

**A LITTLE BIT COUNTRY
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Handling Calving Difficulties

This past January livestock producers of the area were able to hear Dr. Robert Mortimer of Colorado State University discuss calving and calving difficulties. Dr. Mortimer is widely recognized for his expertise in calving management. He has overseen the calving of thousands of heifers in training students and veterinarians in obstetrics.

Dr. Mortimer told us the reason for most calf losses in the beef cattle industry is still calving difficulty. He described four relationships that calving difficulty has on the calf. First, the more difficult the calving difficulty, the greater risk for infectious diseases. Typically, this is reflected by higher incidences and death loss associated with either diarrhea or respiratory disease. Second, the more difficult the calving difficulty, the harder it is for the calf to maintain its body temperature following calving.

The third relationship with degree of calving difficulty is the decrease in absorption of protective antibodies with more difficult deliveries. The fourth relationship with calving difficulty that has been firmly established is the increased infertility losses in the dam. Mortimer emphasized additional losses include increased maternal deaths, treatment costs and diminished productivity of the dam. He cited a research survey on 1889 cows designed to evaluate the effects of dystocia on fertility. The results found that cows which experienced calving difficulties had a delay in resuming estrus and showed 15.9% reduction in conception rate compared with cows which had calved normally.

Dr. Mortimer described three stages of a normal calving process and gave some intervention guidelines. He acknowledged that visible signs of labor onset may be scant or absent in mature cows, but more evident in the first-calf heifers. The cow will usually

seek an isolated place and vaginal discharges increase in liquefaction and expulsion of the cervical plug. The cow (particularly first-calf heifers) will show signs of uneasiness and pain. Occasionally, she will lick at her belly and wring her tail. Restlessness and a tendency to lie down and get up frequently are also often observed. Stage one begins with contraction of the longitudinal and circular muscle fibers of the uterus and ends when the cervix is fully dilated and the fetal parts enter the birth canal. Uterine contractions first occur about every 15 minutes, but by the end of stage one they occur about every three minutes. As the first stage progresses, the contractions become strong enough to cause the cow to arch her back and strain slightly. In cattle, the normal duration of stage one is two to six hours sometimes longer in heifers.

The decision to intervene in the calving process can be difficult for the rancher. Intervention means the cow must be restrained which only adds to her anxiety and disrupts a possible natural delivery. Dr. Mortimer suggested intervention if the cow has been in stage one for over eight hours. Some abnormal deliveries do not allow the cow to progress into a normal stage two of labor. In other cows, the cow may be in a state of uterine inertia and will not go into stage two of labor.

The second stage of labor begins when the cervix is fully dilated and the second water sac (amniotic sac) plus fetal parts enter the birth canal further stimulating strong uterine contractions. For the rancher, observation of the water sac is probably the most practical indication the cow is in stage two. The pains of uterine contraction at this point usually force most cows to lie down.

Second stage labor lasts from one half to four hours in the cow, but Dr. Mortimer suggests assistance at not over two hours and even earlier if delivery is not progressing normally.

Dr. Mortimer defines stage three of the calving process as expulsion of the placenta or fetal membrane which usually occurs eight to twelve hours after calf delivery.

Dr. Mortimer shared many more details about the calving process and handling difficulties. Many of these can be found in the 18 page handout presented for general distribution. A copy can be obtained by calling the Williams County Extension office. (701) 577-4595.