

EXTENDED BOAR SEMEN STORAGE ASSOCIATED WITH LOWER SOWS FERTILITY AND LOWER NUMBERS OF PIGLETS BORN ALIVE

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Abstract. The aim of our study was to evaluate fresh extended boar semen quality, stored for four days and used for field sows artificial insemination (AI) and to determine the relationship between semen quality and sow fertility results. Eighty-one ejaculates were collected, assessed for quality, extended, divided into doses and used for AI. In total, 888 crossbreed sows (195 primiparous and 693 multiparous) were serviced twice with the semen of the same boar. At the laboratory, the semen was assessed for sperm concentration, morphology and subjective motility. Sow fertility was evaluated as follows: the non-return rate %, the number of piglets born alive, and the number of stillborns. The lowest non-return rate ($72.46 \pm 45.00\%$) was detected in the group with the highest number of pathologic spermatozoa in the semen dose ($P \leq 0.05$). With respect to semen storage, the lowest sow fertility results (non-return rate $73.21 \pm 44.48\%$, lowest number of piglets born alive 10.91 ± 3.31 ($P \geq 0.05$)) and the largest number of stillborn piglets 1.05 ± 1.67 ($P \leq 0.05$) were assessed in the group of sows that were inseminated with the semen stored for 72 hours. The correlation between sow's fertility results, semen quality parameters and semen storage day was statistically significant ($P \leq 0.05$).

Keywords: Boar semen quality, sows, fertility rate.