

Responses to delayed estrus after weaning in sows using oral progestagen treatment

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In weaned sows, progestagen treatment extends the weaning-to-estrus interval (WEI). Particularly in lower parity sows, this may allow recovery from lactational catabolism and further improve sow productivity. However, the optimal duration of progestagen treatment in contemporary dam-line sows is unclear. Therefore, sows (n = 552) weaned over consecutive 3-week periods in July and August were organized into two breeding groups using one of three strategies: 1) No progestagen treatment (NAT0; n = 179); 2) Oral progestagen (MATRIXTM) treatment for 2 d before and 5 d after weaning (MAT7; n = 207); or 3) MATRIXTM for 2 d before and 12 d after weaning (MAT14; n = 166). MATRIXTM was administered directly into the sows mouth at a dosage of 6.8 mL (15 mg altrenogest) daily. Sows were bred using artificial insemination at first detection of estrus after weaning (NAT0) or MATRIXTM withdrawal and every 24 h thereafter, until they no longer exhibited the standing reflex. The WEI for NAT0 sows was 5.1 ± 0.1d. Estrus was recorded sooner after withdrawing treatment (P ≤ .0001) in MAT14 than in MAT7 sows (6.9 ± 0.1 vs 7.4 ± 0.1 d, respectively). More (P < .0001) MAT14 sows (88.6 ± 2.5 %) were bred within 10 d of MATRIXTM withdrawal than MAT7 (71.0 ± 3.2 %) sows, or within 10 d of weaning in NAT0 sows (77.1 ± 3.1 %). Reproductive tracts were recovered after slaughter at either d30 or d50 of gestation and dissected on-site. Ovulation rate and number of viable of embryos at d30 of gestation in MAT7 sows (23.9 ± .4, and 17.1 ± .5, respectively) were greater (P ≤ 0.001) than in MAT14 (21.6 ± .4 and 16.0 ± .5, respectively) or NAT0 (21.8 ± .4 and 14.3 ± .5, respectively) sows. However, at d50 of gestation, the number of viable fetuses in MAT14 sows (14.5 ± .5) was higher (P ≤ 0.001) than in MAT7 (12.8 ± .5) and or NAT0 (12.2 ± .5) sows, due to increased embryo survival in MAT14 sows to d50.

Implications: Use of oral progestagens to delay the return to post-weaning estrus for greater than 18 d appears to have potential for improving weaned sow productivity.