Efficacy of a 7 vs 14 day Regu-Mate Protocol in Cyclic Gilts

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Previous studies have shown that the implementation of an efficient gilt development unit (GDU) program and the use of Regu-Mate to synchronize estrus in known cyclic gilts is an effective tool in GDU management. This program can be further refined by reducing the number of days of Regu-Mate treatment, to achieve this, it is critical that start of estrus (first day of standing heat) is recorded. A modified 7-d Regu-Mate protocol can then be implemented; treatment is started when endogenous progesterone production is high, at day 9 to 13 after first detection of standing heat. In a 3200 sow commercial facility, the BEAR system was used to supply service eligible gilts (either natural (NAT) or PG600 (PG) induced). Breedings were targeted to occur Tuesday to Friday to avoid weekend breedings, to coincide with semen delivery and optimize quality. Therefore, Regu-Mate treatment (15 mg/hd/day, top dressed) started on Friday. Gilts detected in heat Saturday - Wednesday of the previous week were allocated to 7-d protocol (RM7) (corresponding to d9 -13 of the estrous cycle). Gilts detected in heat on Thursday - Friday from two weeks previous, or cyclic gilts with unknown heat dates, were allocated to the 14-D protocol (RM14).

The percent of gilts bred within 10d of Regu-Mate withdrawal was higher in RM7 than RM14 (87.4 vs 84.8%; P<.05). No difference in the Regu-Mate withdrawal to service interval (RWSI) (6.5 ± .05 vs 6.4 ± .04 d), total born (12.8 ± .2 vs 12.9 ± .1) or born alive (11.2 ± .2 vs 11.4 ± .2) between RM7 and RM14 gilts was detected. PG600 prior to Regu-Mate treatment decreased the percent of gilts served within 10 days (81.3 vs 91.9 %), increased RWSI (6.6 ± .08 vs 6.3 ± .05 d) and decreased born alive (10.9 ± .2 vs 11.6 ± .2 pigs) in PG compared to NAT gilts, respectively (P<.05). No difference in total born between NAT and PG gilts was detected (13.0 ± .2 vs 12.7 ± .2 pigs) (P>.05).

Implications: Reducing the number of Regu-Mate treatment days from 14 to 7 is effective in synchronizing estrus in gilts, this potentially allows for equivalent treatment days to be applied to weaned parity one sows to optimize weaning management. Secondly, “opportunity” gilts with PG600-induced first estrus had lower fertility than “select” gilts with a boar induced first estrus.