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THE EFFECT OF A COW'S HEALTH ON THE VALUE OF BIOCHEMICAL PARAMETERS IN BLOOD SERUM AND MILK

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Abstract

The aim of this research was to determine the effect of a cow's health status (healthy, at risk, with mastitis; indicated by the number of somatic cell counts) on the value of biochemical parameters in blood serum and milk of Holsteins regarding the month of sampling. Therefore, blood and milk samples were taken from 75 Holstein cows during May, June and July and analyzed in the laboratory. The statistical analysis of data showed that the all effects included in the used statistical model (parity, stage of lactation and classes SCC) statistically significantly ($p < 0.05$) affected the variability of biochemical parameters in blood plasma and milk of Holstein cows. Furthermore, variability in all analyzed parameters due to the month of sampling was observed. Obtained results indicate that, if biochemical parameters in blood serum or milk are used as a bioindicator of occurrence of inflammation of organism (mastitis or some other disorder), a correction needs to be done accordingly to animal-related effects (parity, lactation stage) and the effect of month of sampling.

Key words: Holstein cows, biochemical parameters, blood serum, milk, mastitis

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