



# The Veterinary Link

by **BOB LARSON**, professor of production medicine, Kansas State University

## Assisting the cow at calving

Most beef producers don't need a scientific study to tell them that calving difficulty has a tremendous effect on calf death loss, but a large, 15-year study done at Miles City, Mont., confirmed that calving difficulty (dystocia) directly accounted for 51% of calf death loss prior to weaning. There is also substantial evidence that calves that survive a difficult birth are much more likely to die due to scours, pneumonia or other problems prior to weaning than calves that had a normal birth. Factors contributing to calving problems fall into three main categories — calf effects, cow effects and calf position at birth.

### Calving problems

Heavy birth weights account for most of the problems related to the calf. Birth weights are influenced by breed of the sire, bull within a breed, sex of the calf, age of the cow and, to a slight degree, nutrition of the cow. Shape of the calf may also have a small effect on calving problems. The primary cow factor is age, with first-calf heifers more likely to require

---

**If you have been working on a difficult calving for more than 30 minutes without making progress, it is probably time to call a veterinarian or other experienced herdsman for assistance.**

---

assistance than cows. About 5% of calves are in abnormal positions at birth (such as forelegs or head turned back, breech, rear-end position, sideways or rotated, etc.). This requires the assistance of a veterinarian or an experienced herdsman to position the calf correctly prior to delivery. If calf position cannot be corrected, the veterinarian may have to perform a C-section.

Recognizing normal calving is an important skill to properly manage calving difficulty. A common mistake is jumping in and pulling a calf before the calf and birth canal are ready. It is not necessary and often not appropriate to pull the calf as soon as feet appear outside the vulva. When the feet first appear, the cervix may not be fully

dilated, and the vagina and vulva have not had a chance to relax to their full extent. Excessive pulling at this point, especially with a large calf, may cause a ruptured cervix or produce a lacerated or torn vagina and vulva, risking prolapse, fatal bleeding and/or infection.

Because the length of labor can vary, the best general recommendation is to restrain and check the heifer if no progress is seen in a 30-minute time span. The first step is to examine the heifer and calf to determine if a problem is present. If, after examination, no problem can be identified, then the heifer should be allowed to continue labor unassisted for another 30 minutes.

To appropriately examine a heifer, she should be restrained with a

headcatch or halter to prevent injury to the examiner as well as to the cow and calf. A clean, well-lit area that is protected from cold or wet weather is desirable. You should have a clean bucket and water with disinfectant to soak the calving chains and handles, soap (for cleaning the back end of the cow), lubricant, paper towels, and plastic sleeves. Cleanliness cannot be overemphasized. Introduction of bacteria into the reproductive tract by dirty equipment or your arms may cause health problems and reduce fertility.

The examination should be performed the same way every time to reduce the possibility of overlooking a potential problem. The examination should be made with specific questions or goals in mind, including the following:

### **1. Is the vagina unrestricted and the cervix dilated?**

While wearing a plastic sleeve and lubricating the arm thoroughly, you

*(Continued on page 34)*

## Vet Link *(from page 33)*

should insert a hand into the vagina, palm flat against the vaginal wall and slowly slide forward. When fully dilated, the cervix is barely noticeable as a thickened band at the front end of the vagina. If a band or ridge is definitely felt, it is probably the cervix that is not fully dilated.

### **2. Is the water sac broken?**

If the sac is not broken and the calf is not well into the pelvic canal, it should not be broken at this time. If the sac is broken, determine the amount of fluid and natural lubrication present. The less fluid present and the drier the calf feels, the bigger the potential problem.

### **3. Is the calf in the normal position?**

The normal position is headfirst, both front legs extended, with the head lying extended between and resting on them. This position is determined by noting three things:

- a. the head;
- b. the hooves face down; and

- c. the first two joints of the legs (the fetlock and the knee) bend in the same direction.

A simple backward calf is tail-first with both rear legs extended backward. This position is determined by noting three things:

- a. the tail;
- b. the hooves face up; and
- c. the first two joints of the legs (the fetlock and the stifle) bend in the opposite direction.

