



# The Veterinary Link

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## Assisting the cow at calving

Calving season is a time for long hours and the stress of trying to make the best decisions regarding when to assist heifers and cows having difficulty giving birth. Calving problems are a bigger concern for heifers than for cows simply because heifers have not reached their full skeletal size yet, and they don't have the experience of previous calvings.

### Factors and common mistakes

Factors contributing to calving problems fall into three main categories — calf effects, cow effects and calf position at birth.

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 assistance than cows. About 5% of the calves at birth are in abnormal positions,

such as forelegs or head turned back, breech, backward or rotated. In many situations, an abnormally positioned calf will require 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 caesarean section (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 torn cervix or vagina, risking the danger of prolapse, fatal bleeding, and/or infection.

### When to help

Because the length of labor can vary,

I usually recommend that producers restrain and check the heifer or cow if no progress is seen in a 30-minute timespan once the feet or water bag are visible. If, after examination, no problem can be identified, then the heifer should be allowed to continue unassisted for another 30 minutes.

To appropriately examine a heifer, she should be restrained with a headcatch or halter. A clean, well-lit area 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, lubricant, paper towels and plastic sleeves.

While perfect cleanliness cannot be expected, it is very important to keep your arms and equipment as clean as possible. The examination should be made with specific questions or goals in mind. These include:

**Is the vagina relaxed and the cervix dilated?** While wearing a plastic sleeve and lubricating the arm thoroughly, you 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, the cervix is probably not fully dilated.

**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 and the calf feels dry, it will be important to lubricate the calf in order to help with the delivery.

**Is the calf in the normal position?** The normal position is head-first, both front legs extended with the head lying extended between and resting on them. This position is determined by noting three things:

- 1) identify the head,
- 2) the hooves face down, and
- 3) the first two joints of the legs (the fetlock and the knee) bend in the same direction.

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

- 1) identify the tail,
- 2) the hooves face up, and
- 3) the first two joints of the legs (the fetlock and the stifle) bend in the opposite direction.

**Can the calf pass through the pelvic canal?** A large calf relative to the size of the pelvis is usually only a problem for heifers. Cows that are carrying an embryo transfer (ET) or clone calf can also have a calf that is too large for the birth canal. To determine if the calf can be delivered

without endangering the calf and the dam, three simple “tests for delivery” can be utilized for a calf in the normal, head-first position.

### Tests for delivery

**No. 1:** 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 easily felt. This indicates that there is room for 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.

**No. 2:** 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 (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.

**No. 3:** Once the first limb is extended, its position is held and the other limb is pulled. The first joint of this limb (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.

C-section of heifers and cows can be a very successful surgery for both the calf and the dam if done early. If the calf is already dead and the heifer is exhausted before a C-section is attempted, the likelihood for a productive cow in the future is rather low.

### Final thoughts

In order to make the best decisions during calving season, it is important to have a good facility to assist any heifers or cows experiencing calving difficulty. Learning what normal delivery can look like among different heifers and cows helps you to avoid causing problems by intervening too early. Becoming comfortable examining the cow at calving helps you to determine if the calf is in the proper position and able to pass through the birth canal without expert assistance. Additionally, working closely with your veterinarian so that you can receive advice and assistance when needed is important to provide the best care for your herd.