

Pregnancy establishment in dairy cows supplemented with progesterone before and after timed-AI

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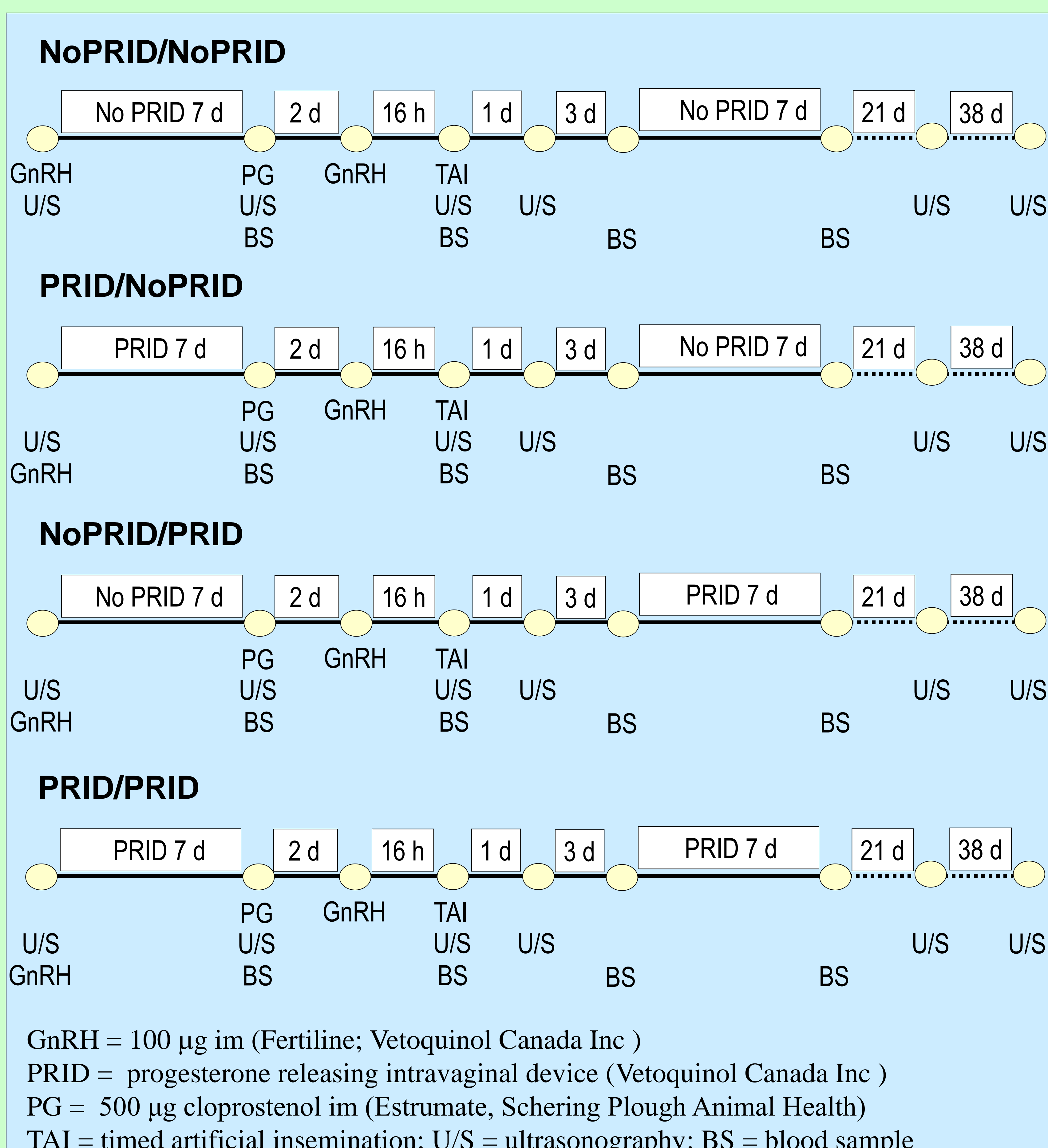
Objective:

To determine the efficacy of supplementation with progesterone (P4) before and after timed-AI (TAI) on pregnancy per TAI (P/TAI) and pregnancy losses.

Animals and experimental design

- n = 608 lactating Holstein cows from 3 herds.
- Ultrasonography (U/S) to determine ovarian dynamics, ovulation and pregnancy (32 and 60 d after TAI).
- Blood samples (BS), for P4, were taken.
- Progesterone was supplemented by an intravaginal device containing 1.55 g of P4.

Fig. 1. Ovsynch protocols and P4 supplementation



Findings:

Table 1. Effect of P4 supplementation before TAI on number and percentage of cows with early ovulations, responding to PG and second GnRH and overall responding to treatments.

	NoPRID (N=314)	PRID (N=294)	P value
Early ovulations (%)	37(11)	17(6)	<0.01
Response to PG (%)	304(97)	285(97)	NS
Ov. response to 2 nd GnRH (%)	267(85)	256(87)	NS
Overall responding	222(71)	230(78)	<0.01

Table 2. Effect of P4 supplementation before TAI and number of previous inseminations on percentage of pregnant cows. PRID increased (P<0.05) the P/TAI only in cows at 2nd breeding or greater.

	NoPRID	PRID
AI=0	39	39
AI=1 or greater	24	44

Table 3. Effect of P4 supplementation 4 d after TAI and cyclicity status at initiation of treatments on pregnancy losses (%) between 32 and 60 d after TAI. The reduction in pregnancy losses tended to be significant (P=0.1) in acyclic cows receiving a PRID.

	NoPRID	PRID
Cyclic	9	6
Acyclic	33	6

Plasma P4 concentration was linearly associated to P/TAI only before TAI.

Take Home Message

- P4 supplementation before TAI increased P/TAI in cows at 2nd breeding or greater.
- P4 supplementation 4 d after TAI decreased pregnancy losses, particularly in acyclic cows.

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