### **4. Can the calf pass through the pelvic canal?**

This is often the most difficult question to answer, but is one of the most critical. To help answer this question, some simple "tests for delivery" can be utilized.

---

**A common mistake is jumping in and pulling a calf before the calf and birth canal are ready.**

---

### **Tests for delivery**

There are three tests for delivery that can be utilized for a calf in the normal, headfirst position.

**First test for delivery.** A separate calving chain is placed on each front leg. Pull on both chains at the same time with approximately the strength of one adult. The front legs are pulled through the maternal pelvis, and the calf's head should come forward with the legs so that the calf's nose can be reached in less than a hand's length. This indicates that there is room for both the legs and the head to fit in the heifer's pelvis at the same time. If the head does not fully enter the pelvis, the first test has failed.

**Second test for delivery.** Recognize that in many difficult calvings, the head and limbs will have entered the pelvis, thus passing the first test for delivery. If this is the case, proceed with the second test.

With calving chains on each limb, pull on one limb with approximately the strength of one adult. Continue to pull until the limb is extended as far as possible. The first joint of the limb (the fetlock) should extend at least one hand's width beyond the vulva. If the cow is lying down, the down limb is extended first. If the limb cannot be extended one hand's width beyond the vulva, the second test for delivery has failed.

**Third test for delivery.** Once the first limb is extended, its position is held and the other limb is pulled. The first joint of this limb (the fetlock) should extend at least one hand's width beyond the vulva. If this second limb cannot be extended one hand's width beyond the vulva, the third test for delivery has failed.

If any one of the three tests for delivery fails, a veterinarian or an experienced herdsman should be called in to continue the delivery and to consider if a C-section is needed. If all three tests for delivery are accomplished successfully, attempts to deliver the calf can continue.

### Steps in calving assistance

Once you determine that calving assistance is needed, keep in mind there are three major obstacles to delivery of a calf in the normal presentation: the head, the shoulders and the hips.

If the examination indicates a dry fetus and birth canal, additional lubrication is needed. Use a commercial obstetrical (OB) lubricant available at most veterinary clinics and farm supply stores. Attach the OB chains to the front legs of the calf, placing the loop of each chain around each leg.

Placement of the chains should be around the pastern (below the dew claw and above the hooves), with the looped chain on the top side of the hooves. Careful attention to this placement when pulling on the chains will generally result in the least amount of damage to the calf. If the chains are allowed to become slack and/or excessive force is applied, the chain may damage the hooves.

The OB chains may also be placed above the fetlocks (above the dew claws) with a half-hitch around the pastern. Attach the OB handles and pull with no more force than can be applied by one adult man. Pull on one leg so that it advances a few inches, and then pull the other until it is even with the first leg to “walk” the calf’s shoulders through the birth canal. You should pull in a steady, even manner and only when the cow is straining.

Once the calf’s head and shoulders are out, grab the calf’s chest and rotate him a quarter to a half of a turn so that his hips are at about a 45° angle. This rotates the calf enough so that its hip bones enter the pelvic canal at its widest point. If “hip lock” occurs, try to push the calf back into the birth canal a short distance and then rotate the calf and try again.

Whenever you have a calf coming rear-feet-first, you should try to assist the cow so that delivery is quicker. Attach the OB chains above the fetlock joint, and be sure the birth canal is adequately lubricated, as you are working against the normal direction of hair growth.

Although a great tool, mechanical calf pullers should only be used by an experienced herdsman or veterinarian. If used incorrectly, permanent damage can occur to both calf and cow. Many calves that die during assistance are killed because of improper (excessive) use of a mechanical puller. Always use

plenty of lubricant before and during assisting procedures. It is vital for easy delivery and protection of the delicate tissue of the birth canal and vagina. Lubricant and patience will often solve even difficult calving problems.

If you have been working on a difficult calving for more than 30 minutes without

making progress, it is probably time to call a veterinarian or other experienced herdsman for assistance.

Once you successfully complete a difficult birth, you should examine the heifer’s birth canal to check for injuries or tears to the reproductive tract that need veterinary care. If the cow or calf

does not stand soon after birth to allow normal nursing, the cow should be milked and the colostrum fed to the calf.

