INFLUENCE OF TIMING OF SECOND PROSTAGLANDIN ADMINISTRATION ON AI PREGNANCY RATES TO TIMED-AI IN A 5-DAY PROGESTERONE BASED CO-SYNCH PROTOCOL IN BEEF COWS

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Introduction: The objective of the present study was to compare the time AI pregnancy rate of Angus cross beef cows synchronized with the 5-d CO-Synch + CIDR (Controlled Internal Drug Release, a progesterone-based intravaginal insert) protocol and given two PGF2α (PGF) doses either at 2h or 8 h interval on the day of CIDR withdrawal.

Materials and methods: All cows (N=1782) at sixteen locations received 100 mg of GnRH (Gonadotropin Releasing Hormone) + CIDR on Day 0. Cows received 25 mg of PGF at the time of CIDR insert removal on Day 5 and randomly allocated within locations to receive second PGF either at 2 h (N=881) or at 8 h (N=901) from first PGF administration. All cows were administered 100 mg of GnRH on Day 8 (72 h after CIDR removal) and were inseminated at that time. Cows were fitted with a pressure sensitive heat detection device at the time of CIDR withdrawal. Cows were observed twice daily through Day 7 and at the time of AI on Day 8 for estrus and Kamar status (estrus - red, partial and lost Kamar vs. no estrus - white Kamar) was recorded.

Results and discussion: Accounting for location, season, AI sire, cows observed in estrus or not at or before timed AI, and treatment by cows observed in estrus interaction, the timed AI pregnancy rates were greater (P < 0.05) for the 8 h (57.2 %) than the 2 h (52.7 %) interval (P< 0.05).

Conclusion: Cows that received a second PGF at 8 h after the first PGF on the day of CIDR removal in a 5-d CO-Synch + CIDR synchronization protocol had greater timed AI pregnancy rates than cows receiving a second PGF at 2 h after the first PGF.