SEASONAL EFFECT ON SPERM MORPHOLOGICAL PROPERTIES OF EUROPEAN WILD BOAR (*SUS SCROFA* L.) IN LITHUANIA

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Abstract. The aim of this study was to determine the effects of the epididymis sample storage conditions and season on the sperm morphological characteristics of wild boars (*Sus scrofa* L.). The samples were collected from males hunted in northern Lithuania. Straight after shooting the animal and cutting out the both testis, the epididymis was dissected and divided into three parts. One part was placed on a freezing element (4 ± 2^0C), the second one into a 3.0 % sodium citrate and the third one into a preservative solution. For determination of seasonal effects, the samples were placed only into a preservative solution. In the laboratory, all the epididymis were broken up and flushed spermatozoa were dyed with eosin. Morphological characteristics of sperm were evaluated by the accepted methodology.

Sample storage conditions in 20–24 hours period had no effect on the sperm morphological characteristics of wild boar males (n=6). The study of the seasonal effects on the sperm morphological properties of European wild boar indicated that during the breeding season (November and December) the number of intact spermatozoa in the semen of second year males (n=5) and 3 year or older males (n=6) was similar and accounted for 54.0 and 52.0 % respectively. During the off-season (May and June), the average number of intact spermatozoa in the semen of second year males (n=5) and 3 year or older males (n=6) was respectively 16.2 and 13.0 % or by 37.8 and 39.0 % lower ($P<0.001$) than that in the semen of contemporary wild boar males hunted at the time of oestrus. In the summer time, the second-year wild boar males can inseminate the second year gilts in heat of the same group what leads to degeneration due to close inbreeding. Older wild boar males should be preserved in order to preserve the reproductive traits of wild boar groups and their genetic values. The seasonal changes of the sexual cycle might have been influenced by global warming and good nutrition conditions throughout the year.

Keywords: wild boar, season, spermatozoa, sperm defects.