



BUL 920

# BQA Guidelines for Calving Management

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Beef Quality Assurance (BQA) helps focus a producer's attention on daily production practices to increase product safety and quality. Implementing BQA calving management practices can increase animal health and product safety by reducing the need for antibiotics and other pharmaceuticals.

## Key Points

- Calf early life affects product end quality.
- Minimizing stress and treatment in calves will decrease the need for treatment in the feedlot.
- Managing the cow herd to minimize disease transmission in early calf life decreases the incidence of scours and improves calf health.



## Pre-calving practices

### Breeding for Calving Ease

- Calving ease starts at conception. Choose bulls wisely to meet the operation's goals. Consider the mature size of cows in the herd and the size of calves they can deliver.
- Heifers should be bred using calving-ease bulls to avoid most calving problems. Having a calf that is too big for the pelvis is the primary reason for dystocia in beef cattle.
- The best way to select a calving-ease bull is to use Expected Progeny Differences (EPD), genomic data, or the bull's own birthweight to give some idea of the bull's calving ease.
- Using bulls that have a higher probability for large calves increases the risk for dystocia. Do not use bulls that are extreme for increased calf size.

### Cow Nutrition

- Evaluate your herd for body condition score (BCS) 3 to 4 months prior to calving. Cows of lower condition (BCS<5), as well as first- and second-calf heifers should be separated and fed a higher quality diet to increase BCS to 5 or greater at calving.
- All cows in late gestation should be fed enough protein and energy to meet their requirements (55–60% Total Digestible Nutrients [TDN] and 8% Crude Protein [CP]).
- Maintaining adequate nutrition throughout gestation enhances feedlot performance of the calf, increases calf immunity, and improves carcass composition compared to calves from dams that are nutritionally stressed during gestation.

### Facilities

- Before calving season, make sure that all pieces of equipment (e.g., chains, pullers, chutes, pens, trailers) are sanitized and in good condition for immediate use.

- Barns and calving pens should be cleaned, sanitized, and bedded down with fresh straw prior to the start of calving and in between each new pair entering the pen. Contamination can be further reduced by allowing 24 hours between calves in a pen.
- All calving pastures should provide access to feed, water, wind break or shelter, and easy access to a calving chute or barn in case of emergency.

## Calving practices

### Calving Assistance

- Cows in labor may become nervous and typically will isolate themselves from the rest of the herd. If you notice this behavior, calving should be imminent. If this cow is later seen back in the herd without a calf, there is often a problem with the calf's presentation and an examination is recommended.
- Labor occurs in three stages. The first stage typically lasts 2–6 hours, during which uterine contractions will occur and the cervix will dilate. Stage 1 labor is concluded when the water bag ruptures and fluid is expelled. Uterine contractions increase as stage 2 begins. During the second stage, the fetus enters the birth canal and is delivered. Stage 2 should not take longer than two hours. This is followed by stage 3, during which the placenta is expelled.
- Assisting a cow too early can increase the chance of a retained placenta. Producers need to wait until the cow is in stage 2 labor before helping. If you see the cow lying down and trying to have the calf, leave her to work at it for 30 minutes. If you see no progress or labor is very slow, an examination is needed. In heifers, stage 2 labor may take a little longer, but if there is no progress within one hour an examination is needed.
- The correct and normal presentation of the calf is the nose and two feet with the pads down showing. This presentation forces open the birth canal to allow the calf to pass through. If the head is turned back, one leg flexed back, two legs flexed back or only a tail is presented at the vulva, the birth will be virtually impossible.

These malpresentations occur in less than 4% of all calving in beef cattle.

- Assistance can consist of applying two half hitches with obstetrical chains. These should be placed on the calf's leg, with the first half hitch above the fetlock and the second on the pastern, and traction should be applied in synchrony with the cow's contractions. This gentle pressure should result in progress as the calf is born. A mechanical calf puller (i.e., calf jack) can be used when assistance is not available. Professional obstetrical intervention by a veterinarian may be necessary to save the lives of the calf and cow.

