

REP-010

## **FIXED TIME INSEMINATION EFFECT ON THE CHARACTERISTICS OF HYPERPROLIFIC SOW PROGENY**

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### **Introduction**

After optimizing seminal doses production, the next step in reproduction is applying fixed-time insemination programs to obtain greater profitability at insemination time by reducing labour costs, number of seminal doses and increasing reproductive performance. The aim of this study was to evaluate a single fixed-time artificial insemination program (FTAI) with buselerin and measure effect on litter performance.

### **Material &Methods**

The trial was conducted in a 5,000 sow farrow-to-finish farm in Zaragoza (Spain). A total of 305 multiparous sows and 2,500 piglets were evaluated. Sows were randomly allocated in two groups every week (during 12 weeks): Control group (C) - the estrus was detected after weaning, at 12 hours post estrus 1st Artificial Insemination, at 24h the 2nd insemination and if estrus continues at 48h, the third insemination is received; Treatment group (P) was treated with PorceptalR to induce ovulation at 75 hours after weaning followed by a single FTI at 30 hours after PorceptalR. At birth 1195 piglets in P and 1337 in C (76 litters in P, 81 in C) were identified with individual tags and weighed in different productive moments: at birth, weaning, nursery and fattening. Reproductive data and weights were compared with Mann-Whitney U Test of Levene and ANOVA.

### **Results**

Fertility (C 93.6%, P 93.2%;  $p=0.9$ ) and total born piglets (C 18.93, P 17.75;  $p=0.233$ ) were not statistically different between groups. Birth weight (Kg) was significantly higher in P (C 1.33, P 1.365;  $p<0.001$ ) but intra-litter coefficient of weight variation was not different ( $P>0.05$ ). Weight at end of nursery was significantly higher in P than C (C 11.53, P 12.42;  $p<0.010$ ), while weaning (C 5.2, P 5.4;  $p=0.277$ ) and fattening (C 50.78, P 53.14;  $p=0.6$ ) weight were only numerically different. Total mating cost per sow was less in P than C (C 5.62€, P 5.22€).

### **Discussion & Conclusion**

Birth and nursery weight were significantly higher in P and birth weight distribution in P tended to be concentrated in higher weight categories in comparison with C. FTAI allows us to know the genetic value of each boar through evaluation of the productivity parameters of their offspring.