# Does the length of progesterone treatment in heifers matter?


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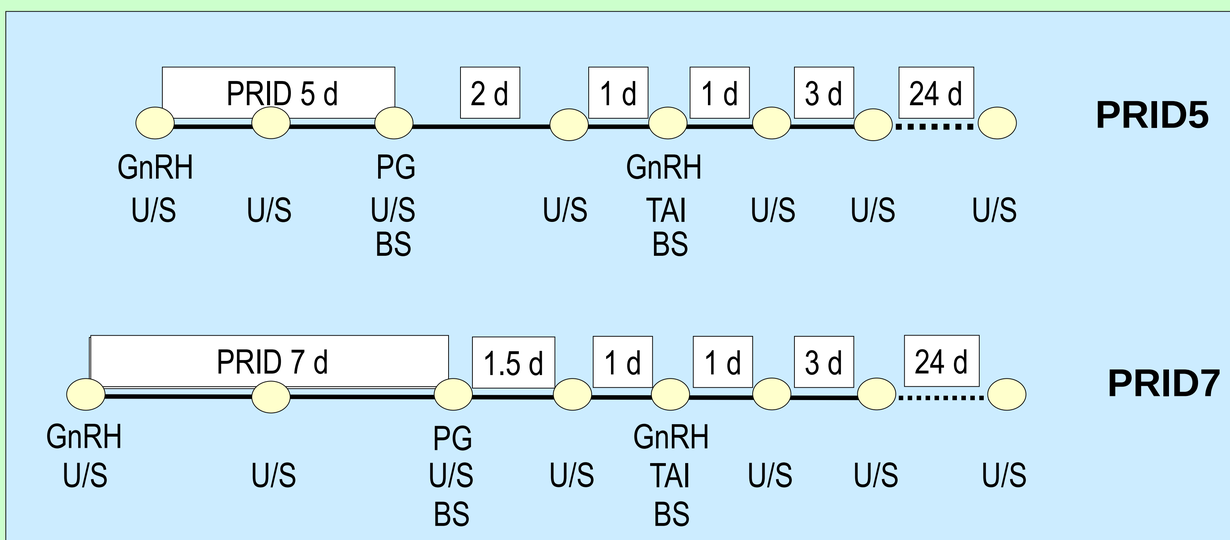
## Objective:

**To compare pregnancy per AI in dairy heifers subjected to two Co-synch protocols using PRID for 5 or 7 days with timed-AI (TAI) at 72 or 56 hours, respectively.**

Animals and experimental design

- n = 64 Holstein heifers, 15 to 16 mo of age.
- Ultrasonography (U/S) to determine ovarian dynamics, ovulation and pregnancy.
- Blood samples (BS), for progesterone, were taken.

## Fig 1. Co-synch/TAI protocols




GnRH = 100 μg im (Fertiline; Vetoquinol Canada Inc )
PRID = progesterone releasing intravaginal device (Vetoquinol Canada Inc )
PG = 500 μg cloprostenol im (Estrumate, Schering Plough Animal Health)
TAI = timed artificial insemination; U/S = ultrasonography; BS = blood sample

## Findings:

**One heifer was removed from the study due to injury. Overall, 94 and 59% of heifers were cycling at PRID insertion and pregnant to TAI, respectively.**

## Findings continued:

**Ovulatory response to first and second GnRH was 32 and 89%, respectively. Pregnancy per AI tended to differ whether the heifer ovulated or not to the first GnRH (P=0.1; 45 vs 65%, respectively).**

**Results between both treatments groups are shown in Table 1.**

**Table 1.** Percentage of heifers pregnant, responding to first, second GnRH and PG treatment and diameter of preovulatory follicle (POF) displayed by treatment group.

| | PRID5 | PRID7 | P value |
|---|---|---|---|
| Pregnancy (%) | 59 | 58 | <0.9 |
| Ov. response to 1st GnRH (%) | 25 | 39 | <0.2 |
| Ov. response to 2nd GnRH (%) | 84 | 94 | <0.3 |
| Responding to PG (%)* | 97 | 100 | <0.7 |
| POF diameter (mm) | 14.3 ± 0.2 | 14.2 ± 0.3 | <0.9 |

* Based on ultrasonographic examinations

**Plasma progesterone concentrations has not been analyzed yet.**

## Take Home Message

Treatment with PRID for 5 or 7 d with TAI at 72 or 56 h after PRID removal resulted in similar pregnancy per AI. All but one heifer in the PRID5 group responded to a single injection of PG.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