

## **Know the Stages of Labor**

**By Charles E. Gardner, DVM**

As I cleaned the area around the vulva of Jim's cow, I began to dread what I would find. The foul odor of a decomposing calf was coming from the vaginal area. I feared that a good outcome for this animal was not likely. Jim had called that morning to say that he had a cow due to freshen that was showing signs of beginning labor, but did not do any actual pushing. This had been happening for a few days. What Jim did not realize was that the cow was already in labor, specifically stage #1. Some problem was keeping her from entering stage #2.

In stage #1 of labor, the cow or heifer is having mild uterine contractions, and her cervix is in the process of dilating. During pregnancy, the cervix acts as a tight seal between the inside of the uterus, where the fetus is developing, and the vagina, which is the passage from the uterus to the outside world. This tight seal protects the fetus from infection from germs in the vagina. When the fetus is fully developed and ready for birth, the cervix must dilate to allow the now fully formed calf to pass into the birth canal and then outside of the cow. Stage one of labor should last for about 2 to 4 hours in mature cows, and 3 to 6 hours in heifers.

Stage #2 of labor begins when the cow senses the calf entering the birth canal. At this point she will begin to show obvious contractions, with her pushing hard. The feet and then the nose should soon appear. After that, steady progress should occur, with the calf fully born within an hour in mature cows and no more than two hours in heifers.

If the animal does not progress from stage #1 to #2 within the timeframe listed above, there is probably something stopping the calf from entering the birth canal. This could be due to mal-positioning, as with the head or a limb twisted back, or to a uterine torsion. A uterine torsion causes the vagina to twist and narrow, and then the calf's progress is blocked. With either cause, the cow or heifer remains in stage #1 labor. Stage #3 of labor is the delivery of the placenta.

With Jim's cow, as I reached into the vagina, I could feel a twisting and a narrowing of that passage. This is the sure sign of a uterine torsion. The foul odor indicated that the calf was dead and starting to decompose. This meant the condition had existed for a few days. This in turn implied that the blood supply to the tissues involved was compromised.

I was able to correct the torsion quickly and soon had the calf delivered. Reaching back into the uterus confirmed my fears, as I felt a tear in it. This meant the fluids from the decomposing calf were now in the abdomen of the cow. Infection was inevitable, even if

the tear was repaired. After discussing options with Jim, we treated the cow with a heavy dose of antibiotics and hoped for the best. By the next day, she was dead.

The “take-home lesson” of this story is the importance of paying close attention to all animals near their due date. If you see the signs of stage #1 labor, continue to observe the animal for two to three hours. If she does not progress to stage #2, she should be examined. Be sure to wash and disinfect the vulva area before reaching in with a new shoulder length glove. If you find a nose and two front feet, or two rear feet, then continue to observe for steady progress. If you find a problem, and know how to correct it, go ahead. If you do not succeed within ten or fifteen minutes, call your veterinarian.