



Angus Advisor

► FEBRUARY herd management tips

Southeast Region

by **John Hall**, Virginia Tech, jbhall@vt.edu

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 two weeks before their 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.
- 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 pregnant cows gaining 1.0 pound (lb.) per day.
- Pregnant heifers and 3-year-olds should gain 2.0-2.5 lb. per day.
- Keep high-quality, high-magnesium (Mg) 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).
- Frost-seed clovers (midmonth 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 (midmonth to late in the month).
- Attend a local beef education meeting.

Weather conditions during late winter and early spring in the Southern region can cause considerable stress to newborn calves. Cold, wet days (temperatures in the 30s with rain) create ideal conditions for hypothermia in newborn calves. On a rainy day, calves begin using energy reserves to keep warm as soon as temperatures dip below 60° F. In fact, there is less stress on calves born on sunny, dry days with snow on the ground than wet days. Research indicates that calf mortality increases exponentially as temperatures fall below 60°. One-half inch (in.) of precipitation on the day of birth can double calf mortality.

Producers should focus on strategies to decrease the effects of weather on calf stress and reduce hypothermia. The first strategy is to observe calving females regularly and ensure calves nurse within two to four hours of birth. Calves that do not nurse by four hours after birth or that are showing signs of hypothermia should be fed 1 to 2 quarts of colostrum with an esophageal feeder.

The next strategy is to provide temporary shelter for 24 hours until calves stabilize. Routine use of calving pens is discouraged due to negative effects on calf health due to exposure to pathogens, but judicious use of calving barns or shelters can help chilled calves. Homemade or commercial calf warming boxes are also useful, as are commercial calf coats. Extra vigilance is important on bad weather days to minimize hypothermia and avoid calf losses.

Midsouth Region

by **David Lalman**, Oklahoma State University, dlalman@okstate.edu

Spring-calving herds

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.

As noted last month, a 1,200-lb. Angus cow in good body condition requires a minimum of about 13 lb. of total digestible nutrients (TDN) and 2 lb. of protein per day during late gestation. Consequently, hay or other forages should contain a minimum of 54% TDN and 8% protein to meet requirements for maintenance prior to calving.

When cows graze abundant native range as the primary forage base during early lactation, 7 lb. of a high-energy concentrate feed containing 20%-24% protein and about 5 lb. of good-quality alfalfa hay is necessary to meet these requirements and to minimize weight loss prior to the breeding season. If high-quality grass hay (minimum of 9% protein and 54% TDN) is the primary forage base, about 6 lb. of a high-energy supplement containing 20%-24% protein is required.

During early lactation, energy and protein requirements increase dramatically. Assuming above-average genetic potential for milk production, these cows would require about 19 lb. of TDN and 3.4 lb. of protein. This is roughly equivalent to a diet containing about 59% TDN and 11% protein.

Maintain cows on fresh clean pasture or in a dry, clean calving facility if they are confined. Consult your veterinarian in the event problems with calf scours should develop.

Check first-calf heifers that are due to calve several times daily for possible calving difficulties.

Feed during evening hours to encourage daytime calving.

Fall-calving herds

Fall-calving purebred cows with above-average genetic potential for milk production should receive about 7 lb. of a supplement containing 20%-24% protein daily when abundant dormant native range (3%-5% protein) is available and cows have a body condition score (BCS) of 5 or less and/or winter weather conditions are severe. A second alternative that works well under these conditions is to feed around 4 lb. of a protein supplement containing 20%-24% protein with 5 lb. of good-quality alfalfa hay.

When conditions are similar to the example given above, with the exception of cow BCS of 6 or greater and moderate to mild winter weather, a supplement containing 38%-40% protein will meet the protein needs of the cows. Daily energy intake will be slightly deficient, resulting in lower milk production and about a 0.25-unit loss in BCS during a 30-day period.

Assuming moderate- to high-quality grass hay (minimum of 9% protein and 54% TDN) as the forage base, 5 lb. of a 12%-14% concentrate supplement will supply adequate protein and energy for 1,200-lb. purebred beef cows with above-average genetic potential for milk production.

Meet your advisor

To further expand management advice, the *Angus Journal* introduces a new addition to the "Angus Advisor" team. Thomas Hill is a member of the animal sciences faculty at Oregon State University. In addition to his teaching responsibilities, he has a beef management consulting business with commercial and purebred beef clients and feed companies in four western states. Also, his immediate family has shown three national champions. His beef cattle judging duties have included the 2004 National Shorthorn Show and the 2005 National Hereford Show, both in Denver, Colo.



If not done in January, remove bulls or discontinue AI to maintain a restricted calving season.

A high-calcium (Ca), high-magnesium mineral supplement should be provided to lactating cows grazing small-grains forage.

Continue to monitor calves for the possible development of bovine respiratory disease (BRD).

General recommendations

- ▶ Break ice in ponds and water tanks at least once daily when necessary.
- ▶ Fertilize fescue and small-grain pastures depending on moisture, soil test and forage production needs.

- ▶ Sprig Bermuda grass during late February and March in a clean, firm seedbed.

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.

CONTINUED ON PAGE 172

ANGUS ADVISOR

CONTINUED FROM PAGE 171

This system has been proven to essentially eliminate scours.

- ▶ 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.

