

STUDY REGARDING GENETIC CORRELATIONS BETWEEN MILK PRODUCTION TRAITS FOR HOLSTEIN POPULATION FROM IAȘI

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Abstract

Correlations between milk production traits play an important role in animal breeding. This study aimed to estimate the correlations between milk yield, fat yield, protein yield, fat percentage, and protein percentage in the dairy cattle population from Romania. Data from 121 Holstein cows during their first lactation were collected. These cows are descendants of 1 bull of the pure breed. The Test Interval Method was used to calculate milk yields, and ANOVA was employed to estimate correlations. The results showed strong positive correlations between milk yield and fat yield, as well as between milk yield and protein yield. A strong positive correlation was also found between fat yield and protein yield. Negative correlations were observed between milk yield and fat percentage, as well as between milk yield and protein percentage. Additionally, a strong positive correlation was identified between fat percentage and protein percentage. These findings provide valuable insights for optimizing breeding programs, improving milk productivity and quality, and guiding selection strategies in the Romanian dairy cattle industry. Further research is recommended to explore additional traits and underlying genetic mechanisms in dairy cattle populations.

Key words: dairy cattle, milk yield, fat, protein