ABSTRACT

Estrus synchronization and artificial insemination are two of the most important management practices available to producers to increase reproductive performance in a beef cow-calf operation. Unfortunately, a small number of producers utilize these practices due to increased labor requirements. The use of fixed-time artificial insemination (FTAI) reduces the amount of time and labor required to detect estrus, leading to decreased input requirements.

The following experiments were performed in order to compare the use of long-term controlled internal drug release (CIDR) insert-based estrus synchronization protocols prior to FTAI in estrous-cycling and anestrous postpartum beef cows.

In experiments 1 and 2, two long-term CIDR-based estrus synchronization protocols were compared on the basis of physiological characteristics, including serum steroid hormone concentrations, estrous response, and follicular dynamics, as well as pregnancy rates resulting from FTAI. From these intensive trials, it was determined that both protocols yielded comparable pregnancy rates and similar physiological responses when used in postpartum beef cows.

In experiment 3, the use of either a long- or short-term CIDR-based estrus synchronization protocol was compared prior to FTAI in a large-scale field trial. Results indicated that pregnancy rate resulting from FTAI was similar for both protocols. These data provide preliminary support for the use of long-term CIDR-based estrus synchronization protocols prior to FTAI in postpartum beef cows.