ELECTRICAL CONDUCTIVITY CHANGES OF MILK DURING MILKING PHASE WITH COWS PRODUCTIVITY AND SOMATIC CELLS COUNT.

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Summary. The aim of this study was to evaluate the electrical conductivity of milk during milking phases and determinate its relationship with cow productivity and milk somatic cell count. Studies carried out in 2008-2010 year at Lithuanian University of Agriculture and Lithuanian Veterinary Academy, Laboratory of Genetic Evaluation and Selection of Animal. Fifty four of lactating cows after II-VI calving were selected.

The average of electrical conductivity was – 6.30 ± 0.09 mS/cm. These results demonstrate that highest electrical conductivity was at the begining of milking – 7.14 ± 0.11 mS/cm, of plateau phase was lower – 0.82 ± 0.12 mS/cm (p=0.001), the main milking phase – 6.71 ± 0.10 mS/cm and of the descending phase 6.21 ± 0.15 mS/cm electrictrical conductivity of milk was comparable and statistically not different. Results demonstrated the positive statistically significant correlation (p=0.0001) between somatic cell in the milk and the electrical conductivity, and statistically insignificant negative correlation between milk yield and electrical conductivity. The highest influence on somatic cell count was shown by the increment of the electrical condutivity of milk at the begining of milking (p=0.0 48).

Keywords: cows productivity, somatic cell count, electrical condutivity of milk.