

Preparing for Fall Calving Season

Lew Strickland
University of Tennessee
Extension Veterinarian

Fall calving season is just around the corner and successful calving seasons are the result of good management decisions and hard work. Cows should be checked at least daily during the calving season, and heifers should be checked more frequently, perhaps several times a day. Having the cows and heifers in an easily accessible pasture will make this task more manageable.

As new calves arrive, so does the threat of calf scours. Allowing cows to calve in clean pastures is better for the health of the calf and the cow or heifer. Application of a pasture rotation system can greatly reduce the occurrence of scours in your calf crop. One such system is the Sandhills Calving Method.

Pathogens

Calf scours are caused by a variety of infectious microorganisms, including bacteria (*E. coli*, *Salmonella*, *Clostridium perfringens*, *Campylobacter*). Viruses such as (coronavirus, rotavirus, bovine viral diarrhea virus), as well as protozoan parasites (*giardia*, *coccidia*, *Cryptosporidium*). Johne's disease is an adult diarrhea (*Mycobacterium avium* subspecies *paratuberculosis*) that is commonly contracted through a calf nursing a manure-contaminated teat. The infected animal does not show any clinical signs until after a prolonged incubation period, usually two to five years post exposure. Typically, the environment becomes contaminated with these pathogens and then serves as sources of infection.

The Solution to Pollution is Dilution

Exposure to pathogens may occur through direct contact with other cattle or via contact with contaminated environmental surfaces. For that reason, keeping the environment clean is recognized as important for controlling calf scours. Disease caused by exposure to pathogens can be prevented by physically separating animals, reducing the level of exposure, or minimizing contact time. Reducing crowded conditions decreases opportunity for contact with infected animals or contaminated surfaces.

Separation is the key

Key components of the Sandhills Calving Method are segregation of calves based on their age, and the frequent movement of pregnant cows to clean calving pastures. Age segregation prevents the serial passage of pathogens from older calves to younger calves. The routine movement (every seven to 10 days) of pregnant cows to new calving pastures prevents the buildup of pathogens in the calving environment over the course of the calving season. This prevents exposure of the latest born calves to an overwhelming dose-load of pathogens. The objective of the system is to:

- Inhibit passage of pathogens
- Avoid contact between calves
- Prevent younger calves being exposed to a build-up of pathogens

Rotation System

The Sandhills Calving System uses adjacent pastures for calving, rather than high animal-density calving lots.

Steps of the system are:

- Cows are turned into the first calving pasture (pasture 1) prior to calving and continues in pasture 1 for 2 weeks.

- After two weeks, the cows that have not yet calved are moved to Pasture 2. Existing cow-calf pairs remain in pasture 1.
- After a week of calving in pasture 2, cows that have not calved are moved to Pasture 3 and cow-calf pairs born in pasture 2 remain in pasture 2.
- Each subsequent week cows that have not yet calved are moved to a new pasture and pairs remain in their pasture of birth.

The result is cow-calf pairs distributed over multiple pastures; each containing calves within one week of age of each other. Cow-calf pairs from different pastures may be commingled after the youngest calf is four weeks of age and all calves are considered low-risk for neonatal diarrhea.

Since this program is based on a well-defined calving system, veterinary involvement is essential for the program to be successful. Herd pregnancy exams can help to sort cows by gestational ages. These cows can then be separated into the proper group to enter the correct pasture at the beginning of the calving season. If you have questions regarding the Sandhills Calving System either contact your local veterinarian, your extension agent, or Lew Strickland. 865-974-3538, lstrick5@utk.edu

Preparing for the Calving Season

Lew Strickland, DVM

Successful calving seasons are the result of good planning and hard work. Observation of cows and heifers before and during the calving season is necessary to ensure a good calf crop. Cows should be checked at least once daily during the calving season, and heifers should be checked more frequently, perhaps several times a day. Having the cows and heifers in an easily accessible pasture will make this task more manageable. Also, allowing animals to calve in clean pastures is better for the health of the calf and the cow or heifer.

