ASSISTING MOTHER NATURE AT CALVING TIME

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Birth represents an abrupt change for the beef calf from one environment to another. It is one of the shortest periods in the life of the bovine but is the most hazardous. It marks the end of gestation and the start of independent life. Calf death loss increases toward the end of gestation partly because of the dangers of birth. The dangers are TRAUMA and/or ANOXIA as a result of a difficult or prolonged birth.

The common term for a difficult birth is dystocia and it is the major cause of death of the newborn calf. It is also important to understand that dystocia and/or prolonged birth affects the vitality and health of the newborn calf. The calf may be born alive but is doomed by unrecognized damage. This can be explained by understanding the effects of anoxia and/or trauma.

Anoxia is a lack or oxygen and it is a common occurrence. Most calves are born with some degree of anoxia but are able to compensate and survive. Severe anoxia can occur as a result of dystocia. When the critical oxygen supply is cut off, tissue damage occurs because anoxia causes acid to accumulate in the blood. When the blood pH falls below 6.6 the heart ceases beating.

Birth trauma describes the mechanical damage incurred during birth and adds to anoxia. The result is hemorrhage in the brain or spinal cord. Trauma may also cause fractured ribs, a ruptured liver, hemorrhage in the joints, and blood in the muscles. Trauma during birth compresses the calf. The newborn calf is already anoxic and is unable to breath due to the birth trauma. This causes further anoxia and a continuation of the build up of acid in the blood resulting in death shortly after birth.

The damage caused by trauma and/or anoxia is often latent and contributes to illness or death following birth. This information was documented in a study conducted by the USDA and reported as the Cow-Calf Health and Productivity Audit. The report revealed that the average mortality estimates from birth to weaning was 8% to 10% of all calves delivered and 70% of those losses occur by 3 days of age. The following important points summarize why the calves are lost:

1. **Dystocia** is the number one contributor to calf death.
2. **Dystocia** can affect calves severe enough to cause mortality directly, or can contribute to other problems and indirectly increase calf death.
3. Heifers have a higher incidence or dystocia than mature cows, and calves from heifers have increased death loss.
4. Calves affected by dystocia or from other cow herd health problems such as deficient or excessive body condition adapt poorly to life outside the uterus and succumb to environmental problems more easily.
5. Infectious disease problems increase in calves with dystocia. Such calves initially adapt poorly to life outside the uterus, and often have poor maternal immunoglobulin absorption.
6. Poor maternal nutrition reduces calf vigor, calf body heat production, and calf immunoglobulin absorption.
7. Environmental conditions such as cold, wind, and moisture increase calf death.
8. Infectious disease is an important cause of death in calves greater than three days old.

Therefore it is clear that the key to reducing calf death loss is to prevent dystocia and to recognize when the birthing
process is prolonged or difficult and provide timely assistance.

Generalizations about when to intervene and provide assistance are of little value. Experience is necessary for making sound decisions in this matter. Dystocia caused by a constricted vulva requires immediate assistance and should be easy to identify. If a fetus is presented breech or with the head turned, intense labor may never be observed. Assistance is necessary and the herdsmen must pay attention to the behavior of each individual animal. In most cases, initial assistance during parturition should be limited to regular observations of the female from a distance. Unnecessary excitement brought on by an anxious attendant often causes reduced labor efforts by the cow or heifer causing a prolonged birth. The result is often a stillbirth. Hard and fast rules are difficult to establish but in general when a cow has been in labor four hours without progress, an examination is warranted.

Wisdom in management of beef cattle at calving time to decrease the damage caused by dystocia is based on the following basic points. First, the attendant must be patient enough to let nature take its course and second they must be able to recognize when assistance is needed. They must apply common sense to all efforts of assistance. Every attendant should take time to observe the normal birthing process. This training will provide the experience and common sense required to successfully assist mother nature at calving time.

For most beef cow herds the single most important means of increasing income is increasing the number of calves weaned and sold in relation to the number of cows in the operation. Timely assistance to detect and correct dystocia in the beef cow herd is an important step in achieving that goal.