

SURVIVAL EFFECT OF YEAR PERIOD ON BULL SEMEN PROPERTIES

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Abstract. The objective of this study was to examine the effect of year period (month) on bull semen characteristics under the climatic conditions of Lithuania. The semen was collected, evaluated and frozen at 3 to 4 day intervals throughout the year. The semen was collected from Lithuanian Black-and White bulls of 4 years of age. The data were subjected to the analysis of variance using general linear (GLM) procedure. The model included the fixed effect of month. The month of semen collection affected the majority of studied semen parameters. The time of semen collection showed higher effect on the volume of the second than on the first ejaculates. The largest in volume ejaculates were collected in August. The highest values of spermatozoa motility for both ejaculates were obtained in March. The lowest motility in the first ejaculates was found in October and in the second ejaculates in December and August. The highest semen concentration was obtained in October and August in the first and second ejaculates, respectively. The tendency of semen concentration decrease was observed between February and May, and between August and March. However, semen concentration in November showed the increase tendency. The highest least square means for volumes suitable for freezing were in August, May and November. The volume of diluted semen in August was 56.3 ml and 59.6 ml, and in May it was 42.4 ml and 45.6 ml higher compared with February and January, respectively. This led to the result that least square mean number of frozen semen doses in August was by 215.5 higher compared with March. The motility in post-thawed semen from the collection in May was 49.4% vs. 41.7% in November. The time of semen collection did not affect the motility 5 h after semen thawing.

Keywords: semen, quality, collection time, bulls.