One of the complications encountered during the calving season is dystocia (a difficult delivery), and sometimes calving assistance is required. Therefore, producers need to be familiar with the signs of impending parturition as well as the sequence of events associated with normal labor and delivery to determine when assistance is necessary.

Signs of impending parturition (calving):

- The udder and vulva will often enlarge 1-3 weeks prior to parturition.
- Cows and heifers often become more nervous (restless) and, if possible, may isolate themselves from the rest of the herd just prior to parturition.
- Cows and heifers may show signs of abdominal discomfort by kicking at their belly; they may also glance to the rear nervously.
- The tail-head appears raised as ligaments around the rump of the cow or heifer relax.

Normal parturition is divided into three sequential stages:

Stage I – Preparatory

- Duration – cows (4-8 hours); heifers (6-12 hours)
- The cow or heifer may become nervous and isolate herself from the rest of the herd.
- Uterine contractions begin.
- ‘Dropping’ of colostrum/milk into the teats.
- ‘Water bag’ appears towards the end of this stage. Stage II begins when the water bag breaks.

Stage II – Delivery of the calf

- Duration – cows (< 1 hour); heifers (1-4 hours)
- The cow or heifer is now actively straining.
- In normal parturition, the calf’s forelegs and head protrude first about 70% of the time, and the hind legs and tail come first about 30% of the time.
- The calf is delivered.

Stage III – Expulsion of the placenta (afterbirth)

- Duration – cows and heifers (1-12 hours; usually occurs within the first few hours)
- Cow or heifer straining decreases.
- Uterine contractions continue and the placenta is expelled.
- If the placenta is not expelled soon after birth, do NOT manually remove the placenta by pulling it out. Manual removal can leave portions of the placenta in the uterus and serve as a source of infection.

Assistance may be necessary when parturition does not proceed as described, and early intervention is the key to a successful outcome. Waiting too long to provide assistance unnecessarily risks the life of the cow or heifer and her calf. Seek the help of a veterinarian or experienced producer when needed.

Supplies used to assist with calf delivery:

- Obstetrical (OB) chains or ropes, and chains are preferred because they can be easily disinfected after use. OB chains and ropes are used for pulling on the legs. NEVER attach OB chains or ropes to the jaw and pull on a calf, as the jaw will almost always fracture.
- OB handles for pulling on the chains or ropes
- Mechanical calf puller (‘calf-jack’) – USE WITH CAUTION AND DO NOT APPLY EXCESSIVE FORCE. A calf-jack can exert substantial force on the cow or heifer and the calf. When used improperly the cow, heifer, and/or calf can be injured or killed. NEVER ATTEMPT TO DELIVER A CALF BY PULLING WITH ANY TYPE OF VEHICLE.
- OB lubricants
- Plastic gloves
- Buckets
- Towels and paper towels
- Iodine for disinfecting the calf’s navel

Some things to keep in mind when trying to decide when to call your veterinarian:

- Calving takes time, and it often takes longer for heifers than cows, so be patient. However, progress should be steady and generally fit within the time-frames previously mentioned. Once Stage II begins (delivery of the calf), the cow or heifer should make visible progress about every 15 to 20 minutes.

- Use the '2+1 rule' to help determine when to call. Upon examination, 2 feet and 1 head (or 2 feet and 1 tail) should be felt or seen for a normal delivery to proceed.
- If the cow or heifer becomes exhausted and quits trying to calve, then assistance is necessary.
- When in doubt, call your veterinarian. The outcome is always more favorable if assistance is provided sooner rather than later.

If possible, and if safe for you and the animal, capture the cow or heifer needing assistance before your veterinarian arrives. This will make his or her job easier, and minimize your expenses.

If you have any further questions, please contact your local Extension agent, or lstrick5@utk.edu 865-974-3538.