

Influence of GnRH (Fertagyl) at Estrus on Fertility of Gilts

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Early weaning of piglets is associated with an diminished preovulatory luteinizing hormone (LH) surge in the sow, possibly decreasing ovulation rate, resulting in the lower subsequent litter sizes associated with early weaning. Furthermore, the injection of gonadotropin releasing hormone (GnRH) near the time of breeding has been associated with improved pregnancy rates in primiparous sows. This improvement of fertility is an indirect effect of GnRH, which releases a greater amount of LH, possibly resulting in a synchronization of ovulation or the release of more eggs. However, recent results from our group have shown no effect on sow fertility when sows were injected with GnRH at the time of breeding. Our results have shown that gilts injected with GnRH at the time of breeding resulted in a significant increase in litter size. The objective of the present experiment was to confirm the effect of GnRH, injected at detection of estrus, on the fertility of maiden gilts.

A total of 169 maiden gilts received an intra muscular (IM) injection of 1.5 ml of Fertagyl (GnRH) at the detection of estrus or no injection (CON). At the detection of estrus, animals were treated then naturally serviced 1-2 hours later. The second breeding was by AI. Boars and semen were represented equally in both treatments. Animals were pregnancy checked at 25 days post breeding. If a gilt returned to estrus she was taken off trial as we were looking for effects in maiden gilts only. Subsequent litter size (total born and live born) was also recorded.

There were no significant differences between treatment groups in conception rate (85.35 %), farrowing rate (78.28 %), total born (10.67 piglets) or live born (9.76 piglets) in the subsequent (first) litter.

Implications

Injection of gilts with GnRH at the onset of estrus and prior to breeding, did not appear to improve conception rate, farrowing rate or litter size in maiden gilts.