

INFLUENCE OF SOME FACTORS ON SEMEN QUALITY OF DIFFERENT BREEDS OF BOARS

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Summary. The quality of pedigree material takes important place in pig reproduction. Semen used for AI has to be of good quality, of high fertilizing capacity and of high genetic value. Semen quality depends on the breed, animal age, frequency of collection, and etc. Therefore the aim of our study was: to evaluate the influence of semen quality and quantity of Danish Landrace and Duroc boars. The goals for our study was to evaluate the influence of boar breed, age and season on semen quality parameters of Danish Landrace and Duroc boars.

This study was performed in Joined stock company "Lekėčiai". In total, 13 boars of Danish Landrace and 3 boars of Duroc bred were included into the analysis. Ejaculates were collected 3 times during the 2-week period, and assessed for the volume of the ejaculate (ml), concentration of spermatozoa (billion/ml), motility (%) and sperm morphology. In total, the quality of 416 ejaculates was assessed. Data was analyzed with the SPSS statistical package.

We found that breed of the boar had a significant effect on volume of the ejaculate, concentration of spermatozoa and percentage of pathological spermatozoa ($p < 0.001$). The breed of boar had not significant effect on sperm motility. Compared to the boars of Duroc breed, Danish Landrace boars had higher volume of ejaculate, but lower sperm concentration of spermatozoa and had lower incidence of pathological spermatozoa in their semen.

Age of animal had a significant effect on volume of the ejaculate, concentration of spermatozoa and the incidence of pathological spermatozoa ($p < 0.05$). The volume of the ejaculate increases with the age of the boar, with the advancing age, volume of ejaculate increases but concentration of spermatozoa decreases. The highest percentage of motile spermatozoa was found in boars that during semen collection were 18–24 month of age, and the lowest – in boars that were older than 30 month. The highest incidence of spermatozoa with pear shaped heads was found in boars younger than 12 month of age, and the highest incidence of spermatozoa with simple bent tails was found in boars that were over 30 month of age.

Season had a significant effect on sperm motility, concentration and number of pathological spermatozoa ($p < 0.001$). Sperm motility decreased during summer and autumn, and sperm concentration decreased during autumn and winter. The highest incidence of pathological spermatozoa was observed in the end of summer and beginning of autumn.

Keywords: boars, breed, age, season, sperm quality.