# EFFECTS OF AGE, AND SEASON ON SPERM QUALITATIVE PARAMETERS IN LITHUANIAN WHITE AND PETREN BOARS

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**Abstract.** In the present work, we examined the effects of age, breed, and season on qualitative parameters of sperm from 45 boars bred by artificial insemination. Boars were assigned to the groups according to their age (young, 10 to 18; 18 to 24; 24 to 30; 30 to 36 month of the age and older, over 36 months of the age) and breed (Lithuanian White, [LtW] and Petren, PI). The following sperm parameters were analysed: motility, morphology of spermatozoa, and viability (eosin/nigrosin staining).

Analysis of the obtained results revealed that sperm motility was the only sperm parameter analysed that did not significantly differ between the different age groups of boars. Other qualitative sperm parameters were significantly ($P \leq 0.05$) influenced by the age of the boar. Within young (10 to 18 months) boars, from the LtW breed had the lowest ($P \leq 0.05$) sperm motility, when compared to the PI breed. They also had higher abnormal sperm counts and their sperm motility values were significantly correlated (r=-0.57) with abnormal sperm morphology results. The incidence of pathological spermatozoa and sperm viability were significantly ($P \leq 0.001$) influenced by the age of the boar. With increasing age, the total number of pathological spermatozoa increased, and the number of viable spermatozoa decreased ($P \leq 0.05$). Young (10 to 18 months) LtW breed boars had 34,0–47,0 % greater pathological sperm counts and 5,0 to 7,0 % lower ($P \leq 0.05$) sperm viability that PI breed boars.

Season had a significant ($P \leq 0.05$) effect on the intensity of spermatogenesis and qualitative sperm parameters. During the summer–autumn period, the incidence of pathological spermatozoa increased (54.2 %), but sperm motility and viability decreased (4.1 % and 9.2 %; $P \leq 0.05$, $P \leq 0.01$, respectively). Boars from the LtW breed during the summer–autumn period had a 30,0–34,0 % lower ($P \leq 0.01$) incidence of pathological spermatozoa than the PI breed boars, respectively.

**Keywords**: boar, age, season, breed, sperm quality.