## Post-calving practices

### Post-birth Treatment

- Breathing is the first concern at calving. After clearing the nasal passage of any foreign material or placenta, use a piece of straw to tickle inside the nose and cause a sneeze reflex in the calf. This is very effective in starting the breathing process.
- Calves should ingest 1–2 quarts of colostrum in the first 2–4 hours of life. By 12 hours they should have consumed 1 gallon of colostrum. This is extremely important as immunoglobulin absorption decreases dramatically 12 hours after birth, with no absorption after 24 hours. Research has shown that calves that do not receive colostrum are more susceptible to disease throughout their lives and ultimately do not perform as well in the feedlot as calves that receive colostrum.
- Stored colostrum should be collected from healthy, vaccinated cows 12–24 hours post calving and frozen in quart-size containers. To thaw, containers should be immersed in 110°F water and stirred every few minutes to ensure even thawing and warming until the colostrum reaches 104°F (about 40 minutes). There are also a number of colostrum supplements available in powder, paste, and bolus form. However, these are most effective when the calf also receives natural cow colostrum. Colostrum substitutes should contain a minimum of 100 grams of Immunoglobulin G (IgG).

- Calves should be tube fed only when absolutely necessary. Use relatively non-flexible, hollow ½-inch diameter tubing with a ¾ to 1-inch diameter bulb on the end. When feeding, make sure the tube feeder enters the esophagus by both visual and physical confirmation (Figure 1).



**Figure 1.** Proper position for tube feeding and checking that the tube is in the esophagus. (Photo by John Hall.)

- Many producers tag calves as they are born. This allows the administration of a tincture of 7% iodine solution, which soaks the navel to help disinfect and dry it as soon as possible (Figure 2). This is more critical for calves born on a crowded or wet calving ground. Producers may also administer a micro-mineral injection at this time. A local veterinarian can suggest many available products.



**Figure 2.** Navel prior to being dipped for disinfection.

- Cows may have retained the placenta following calving, especially those that have experienced a difficult birth. Manual extraction of the placenta is discouraged as this leads to delayed rebreeding. Oxytocin can be administered to continue the birthing contractions to help expel the placenta, but is not necessary if the calf is actively suckling. An antibiotic should be administered to help discourage a uterine infection if the retention is associated with obstetrical intervention.

## Scours

- Good cow nutrition, vaccination of the cow, a clean calving pasture, and calving management are all important parts of mitigating a scours outbreak in your herd. Calves that do not have health issues in the first few months of life require less treatment once they enter the feedlot and result in a higher quality product.
- If a calf begins presenting signs of scours, determine its hydration status immediately by looking for signs of dehydration (e.g., sunken eyes or tenting of skin). If the calf is not recumbent, begin administering electrolytes orally 30 to 60 minutes following nursing or milk feeding. If the calf is recumbent and unable to get up, seek assistance to administer intravenous fluids.
- Rectal temperatures should be taken as well. If temperature exceeds 103.5°F, infection is likely. However, severely dehydrated calves may have a lower than normal rectal temperature. Consult with a veterinarian on treatment and medications that may be needed.
- When treating scours, it is key that calves are kept hydrated with fluid and electrolyte therapy, fed regularly and without withholding milk, and that affected calves are separated from other calves and protected from the wet and cold.
- Separating older and younger calves is a vital part of scours prevention. It takes up to 30 days for a calf's active immune system to begin to mature. For this reason, keeping older calves with more mature immune systems separated from younger calves with naïve immune systems is key in preventing an outbreak.

## Further reading

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The Idaho Beef Quality Assurance Program is a partnership between University of Idaho Extension and Idaho Beef Council.

### The BQA Mission

To maximize consumer confidence and acceptance of beef by focusing the producer's attention to daily production practices that influence the safety, wholesomeness and quality of beef and beef products.

### BQA Certification

Certification requirements can be achieved by participating in a training session and completing the BQA quiz and personal contract. Certification is valid for three years. Learn more about BQA certification in Idaho, here: <http://extension.uidaho.edu/bqa/certification/>.

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