

Food Animal Reproduction and Medicine Services

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As a veterinarian in practice, working in the College of Veterinary Medicine, our research has developed as a consequence to investigation of clinical problems observed in the course of providing care to our client's beef cattle herds. We are looking at and seeking to understand animal populations in health and disease. We collect data on cattle performance, on morbidity and mortality. This review briefly discusses 3 areas of research and observation: 1) calf death loss [pregnancy loss and calf death loss to weaning]; 2) the impact of Johnes disease on cow-calf performance; and 3) the effect of *Tritrichomonas foetus* (Trich) on cow performance.

1) Tracking performance and mortality information is important to producer success. We have monitored the Santa Fe Beef (SF) and Beef (BRU) Units of the University of Florida and summarized 13 years of data. Some observations of interest: The loss of pregnancy at the units has ranged from 0.1% to 3.3% (mean 1.3%) at SF and 0% to 2.6% (mean 0.9%) at BRU; calf death loss has ranged from 3.0% to 7.1% (mean 5.2%) at SF and 4.1% to 9.3% (mean 5.9%) at BRU. At weaning, calf crop has ranged from 66.2% to 85.5% (mean 78.7%) at SF and 69.7% to 85.9% (mean 79.7%) at BRU. These weaning percentages are lower than I would personally like, despite our working closely with these units and responding to health issues. These values are likely representative of results seen elsewhere in the State. [The numbers are based on Standardized Performance Analysis methodology].

2) We have followed performance of cows with different levels of likelihood that they have or have been exposed to *Mycobacterium avium subspecies paratuberculosis* (Johnes disease).

The levels were described by a score from 0 (least likely to be affected) to 4 (most likely). How did that risk affect performance? Cows with progressively higher scores required 5 more days in a breeding season to become pregnant, had a lower average body weight (5 lb per increase in score), a lower calf birth weight (1 lb per increase in score) and a lighter 205 day adjusted weaning weight (5 lb per increase in score). A rough estimate of lost production value per cow ranged from \$10 to \$60 as her likelihood of infection increased.

3) We continue to see lost production in herds as a result of the venereal disease *Tritrichomonas foetus*. Our surveys suggest that statewide from 11% (North Florida) to 40% (South Florida) of herds have one or more bulls infected with this organism. Of herds with the venereal disease present, about 11% of herd bulls are infected. These bulls are responsible for cows that suffer early embryonic death, abortions and chronic uterine infections. The result is a delay in cows attaining a full-term pregnancy (a prolonged time to conception) or not attaining pregnancy at all (open cows). The producer outcome is a lesser pregnancy percentage and calves born later in the calving season. The number of calves weaned per exposed female is reduced about 1% for each 1% rise in number of infected bulls. The weaning weight of each calf in the herd is reduced about 3.5 lb for each 1% rise in the number of infected bulls.

As we document the performance of our cow herds, we are also implementing ways to address and resolve these impediments to cow productivity.