

## **SHORT-TERM PROGESTIN ESTRUS SYNCHRONIZATION WITH TIMED INSEMINATION FOR BEEF HEIFERS: CIDR VS. MGA**

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### **Summary**

Recently, a new product, Eazi-Breed CIDR (a vaginal insert containing progesterone), was approved for estrus synchronization in beef heifers. In previous studies the CIDR has produced excellent estrus synchrony, but it is more costly than the commonly used progestin, melengestrol acetate (MGA). Therefore, the objective of this study was to compare the CIDR to MGA in a shorter-term timed breeding program. Seventy-seven commercial beef replacement heifers were assigned to one of two treatments, CIDR (n=38) or MGA (n=39). Each heifer in the CIDR treatment group received a CIDR on day 1, which was removed on day 7. The MGA treatment group received MGA in the feed each day from day 1 to day 6. All heifers in both treatment groups received an injection of prostaglandin F<sub>2</sub> $\alpha$  (PGF) on day 7. Forty-eight hours after the PGF injection (day 9), all heifers received an injection of gonadotropin hormone-releasing hormone (GnRH) and were artificially inseminated. Pregnancy status was determined by ultrasonography 29 days post-breeding. A greater percentage (P=0.05) of heifers were pregnant in the CIDR treatment (55%) than in the MGA treatment (33%).

### **Introduction**

Less than six percent of the nations beef cows are artificially inseminated every year. This translates into an opportunity for many beef producers to improve genetics and improve profitability. The problem is convenience. There are many tools available to pro-

ducers, but no tool available will ever be as convenient as turning in bulls for natural service. The purpose of any estrus-synchronization system is to maximize the number of pregnant animals, while minimizing time and labor costs. Estrus synchronization provides unique opportunities for beef producers to group calf ages for uniform calf crops and to choose when calving season will begin and end. It also allows producers to improve genetics without purchasing a superior sire. For some producers, the use of timed insemination would be preferred to eliminate estrus detection.

There are several different methods of synchronizing estrous cycles. Progestins are used to extend the luteal phase of the cycle. Progestin use synchronizes estrus, but does not synchronize ovulation; therefore, it does not allow for effective timed insemination. Other synchronization systems use gonadotropin hormone-releasing hormone (GnRH) in combination with prostaglandin F<sub>2</sub> $\alpha$  (PGF) to synchronize both the luteal and follicular phases of the estrous cycle. These systems allow for the use of timed insemination.

The standard synchronization protocol for beef replacement heifers requires feeding the oral progestin, melengestrol acetate (MGA), for 14 days, followed by an injection of PGF 17 to 19 days later, and then several days of estrus detection. Although this is an effective system, it requires 31 to 33 days before estrus detection begins. The purpose of the current experiment was to test a shorter-term timed artificial insemination system for heifers, us-

