

INVESTIGATIONS OF THE DEPENDENCE BETWEEN SOMATIC CELL COUNT AND INHIBITORY SUBSTANCES IN COW MILK DURING PASTURABLE PERIOD

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Abstract. The main objective of the research was to determine somatic cells count (SCC) and inhibitory substances (INH) in milk and to analyse their monthly variation during the pasturable period. The milk samples of Holsteinized Lithuanian Black&White cows (n=414) were divided into four groups according to the established SCC: 1st group – SCC up to 200 000 cells/ml; 2nd group – 201 000–400 000 cells/ml; 3rd group – 401 000–700 000 cells/ml; 4th group – 701 000–1 000 000 cells/ml. It was stated during the experiment that SCC in the milk of cows was statistically reliably related to the month of the experimental period ($\chi^2 = 41.721$, $df = 11$, $p = 0.0001$). The highest number of the samples in which INH were found at the beginning of the period of pasture accounted for 26.32 percent. The month of the investigation time statistically reliably influenced the frequency of the samples with INH ($\chi^2 = 29.366$; $df = 5$, $p = 0.0001$). The groups of samples according to the SCC and the number of samples with INH correlated statistically significantly ($\chi^2 = 64.527$; $df = 3$, $p = 0.0001$). The highest number of samples with INH was found in group 4 (11.6 percent).

Keywords: cow, somatic cell count, inhibitory substances, dependence.