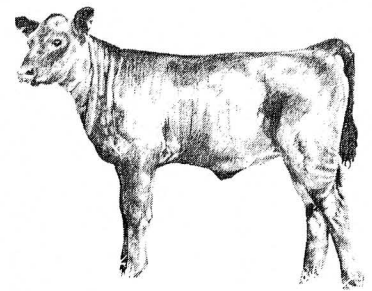


# CALVING

## Some Facts

## Some Suggestions



by Dr. Don van der Hagen, DVM

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To wean a calf from every cow every year—that's a primary goal in beef cattle production. Any number of things stand in the way of its achievement, but problems encountered during calving (especially with heifers) probably rank high on the list. Dr. Don van der Hagen, DVM, Big Timber, Mont., offers some basic information about the calving process itself, followed by some suggestions on pulling calves and common sense post-natal care.

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To do a proper job of calving, we need to understand what is going on inside the calving cow. Parturition (labor) is defined as expulsion of the fetus and subsequent expulsion of the placenta through the birth canal. Labor has three stages:

**1. Preparatory stage or first-stage labor** occurs when dilation of the birth canal takes place. The musculature of the uterus starts to contract, and the fetus is brought up to the pelvic cavity. The water bag is forced up against the internal opening of the cervix, causing its dilation; then the water bag eventually goes out through the birth canal and can be seen pushing out behind the cow. The cow becomes restless during this period and will wander away from the herd looking for a secluded place to calve. This stage varies quite a little in time but ordinarily goes on for 2-6 hours, with first-calf heifers taking a little longer.

**2. Second-stage labor** is when the abdominal press of the cow is brought into play. It starts with contractions of the cow's abdominal muscles and ends with the fetus being expelled to the outside wall. Most cows and especially heifers will lay down in this stage. (When helping a calving cow, allowance must be made for this.) This stage usually lasts ½-4 hours.

There are times when a cow will go through first-stage labor but will not continue into the second stage. And it definitely helps to have some idea of what is wrong if this happens.

### Most Common Problem

Three things are necessary for second-stage labor to begin—a healthy uterus, a normal fetus and an intact abdominal wall. Ordinarily it is fairly obvious whether the cow has an intact abdominal wall, so we are mostly concerned with the first two. And the problem I see most commonly is a breech calf (a calf presented backwards, with feet and legs up under its abdomen).

Many cows carrying a calf in this position will not go into good second-stage labor.

A torsioned uterus (a uterus twisted on its horizontal axis, obliterating the opening) can be another reason second-stage labor doesn't occur. And a dead fetus can be responsible—the fetus plays a part in initiation of labor, and if it is dead, labor may fail. Lack of proper hormone action on the uterus also will cause failure of proper contractions, and the cow will not go into second-stage labor.

**3. Third-stage labor** involves involution of the uterus and expelling of the fetal placenta or membrane (referred to as cleaning). If a cow does not clean, infection can result in the uterus, which not only can inhibit future breeding and conception but easily can kill the cow. Uterine prolapse can be another serious result of retained placenta. Retained membranes tend to make a cow strain, and she may do so until the whole uterus is everted to the outside. This is a serious emergency.

### Dystocia

Dystocia is the condition in which parturition becomes very difficult or impossible for the cow without outside help. Cows vary some in how they act at calving and how long they spend in the stages of labor, so determining if a cow needs help can be a problem. I believe a cow should be left undisturbed as much as possible while calving. But my rule of calving is—when in doubt, check. It is better to check the cow and find you are too early than to discover trouble after the calf is dead. Experience helps in these cases, but I think the rule applies. When in doubt, check.

Timing the stages of labor is a good way to discover trouble. Older cows ordinarily will spend not more than 6-8 hours in first-stage labor and no more than 2-3 hours in second-stage labor, often even less time than that. First-calf heifers, however, usual-

ly will take a little longer than cows, especially in second-stage labor. And these time spans may need to be modified for individuals.

Assuming you have determined the cow needs help, what do you do? The first thing that must be done is to tie up the cow, preferably with a halter. She should be tied low in a corner if possible, because this helps to keep her from moving too far while she is being examined and any necessary manipulations are carried out. Tie her low so if she goes down in the calving process (as most do), she will not be left hanging by the halter. I don't like to have a cow in a squeeze chute to deliver a calf; if she goes down, not only is she being squeezed, but it is nearly impossible to get the proper angle of pull on the fetus.

