

Public Abstract

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Title:COMPARISON OF LONG-TERM CIDR-BASED PROTOCOLS TO SYNCHRONIZE ESTRUS AND OVULATION PRIOR TO FIXED-TIME ARTIFICIAL INSEMINATION IN POSTPARTUM BEEF COWS

Estrous synchronization and artificial insemination (AI) are management tools that cattle producers can use to improve reproductive performance within their herds. Few cattle producers however, implement these technologies, generally due to increased time and labor commitments. In recent years, our research group has focused on the development of estrous synchronization protocols that facilitate the use of fixed-time AI (FTAI), which greatly reduce labor requirements by eliminating the need for estrus detection. Currently, short-term CIDR-based protocols are the preferred method to synchronize estrus prior to FTAI in postpartum beef cows. Alternatively, long-term CIDR-based protocols have been used with greater success in beef heifers. This experiment compared two long-term CIDR-based protocols to synchronize estrus and ovulation prior to FTAI in postpartum beef cows (14-16 d CIDR-PG protocol vs. 14-19 d CIDR-PG protocol). The hypothesis tested was that extending the interval from CIDR removal to PG from 16 to 19 d would improve estrous response after PG and improve pregnancy rates resulting from FTAI. The overall objectives of the experiment were to evaluate treatments on the basis of estrous response after PG and FTAI pregnancy rate, and to identify potential differences in response to these protocols among various age classes of females. Estrous response after PG was higher for cows assigned to the 14-19 d CIDR-PG protocol. Estrous response after PG among cows aged 4 years and older was higher for cows assigned to the 14-19 d CIDR-PG protocol, but there were no differences between treatments for 2- and 3-year-old cows. There were no differences between treatments for FTAI pregnancy rate. However, pregnancy rate after FTAI among cows aged 4 years and older tended to be higher for cows assigned to the 14-19 d CIDR-PG protocol. In summary, both protocols worked effectively to synchronize estrus and ovulation prior to FTAI in postpartum beef cows, suggesting that a range in interval from CIDR removal to PG may be feasible when using long-term CIDR-based protocols. Higher estrous response rates after PG and improvements in FTAI pregnancy rate for 14-19 d treated cows aged 4 years and older warrants further consideration. In conclusion, long-term CIDR-based protocols provide an alternative method to synchronize estrus prior to FTAI in postpartum beef cows, and allow beef producers to select a protocol best suited to their management style.