

Pregnancy Determination In Beef Cattle

Reproduction must be a high priority for any cattle producer whose enterprise is to be profitable. Data from both industry and research herds indicate that one out of every four or five cows will fail to wean a calf each year, which results in a 20 to 25 percent loss to the producer. Carrying open cows might not seem to matter until we remember that the annual cow cost is more than \$300, with roughly 70 percent of this in winter feed alone, and the cost continues to rise.

Increased reproductive efficiency is absolutely essential for increased returns and survival in the competitive beef cattle world. Low reproduction is one of the greatest inefficiencies facing cattlemen. Although there are many factors involved in obtaining a high calving percentage, a good starting place is through pregnancy determination.

Pregnancy determination, followed by culling (selling) all open cows, will improve the reproductive efficiency of any cow herd. Open cows have a tendency to show up open again; while early breeding cows appear to calve, return to heat, and rebreed more consistently. To improve reproductive efficiency, the cattle owner must adopt a short breeding and calving season. Cows must breed, calve, and rebreed on schedule. Every female in the herd must calve every 12 months if the beef operation is to produce at its most efficient level.

Pregnancy is determined by rectal palpation. The speed with which pregnancy is determined depends upon management of the cattle, the working chute, stage of pregnancy, and the palpator's experience. Under good conditions, from 600 to 800 cows may be palpated in a day. A good working chute with walk-in gates is essential. Several workers to move cattle quickly and to record information supplied by the palpator are important.

The palpator must have a thorough knowledge of the female reproductive tract. The genital tract lies directly below the large intestine. Palpation is accomplished by inserting a gloved hand and arm, well lubricated with soap and water containing a mild antiseptic, into the rectum (large intestine) and examining the genital tract directly below. The reproductive tract lies on the floor of the pelvis in open females and in part on the pelvis floor as pregnancy progresses. Feeling through the rectal wall is no more than feeling through a layer or two of thin rubber.

The genital tract is not difficult to find for the experienced person; however, for the inexperienced, it can be frustrating. The reproductive tract is slightly different in every animal. In the open cow, the reproductive tract is generally described as lying on the floor of the pelvis. This is true, but it may be floating up off the floor and to one side or the other. The paunch (stomach), located directly forward and to the left, is a stumbling block for the novice.

A knowledge of the cow's physical makeup and developing a "feel sensation" is necessary for the palpator. This feel sensation comes through knowledge of the cow's physical makeup and with experience. Experience builds confidence and the palpator will improve speed and ability in time.

Fetal size over time is described in Table 1. This is important for the palpator who needs to establish an approximate age of the fetus. However, this skill should be left to those who palpate cattle on a regular basis.

Determining fetal age is not necessary for cattle owners who palpate their own cattle on an annual basis. They generally palpate their cows at time of

weaning and are concerned with whether or not the cows are bred, not the age of the fetus. With established breeding and calving seasons, producers need to find open cows and sell them to save on winter feed bills.

At 6-8 months of age when the average producer would be palpating, the fetus weighs 20-60 pounds, is 24-36 inches long, and can easily be felt. If the fetus happens to be down in the body cavity, enlarged cotyledons can generally be palpated. Locating the cervix pulled across or over the pelvis rim and lifting up on it can tell the palpator, by the weight, that the cow is pregnant. There are numerous telltale signs the palpator can feel, any one of which indicates presence of a fetus. Locating the cervix and uterine horns lying on the pelvis floor confirms the absence of pregnancy at this stage. The reproductive tract in

the open cow is light in weight, floats upward when pulled by the cervix, and, in general, can rest in the palm of one's hand. With knowledge of the female reproductive tract and a developed ability to feel the genital tract and its parts, one can become rather skilled at palpating, especially at time of weaning when cows are 6-8 months pregnant.

Finding cows to practice on need not be a problem. The skilled technician can train the cattle owner or a representative using the owner's cattle. Damage should not occur from the trainer and trainee going into each female if plenty of water, lubricant, a mild disinfectant, and care are used. Learning and developing the "technique of feel" within the cow is a matter of attitude. The desire to learn is the greatest attribute needed.

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Table 1. Fetal Size and Uterine Horn Characteristics

Days of Gestation	Fetal		Uterine Horn Characteristic
	Weight	Length	
30-35	1/100 oz	2/5"	One horn slightly enlarged. Uterus in position of non-pregnant uterus. Embryonic visicle size of a quarter.
50-60	1/4 - 1/2 oz	2 - 2-1/2"	Uterine horn oblong, soft and size of banana; fluid filled, and pulled slightly over pelvic brim into body cavity. Fetus is mouse size.
100-120	3/4 - 1 3/4 lb	10-12"	Both horns swollen, 4-5" diameter and pulled into body cavity. Fetus is large rat to small cat size. Colytedons noticeable and 1-1 1/2" in length.
180	10-16 lb	20-24"	Horns and fetus out of reach in body cavity. Fetus is size of small dog. Cotyledons enlarged.
210-240	20-60 lb	24-36"	Fetus can be felt. This is the time most cattle owners will be palpating (weaning time).