

Effect of altrenogest on prevention of early parturition and reproductive performance in sows

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Objectives

The purpose of this study was to investigate whether the administration of altrenogest during late pregnancy was effective to prevent early parturition (< 114 days of gestation) and to improve the reproductive performance in sows.

Material and Methods

The experiment was conducted in 4 commercial pig herds located in Flanders, Belgium. Within each herd, random stratification based on parity was used to allocate the sows (n=329) into a treatment or control group. Oral administration of 20 mg of altrenogest (Regumate[®], Janssen Animal Health) was performed on day 111, 112 and 113 of gestation, based on the sow's individual insemination date. Reproductive parameters recorded were: farrowing date, farrowing duration, number of live born, dead born and mummified piglets, mortality of weak born piglets during the first 3 days postpartum, cross-fostered piglets, pre-weaning mortality, number of weaned piglets. Statistical analysis was performed by means of analysis of variance (SPSS 16.0), in which the effect of the herd was taken into account.

Results

Early parturition (<114 d) was found in 14.1% of the control sows. The reproductive performance of sows with an early parturition was significantly lower compared to sows with a normal gestation length (Table 1).

Gestation length was significant different between the treatment and the control group (115.3 ± 1.23 and 114.7 ± 1.69 days, respectively $p=0.001$). In the treatment group, none of the sows started farrowing during the altrenogest treatment. For the other reproductive parameters, no significant differences were found between control and treatment group ($P > 0.05$).

Table 1: Reproductive performance of the control sows with either early parturition (< 114 d) or normal parturition (≥ 114 d).

Parameter	< 114 d			≥ 114 d		
	Mean	s.d.	N	Mean	s.d.	N
Gestation length (day)	111.9	1.36	23	115.2	1.24	140
Total litter size (No)	15.6	5.17	23	14.4	4.04	140
Live born piglets (no)	11.6	4.22	23	13.0	3.72	140
Dead born piglets (%)	19.5	18.56	23	8.5	11.57	140
Pre-weaning mortality (no)*	2.7	2.64	17	1.7	1.64	91

Mortality of weak born piglets (%)*	20.7	31.15	17	5.9	8.94	91
Weaned piglets (no)*	8.1	5.02	17	10.7	2.10	91

Significant differences are marked in **bold** (P < 0.05)

*Sows with a correct record of cross-fostered piglets and pre-weaning mortality

Discussion and conclusion

The present study demonstrates that early parturition adversely affects the reproductive performance of the sows. The frequency (14.1%) of early parturition is much higher than reported in the study (9.5%) of Sasaki and Koketsu (2007). The administration of altrenogest provides an effective and save method to prevent early parturition in sows, but there were no significant improvements on reproductive performance.