

THE MILKING SPEED HERITABILITY AND FENOTYPIC AND GENETIC CORRELATION WITH PRODUCTIVITY, MILK YIELD AND SOMATIC CELL COUNT IN LITHUANIAN BLACK-AND WHITE COWS

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Summary. The aim of performed study was to determine the milking speed heritability and fenotypic and genetic correlation with productivity, milk yield and somatic cell count in Lithuanian Black-and White cows. The experiment on 2799 Black-and-White cows in 13 farms was performed. Milking speed heritability was estimated by model using fixed lactation and random lactation day, herd – year – season and additive – genetic sire effects. Variation of investigated traits heritability was from 0.118 to 0.232. Analyze of phenotypic correlation showed positive and statistical significant ($p < 0.001$) correlation coefficients between milkability traits. Statistical significant positive ($p < 0.001$) correlations were estimated between milk yield and milkability traits ($r_p = 0.179 - 0.442$). Correlation between somatic cells count in cows milk, high milk flow and milking speed was negativly statistical significant ($r_p = -0.039$, $p < 0.05$). Analyze of genetic correlation showed strong positive genetic correlation ($r_g = 0.673 - 0.872$, $p < 0.001$) between milkability traits. Positive statistical significant correlation was between milk yield and milking speed ($r_g = 0.290 - 0.421$, $p < 0.001$). Genetic correlation between somatic cells count in cows milk and milkability traits was fractionally positive statistical significant ($r_g = 0.024 - 0.031$; $p < 0.05$). These results demonstrate that it is appropriate to perform mass cows selection and genetic evaluation by BLUP method of milkability traits in the entire country.

Keywords: milking speed, milk flow rate, somatic cells, heritability, genetic correlation.