

EVALUATION OF THE QUALITY OF BOAR SEMEN DILUTED IN VARIOUS EXTENDERS USING A LONG-TERM THERMORESISTANCE SURVIVAL TEST

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Abstract

The aim of this study was to determine the quality of boar semen in samples prepared by dilution in long-term commercial extenders using a long-term thermoresistance survival test. Over the period of one year, sixteen ejaculates were collected from eight Přeštice black-pied boars from one AI centre. Basic semen quality parameters were determined. The semen was diluted in Androstar plus, Androstar premium and Spermax extender at a dilution ratio of 1+2 and the prepared samples were stored at 17°C. The test was performed after storage for up to 168h and sperm motility was evaluated during incubation at 38°C in water bath after the 1st, 3rd and 5th hour. During storage and incubation, no significant differences in sperm motility were observed between the extenders ($p>0.05$). Sperm motility was statistically significantly reduced in all tested extenders after 96 and 168h of storage ($p<0.05$). Negative correlation was observed between sperm motility and decreasing pH ($p<0.05$). The best temperature stability was found in the Androstar premium extender where a reduction in sperm motility was observed in the 5th of incubation, while in the Androstar plus and Spermax extender, a reduction was observed in the 3rd hour ($p<0.05$). In conclusion, this study did not find differences in sperm motility between the tested extenders. The best temperature stability was found in the Androstar premium extender compared to the others. According to the results these tested extenders are suitable for the production of insemination doses and in the process of sperm cryopreservation.

Key Words: Boar semen quality, extenders, long-term thermoresistance survival test