Winter-Ready

Preparing cows and heifers for a successful calving season.

by ***Mark Z. Johnson***

As we approach the holiday season and winter months, it is the time of year when feeding harvested forage becomes the norm, spring calving season is drawing near, and it is time to prepare for winter.

Nutrition requirements of the cow herd

To get our cow herd primed for calving season, we need to consider the herd's daily nutritional requirements. Grazing and feed expenses account for about half of the input cost on a cow-calf operation. Knowing the nutritional needs of our cows helps us cost effectively meet those needs. Overfeeding or underfeeding robs the profit potential from cow-calf operations.

During the normal production cycle, cows should gain some weight/body condition during the dry stages and lose some weight/body condition while nursing a calf. With that in mind, it is optimal for cows to have a body condition score (BCS) of 5.5-6.0 going into calving season. This means cows are in good shape and have ample energy reserves to draw upon when the "spike" in crude protein (CP) and energy (TDN) requirements occur post-calving as the cow begins lactation. Cows need to be in good shape at the beginning of calving season to reduce the rebreeding interval and stay on schedule to breed, calve and raise a calf to weaning every 12 months.

Assuming we have an ample supply of good quality water and an adequate vitamin/mineral supplementation program, the two primary nutritional requirements of cows are CP and TDN. In normal weather, there are three primary influences on the daily requirements of both: mature weight, level of milk production and stage of production.

Where cows are in their current production cycle and when they will start calving should be considered when making management decisions regarding feeding. The example below follows a 1,300-pound cow through a normal production cycle during the middle trimester of pregnancy, the final trimester of pregnancy and the first 90 days post-calving, based on her level of milk production.

During the middle third of pregnancy, the 1,300-pound mature cow needs:

- CP = 1.64 pounds per day
- TDN = 11 pounds per day

The same 1,300-pound cow in the final third of pregnancy needs:

- CP = 1.84 pounds per day
- TDN = 13.3 pounds per day

The increased nutritional needs reflect the cow's maintenance requirements and the increased growth and development of the fetus as calving draws near.

After calving, during the first 90 days of lactation, the same 1,300-pound cow will have increased nutritional requirements based on how much milk she is producing:

If giving 25 pounds of milk per day at peak lactation, she will need:

- CP = 3.4 pounds per day
- TDN = 19.3 pounds per day

If giving 35 pounds of milk per day, she will need:

- CP = 4.2 pounds per day
- TDN = 22.2 pounds per day

In summary, the same cow has a dramatic rise and fall in protein and energy needs over the normal production cycle. Knowing these requirements is essential to cost-effective feeding of the cow herd. Managing our nutritional program correctly plays a huge role in reproductive performance. More details about nutritional requirements of beef cows can be found in the fact sheet — *Monitor the Body Condition of Your Cow Herd* — referenced below.

The dry period is the most efficient time to put flesh and weight on cows that may have gotten too thin while raising a calf this past summer. Managing now for optimum BCS at calving next spring will pay dividends in future reproductive efficiency and breed back.

Don't forget the water

Water is the most important nutrient. A clean and abundant supply of water is critical for the health, reproduction and production of beef cattle. If ponds are low, now is the time to plan for your winter water supply, whether it is pond cleanout, installing automatic waterers, checking wells, windmills, etc.

Source: Nutritional Requirements of Beef Cattle. OSU Cooperative Extension Fact Sheet E-974

Act before freezing temperatures. Shallower ponds are more subject to freezing. Plan accordingly.

A good start for baby calves

Calving season is exciting, especially in the purebred seedstock business. We have selected our sires, planned our matings and effectively managed the nutrition of our cow herd. Calving season is when we see the results of months (and years) of work. This sequence of critical steps needs to happen for the calf to get a good start. We often don't witness some of them or take them for granted when we find a newborn up and nursing. If we are watching, this is what we should see:

No. 1 — The calf begins to breathe. This one is obviously critical. Typically, as a calf comes out of the birth canal and the umbilical cord is severed, the calf's first reaction is to inhale. Sometimes, a difficult birth, less calf vigor, amniotic fluid in the nostrils or throat, or part of the amniotic sac covering the nose prevents it from happening. If you are observing the process after delivery, you need to help a calf that is not breathing immediately. First, clear the airway. Use your fingers (or small tube with a bulb on the end) to remove fluids from the back of the mouth and remove anything covering the nostrils. Then, insert a piece of straw into the nostril as a probe to try to stimulate a sneeze reflex. This reflex will cause the calf to blow out fluids from the airway and inhale. It should only take a few seconds. Avoid hanging calves over a fence rail or picking up calves by their rear legs. This is a common mistake. The maneuver only makes it more difficult for the calf to breathe; it puts the weight of the internal organs against the diaphragm and lungs which need to move to bring in air.

No. 2 — Cleaning and drying the calf. This is the beginning of the maternal bond during which the cow will lick the calf dry and use her muzzle to stimulate the calf to stand up. Calving in winter and spring when calves are leaving the cozy environment of the mother's womb at a temperature of 101-102 degrees Fahrenheit and hitting the ground at temperatures 60-100 degrees colder, makes this very important to the calf's survival. An attentive cow may save her calf's life simply by cleaning it immediately after birth. The cleaning action accomplishes two things: it removes the fluid soaking the calf and stimulates muscle contractions and circulation in the calf. Both prevent excess loss of body heat from the calf which can be conserved to help it stand and begin the process of finding a teat to nurse. Manually drying and warming may be necessary for a weak newborn or in extremely cold winter weather.

No. 3 — Nursing. Standing and nursing are extremely critical so that a calf ingests an adequate amount of colostrum in the first few hours of life to acquire passive immunity as well as energy and other nutrients to maintain body heat. A calf needs adequate colostrum within two hours of being born for the best chance of survival. A calf begins to lose its ability to absorb antibodies from colostrum within six hours following birth and nearly all ability by 24 hours after birth. Any time you assist the birth of a calf, you should consider giving colostrum to the calf with an esophageal tube feeder before leaving the new pair on their own. First-calf heifers with less experience than cows may require a higher level of management and assistance in order to allow steps two and three to take place. A squeeze chute or head catch will be handy if you find yourself in the situation of assisting with the nursing process.

No. 4 — The maternal bond. After steps two and three are complete, the majority of the bonding process is established but will continue to strengthen over the next several days. During the first few hours post-calving, the cow or heifer identifies her own calf, and the calf learns who its mother is. If all is proceeding normally, a little privacy is best. Too much interference by humans or other animals can be a distraction and delay the process.

Remember the nutritional requirements of the cow or heifer will increase dramatically once she begins lactation. For perspective, the nutritional requirements of a dry cow in the last trimester of pregnancy can be achieved with 24 pounds of dry matter per day. Post-calving, this same cow needs 30-31 pounds of the same dry forage per day and possibly additional supplementation. This is even more critical if you are calving out cows and heifers that are thinner than a BCS 5. Cows in a body condition of 5.5-6.0 at calving are better prepared to produce the adequate quantity and quality of milk and colostrum needed to get a calf off to a good start. Now is also the time to make sure your calving barn, shelters and wind breaks are in good repair. HW

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