

Day of injection does not affect the response of weaned sows to PG600[®]

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An important economic objective for swine operations is to maximize weaned pig output. This results in more pigs entering the grow/finish stages of production and reduces the cost per weaner produced. A recent University of Minnesota study clearly showed that for most farms, the main factor controlling weaner output was the number of females served per week.¹ This highlighted the importance of achieving breeding targets. Females forming the weekly service groups will mostly be newly weaned sows and incoming replacement gilts. Within the sow group, the primiparous sows are the most likely to display a delayed and more variable return to heat.

A large field study recently confirmed the efficacy of a combination of 400 IU PMSG and 200 IU hCG (PG600[®]) administered on the day of weaning to induce a rapid and synchronous postweaning estrus in primiparous sows.² However, it has been suggested that the optimal time of PG600[®] injection is 1 day after weaning.³ Therefore, we investigated the potential benefit of inducing estrus in primiparous sows using PG600[®] injected either on the day of weaning or 1 day after weaning.

Materials and methods

Between November 1996 and March 1997, primiparous sows (n=215) were assigned to receive an intramuscular (IM) injection of PG600[®] either:

- on the morning of the day of weaning (n=70),
- 1 day after weaning (n=72), or
- to receive no injection and serve as controls (n=73).

Assignment to treatment was sequential; i.e., the manager assigned a row of sows to treatments 1,2,3,1,2,3, etc. Estrus detection involved direct boar contact for 15 minutes daily from 2 days after weaning. Sows were bred naturally at estrus detection and again 24 hours later. Sires were equally represented among treatments. To minimize the inclusion of sows bred at their second postweaning estrus, only sows bred by 25 days after weaning were considered.

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Statistical analysis

Data were subject to ANOVA using GLM procedures of SAS[®] (Statistical Analysis System Institute Inc, Cary, North Carolina). Variances of the means were compared by F-ratio testing and proportional data were compared using χ^2 .

Results

Injection of PG600[®] resulted in more ($P < .02$) sows being bred by 25 days after weaning and a greater ($P < .01$) proportion being bred by 7 days after weaning (Figures 1-2). For those sows bred by 25 days, PG600[®] resulted in a more rapid and more synchronous onset of estrus ($P < .005$) and this effect was not influenced by day of injection. There were no treatment effects ($P > .1$) on farrowing rate or subsequent litter size.

Discussion

The present results confirm the efficacy of PG600[®] for inducing a predictable return to estrus and to facilitate achievement of breeding targets. However, our results do not support earlier data³ that suggested that there is an effect of day of injection on the response of weaned sows to gonadotropic stimulation. Therefore, choice of day for PG600[®] injection should be dictated solely by ease of management. The present results also fail to support our earlier finding² of an adverse effect of PG600[®] treatment on subsequent litter size. Since the sow genetics and parity did not differ between our present and previous studies, it serves to emphasize that while PG600[®] is an excellent tool for the induction of a fertile estrus, no claim should be made with respect to subsequent litter size.