### Sanitation

The cow now should be thoroughly cleaned. First I like to tie a cow's tail to her neck with a small rope (baler twine works fine). This makes it easier to clean her and gets her tail out of the way while you are working. Sanitation is a must—you must have clean hands and arms and keep the cow clean. And use good lubrication so any manipulation or traction is much easier on the cow and yourself.

Now you must decide if the calf can be expelled by traction or if more serious help such as a cesarean is necessary. Ordinarily, if the calf's front legs and head can be pulled up into the cow's pelvis by hand, you can pull it. If you can't pull the head and legs up by hand, you should never hook up a calf puller. With a posterior (backward) presentation, this decision is harder to make and is mostly made on how things feel under moderate tension with the calf puller.

Avoid hooking onto just any part of the calf and then pulling. The fetus must be in the proper position before you apply traction. There are only *two acceptable positions* for pulling a calf. The best is an anterior presentation with the calf's back up and the forelimbs fully extended into the birth canal, with the head resting on the limbs. The other acceptable way is a posterior presentation with the calf's back up and the hind legs fully extended into the birth canal. You should have one of these two options before any traction is applied.

## **Calf Puller**

The calf puller or fetal extractor—a device designed especially for the job—is very important because of the direction and timing of pull. Only with a good puller can they be achieved properly. I like a puller that can be operated with one hand, as it is important to use the other hand to keep track of what is happening inside the cow, at least until the calf's head is out of the canal. Also, a good puller should release tension easily, as it is necessary at times to do that in order to be able to change something.

Traction should be timed so it is applied at the same time the cow strains. Straining tends to tip the pelvis and also enlarges it somewhat; this makes it easier on the cow and the calf. And it is important to get the puller's O.B. chains on the calf's legs above the fetlocks. If they are left below the fetlocks, it is much easier to break the legs or get an epiphysical separation. Another point—you must be very careful in manipulating the fetus in the cow, as the calf's teeth are very sharp and easily can slice through the wall of the uterus.

When the calf is expelled from the cow, don't be too quick to pull it away. It is always a good idea to leave the umbilical cord attached for a short time. This way the calf gets a rest from the pressure of expulsion through the canal before initiation of breathing becomes critical. And it allows a little extra blood to be pumped into the calf's body. When the umbilical cord is

severed, it should be thoroughly soaked in strong iodine. And it doesn't hurt to do this two or three times at intervals of a few hours.

## **The First Breath**

The calf's airway should be cleaned out as soon after birth as possible, and then a stimulous to initiate breathing should be applied—a straw in the nostril or a finger in the ear will work. It is very easy for breech calves to inhale fluid, especially if they are not pulled out fairly quickly. In this situation, it is a good idea to hold the calf by the hind legs and swing it in a circle around you so centrifugal force clears the airway.

One of the things to watch for and guard against, especially on the backward calf delivery, is uterine prolapse. One of the more common causes of uterine prolapse is pulling a calf too fast. Many people tend to pull a normally presented calf too fast; however, a breech calf must be pulled fairly quickly, so then you must be on guard and see that the cow doesn't lie there and strain until her whole uterus is everted to the outside. One good way to avoid this is to get the cow up on her feet as soon as possible after the calf is born and if necessary walk her around for a time until she loses her inclination to strain.

Once the calf is born, an all-out effort must be made to keep it healthy. In this regard, two things cannot be over emphasized. First the calf must receive plenty of colostrum (first milk) as soon as possible

after birth and must continue to receive it for at least 24-36 hours. This gives the calf its main line of defense against the early challenges of disease-causing bacteria and virus. If there is any doubt the calf will suck right away, it is a good idea to milk 1-2 quarts of colostrum from the cow and give it to the calf using a calf tuber and bag.

## **Care of the Newborn**

The second thing to emphasize is to do everything possible to keep the newborn calf clean and dry. And remember that it does little good to clean the shed before calving or even to apply all kinds of disinfecting agents to the area if after calving all cows are crowded in the shed and allowed to lie in a deep mire of mud and manure. The cow's udder gets filthy, and every time the calf nurses it takes in a tremendous load of disease-causing organisms.

Good sanitation plays a vital role not only in whether the newborn calf survives but also how well it develops into an adult animal. As soon as possible after calving, the cow and calf should be moved to a clean area large enough for them to spread out in and stay clean but small enough to make checking them every day easy.

It is best not to leave cow-calf pairs in with pregnant cows, as it is easier to check each group when they are separated. Also older calves, if kept with the drop bunch, may quickly spread any of their problems (such as scours) to the newborn calves when they are the most susceptible to disease. ▢