Northwest Region

by **Thomas Hill**, Oregon State University,
thomas.w.hill@oregonstate.edu

Prebreeding management

Bulls used as yearlings the previous breeding season need to be turned out this spring with a BCS of 5 to 6 to maximize their breeding potential and longevity. Separate

younger bulls from older bulls that need to have an increase in body weight in order to provide these thinner, younger bulls with more energy.

Complete the entire vaccination protocol for replacement heifers one month before breeding to guard against any potential negative ovary/vaccination interaction. The vaccination protocol should be evaluated to protect against reproductive failure issues caused from bovine viral diarrhea (BVD) type I and II, infectious bovine rhinotracheitis (IBR), vibriosis, leptospirosis, and possibly haemophilus.

Begin to search out your next generation of seedstock. Establish or evaluate your current breeding goals and long-term genetic objectives. Locate the AI sires and/or herd bulls that best fit your program. Look early for herd bulls in order to sort through the top end of a breeder's bulls. Be realistic about your bull budget. A good bull battery is one-half of your

calf crop — an inferior bull battery is your entire calf crop!

Heifers need to be at 65% of their mature weight to have a satisfactory pregnancy rate. Consider melengestrol acetate (MGA) or CIDR® protocols to efficiently synchronize the estrous cycle of these heifers. Timed AI breeding protocols using MGA or CIDRs can be expected to produce first-service pregnancy rates of 55%-65%.

Bred cow nutrition

The optimum BCS for cows is a 5, and for bred heifers a 5-plus.

A cow with a BCS of 5 will have no rib bone outline or spinous process (backbone) visible. A BCS of 6 will have fat deposits beginning to fill the brisket. To increase one BCS usually requires 45 days of improved nutrition and 75-100 lb. of body weight gain. BCS is a function of dietary energy more than any other nutrient. Improving the body condition

of a 1,200-lb. mature cow with a BCS 4 by one BCS requires the equivalent energy found in 250 lb. of corn. In times of extreme cold and wind chill, the required energy is even greater. A basic benchmark is that a cow's energy requirement increases by 1% for every degree of wind chill below 32° of dry cold. Calving cows that are nutritionally challenged vs. cows with optimum BCS will have lighter calves at birth but no fewer dystocia events, weaker calves due to possibly reduced immunoglobulins in colostrum, and more days after calving before cows will begin to cycle.

Vitamin A is most limiting in mature forage or standing forage that has experienced a killing frost or freeze. Vitamin A can be incorporated into trace mineral sources or injected to improve cow performance.

Bull reproductive soundness

Now is the time to perform a breeding

soundness exam (sometimes referred to as a BSE) on your entire herd bull battery. It is not surprising to find 5%-10% of the existing herd bull battery to be incapable of servicing cows and heifers in the upcoming breeding season.

Complete your breeding soundness exam by giving annual boosters for IBR, BVD, parainfluenza-3 virus (PI3) and bovine respiratory syncytial virus (BRSV), along with vaccinations recommended by your veterinarian.

Prepare for calving season

Maintain a record book to list calving data and to identify open cows and problem cows to be considered as culls in the fall.

Secure supplemental colostrum from a viable source that can provide high levels of maternal antibodies. Older, home-raised cows will have the most effective antibody level. First-calf dairy heifers will have the lowest antibody concentration. Remember, thawing

CONTINUED ON PAGE 174

frozen colostrum in a microwave will denature the valuable immunoglobulins.

Have equipment ready to assist with difficult births. Adequate amounts of nonirritating lubricant, such as J-Lube, can be invaluable. Supplemental calf-feeding equipment and a dry, well-ventilated warming area with an evenly displaced heat source will improve calf survival.

Prevent newborn calf loss. The two most significant death losses of newborn calves are hypothermia and dehydration caused by scours. Hypothermia is a significant issue in the first 72 hours of life. Normal calves must stand within one hour of birth and nurse within the first two hours. Calves with a body temperature below 100° to 101° are experiencing mild hypothermia that may

continue to worsen if proper care is not provided. When a calf's body temperature drops below 95°, severe hypothermia is already taking place, and immediate corrective action needs to be implemented. A very effective method to regain body temperature in calves experiencing severe hypothermia is to immerse (but not drown!) them in 100° water. Appropriate windbreaks or natural shelter and bedding will benefit calf survival and vigor when experiencing extended periods below 45°.

Scours is usually precipitated by a stressful event, such as a difficult birth, weather changes, inadequate colostrum intake or nutritional challenges. Once a calf has scours, mortality will be a result of dehydration.

Dehydration can be monitored by pinching skin on the neck. A normally hydrated calf's skin will snap back toward the body immediately; mildly dehydrated (4% or less dehydration) skin will tent for five seconds or

less. If the skin tents for five to 10 seconds, serious dehydration has occurred.

It is not uncommon for a calf with scours to have a lower-than-normal body temperature. Fluid therapy and electrolyte balance is the first response to scours if dehydration is occurring. Since several pathogens can cause scours, your veterinarian should be consulted if more than 5% of your calves are scouring.

Forward planning

Establish two annual production goals and a management plan that will improve your bottom line by 5%. These goals can be a higher weaned calf crop percentage, increased use of low-cost byproduct feeds, reduced calf morbidity, shortened calving/breeding season by 10 days, etc.

Consider implementing programs such as AngusSourceSM that will let you reap a premium for age- and source-verified Angus-sired commercial cattle.

