Progesterone (CIDR) Device-Based Timed AI Protocols for Dairy Heifers*

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The objectives were to compare the efficacy of three new CIDR-based protocols for timed insemination (TAI) of dairy heifers. Cyclic Holstein heifers (n=299) were randomly assigned to 1 of 3 TAI protocols designated as D7/D7, D8/D8 or D7/D8. All heifers received an intravaginal progesterone-releasing (CIDR) device and gonadotropin releasing hormone (GnRH; 2 mL of Fertiline) on Day 0. The CIDR device was removed either concurrent with prostaglandin (PG; 5 mL of Lutalyse) treatment (D7/D7 and D8/D8 group), or 1 day after PG (D7/D8 group). A second GnRH treatment was given 48 h after PG and heifers were inseminated 16-20 h later. Pregnancy diagnosis (by ultrasound) was done 32 days after AI. Protocols and pregnancy rates are shown below:

Table 1. Protocols and pregnancy rates for CIDR-based timed-AI protocols in Holstein heifers.

Protocol	No. of heifers	Day 0	Day 7	Day 8	Day 9	Day 10	Day 11	Pregnancy rate (%)
D7/D7	99	GnRH + CIDR in	PG + CIDR out	--	GnRH	AI	--	56
D8/D8	98	GnRH + CIDR in	--	PG+ CIDR out	--	GnRH	AI	54
D7/D8	102	GnRH + CIDR in	PG	CIDR out	GnRH	AI	--	62

Pregnancy rate was not significantly different among treatment groups.

Take Home Message: All three protocols tested in this study could be used for timed-insemination of dairy heifers, with similar pregnancy rates. It was noteworthy that these pregnancy rates were at least 15 percentage points higher than those typical for dairy heifers bred to Ovsynch/TAI (without a CIDR).

**Study supported in part by Alberta Agriculture, Alberta Milk, Bioniche, Pfizer, and Vétoquinol.*