerals available.
- ▶ Vaccinate cows against scours if it has been a problem.
- ▶ Attend performance-tested bull sales and/or order semen for artificial insemination (AI) program.
- ▶ Frost-seed clovers (mid- to late in the month).
- ▶ Attend a local beef education meeting.

Fall-calving herds

- ▶ End breeding early in the month.
- ▶ Remove bulls to bull pasture and check condition.
- ▶ Begin creep-feeding or creep-grazing calves if desired.
- ▶ Plan marketing strategy for calves.
- ▶ Begin feeding high-magnesium minerals to prevent grass tetany.

- ▶ Continue to check calves closely for health problems.
- ▶ Inventory winter feed supplies.
- ▶ Frost-seed clovers (mid- to late in the month).
- ▶ Attend a local beef education meeting.

February is an excellent time to revitalize pastures in our region. Many pastures in the western portions of the Southern region had a tough year. Drought took its toll on these pastures.

Proper soil pH, soil fertility, grazing management and incorporation of legumes will help all pastures in our region. All lime applications should be completed this month to allow changes in pH to occur before the major growing season. Phosphorus (P) and potassium (K) levels should be checked with soil tests, and fertilizer applications should be made according to recommendations from your state's Extension service. These recommendations take into account regional variations in soil type and forages.

Care should be taken not to overgraze drought-stressed pastures early in the growing season. Pastures coming out of a

drought are fragile, and the plants have limited carbohydrate reserves for early spring growth. Pastures really need to be 6-8 inches (in.) tall before extensive grazing to allow these drought-stressed plants time to recover some energy reserves and root mass. Delaying of grazing of drought-stressed pastures is difficult, as hay supplies are often limited. Rotational grazing will improve the vigor of these pastures as well.

Frost-seeding of clovers is an excellent way to add legumes to pastures. In our region, February is the ideal month for frost-seeding. Seeding should occur early in the month in the southern areas and late in the month in northern parts of the region. Pastures are grazed short (not a problem at this time of year), then clover seed is broadcast over the pasture. Seeding rates are 4-6 lb. per acre for red clover, and 1-2 lb. per acre for white clover. The freezing and thawing action of cold nights and warm days creates good soil contact with the seed without the need to drag the pasture. Hoof action of cattle also helps incorporate the seed. For more information on frost-seeding, contact your local Extension service.