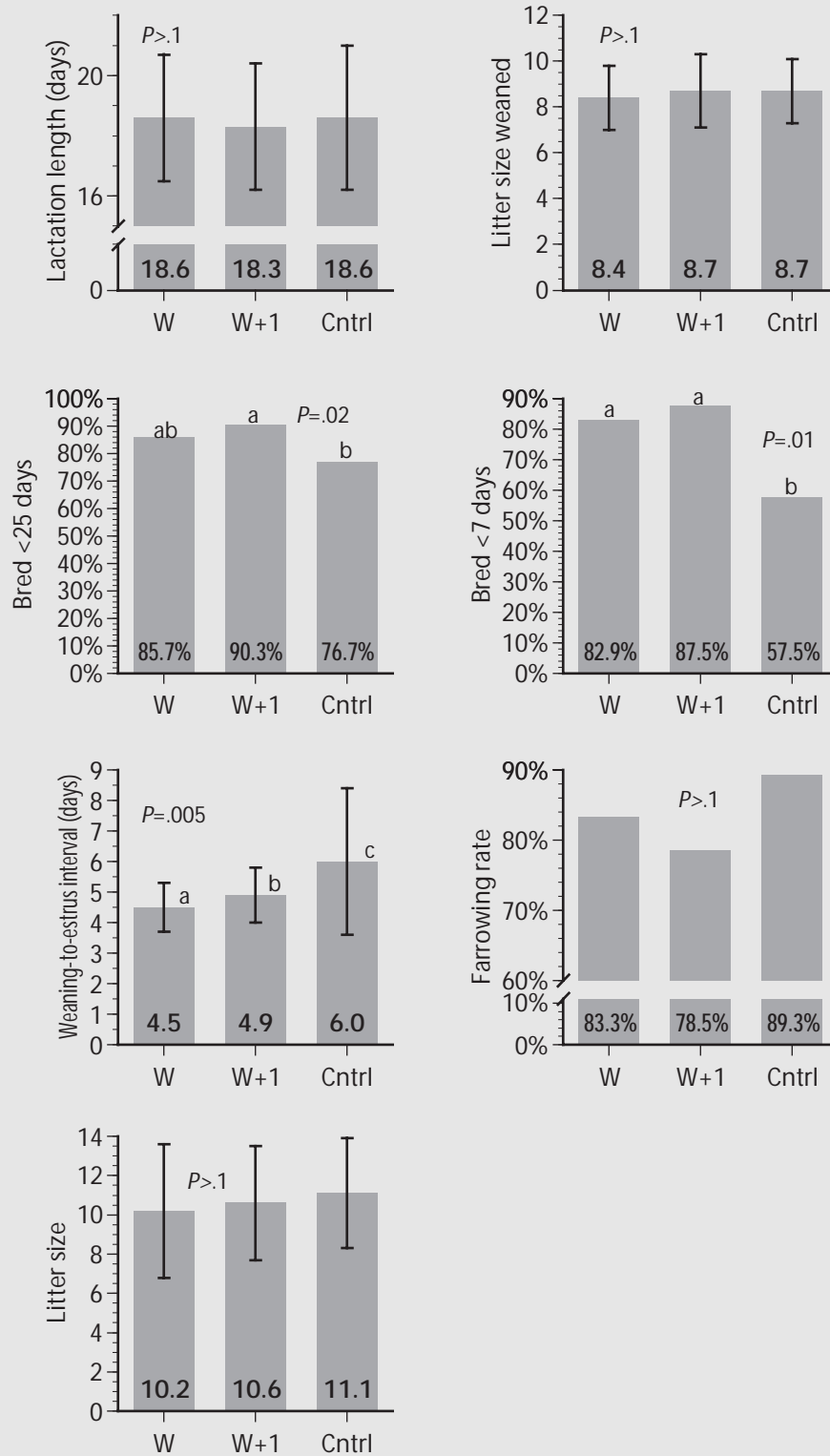
Implications

- Day of injection of PG600[®] does not have a major impact on post weaning sow performance.
- Choice of injection day is dictated only by ease of management.

Acknowledgements

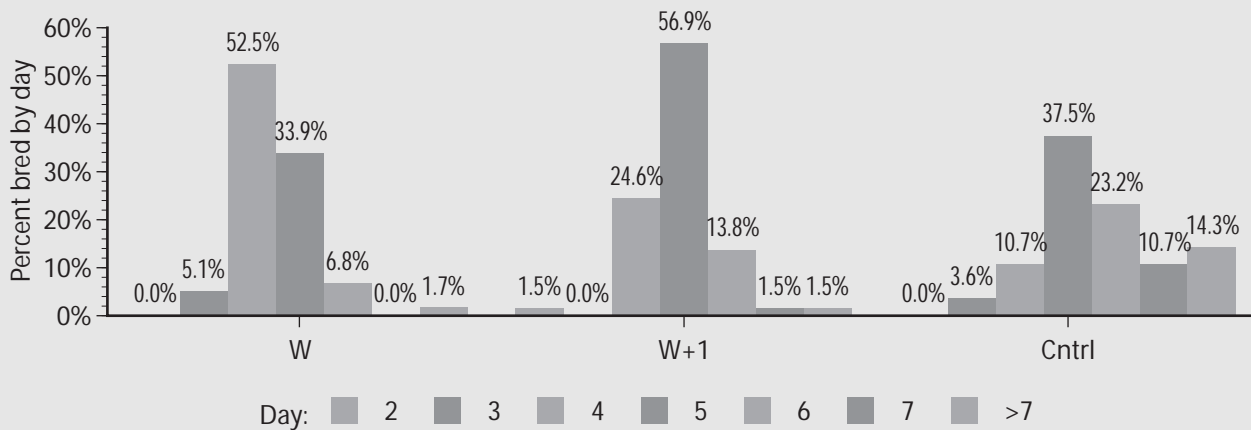
We gratefully acknowledge the support of Intervet Canada in the performance of this study.

Figure 1



Effect of postweaning day of PG600® injection on performance of primiparous sows

Figure 2



Percent bred by day (includes only sows bred by day 25 postweaning)

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