

Pregnancy Testing Methods on Beef Cattle

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Introduction

In the beef industry, it is a standard for females to be expected to produce one calf every year. By using a pregnancy diagnosis, producers can identify if their females if they are pregnant or open within 30 days of breeding, instead of waiting 283 days at the end of their gestation period when they are supposed to calve. According to recent statistics produced by the United States Department of Agriculture, it costs roughly \$600-\$700 per year to maintain the average beef cow in the United States. One of the most important and overlooked methods of a cattle operation from being more efficient is pregnancy testing their cattle. There are a few different methods available: rectal palpation, ultrasound, and blood test.

Rectal Palpation

This method is the oldest, simplest, and most commonly one used in cattle, but it requires a technician or a veterinarian with the proper training to ensure accuracy on this method. The technician will use their skills to find the uterus and horns of the cow through the rectum (Image 1).

1. Diagnosis can be made 35-40 days following breeding.
2. Accuracy depends on your palpator's skills (usually 95%).
3. Have result in real-time.

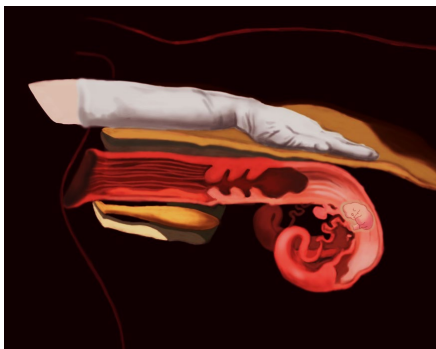


Image 1: Rectal palpation, one hand is used to palpate the uterus and the horns through the rectum (NFREC Repro Lab, 2022).

Ultrasound

The ultrasound method has become more widely used in the cattle industry and is a recommended technique for pregnancy diagnosis. This exam can be performed by the technician by introducing the ultrasound probe with their hand in the rectum of the cow and will monitor the ultrasound to find the uterus and horns, to try and find signs of pregnancy.

1. Diagnosis can be made 28 days following breeding.
2. Accuracy depends on your technician's skills and has the highest degree of accuracy.
3. Have result in real-time (Image 2).
4. Provide more information of age of pregnancy, size of fetus, sex, twins, status of ovaries, and more.



Image 2: Image taken by Dr. Mario Binelli, UF Animal Science Professor.

Blood Test

There are particular proteins that are present in a cow's blood when it becomes pregnant. Science has allowed for blood tests to be developed to use to identify these proteins in the blood. There are several types of commercial test that producers can purchase or send off to a lab to be tested. The small sample will need (2cc-5cc) of blood from the cow's tail in their coccygeal vein. The sample can either be sent to a lab or can be processed chute-side.

1. Diagnosis can be made 26 days following breeding.
2. Accuracy is very high.
3. Have results within 20 minutes or if you send it to a lab within a couple of days.