

RELATIONSHIP BETWEEN LACTOSE CONTENT IN COWS MILK WITH SELECTION ATTRIBUTES AND HERITABILITY

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Summary. This investigation evaluated the correlation between lactose content in milk and cows productivity, and milk composition. In addition, the relationship between lactose content in milk and reproductive traits of the cows, and the heritability of lactose content in cows milk were estimated.

Correlation between lactose content (%) and amount of milk was statistically significant slightly positive ($r=0.206$; $p<0.01$). Comparable results were determined between lactose content in milk and milk fat content ($r=0.105$; $p<0.01$). Correlation between lactose content and milk protein content was statistically significant slightly negative ($r=-0.128$; $p<0.001$). Negative average on phenotypical correlation was estimated between lactose content and somatic cell count in milk (from $r=-0.36$ to -0.588) Average negative statistically significant correlation between lactose content in cows milk and servis period was estimated ($r=-0.401$; $p<0.01$). Average negative correlation coefficient between two calving period and lactose content in milk ($r=-0.368$; $p<0.01$) was estimated. Slight negative statistically significant correlation between insemination index and lactose content in milk was recorded ($r=-0.175$; $p<0.01$). Heritability coefficient (h^2) of lactose content in cow's milk was 0.279 ± 0.001 and average negative genetic correlation between somatic cell counts and lactose content in milk was registered ($r_g = -0.43$; $p<0.01$). These findings suggest possibilities of cows selection according lactose content in milk. Selection based on lactose content could help to increase the effectiveness of selection of cows according somatic cells count.

Key words: lactose, phenotypical correlation, genetic correlation, heritability.