

INVESTIGATION OF PHENOTYPICAL RELATIONSHIP OF LACTATION NUMBER EFFECTS ON MILK PRODUCTION AND BLOOD OF DAIRY CATTLE IN LITHUANIA

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Summary. This study aimed to estimate correlation between blood and milk traits in 66 high-yielding Lithuanian Black and White cows at different lactation stages and numbers. Cows were divided to three groups accordingly lactation number: first lactation cows - Group 1 (n=21), second lactation cows – Group 2 (n=8) and third or higher lactation cows - Group 3 (n=37), respectively. In addition, somatic cells count (SCC) as one of the most important factor of milk quality in different lactation cows was estimated.

First lactation cows had lowest milk production, however, highest production and protein level occurred in lactation 2. Highest SCC occurred in first lactation cows ($P<0.001$) and the highest milk fat content was registered in third and higher lactation cows. It was estimated that third and higher lactation cows had on 294 thousand/ml SCC higher compared to the second lactation cows ($P<0.001$). Fat content of milk was on 0.07% and protein content of milk on 0.1% higher in cows with SCC lower than 200 thousand/ml ($p>0.05$). Estimated positive significant correlation between protein content of milk and leukocyte content of blood in first lactation cows ($r=0.41$, $P<0.05$). Furthermore, estimated negative significant correlations between milk yield and erythrocyte content of blood ($r=-0.41$, $p<0.05$) either in milk yield and leukocyte content of blood ($r=-0.42$, $P<0.05$) in third lactation and higher cows.

Keywords: lactation number, milk, SCC, cows.