

STUDY REGARDING ESTIMATION OF HERITABILITY FOR MILK PRODUCTION TRAITS IN HOLSTEIN CATTLE

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Abstract

The goal of this study is to estimate the heritability of milk, fat, and protein yields in Holstein cows from a dairy farm in Iași, Romania. The heritability of these traits during the first lactation is examined using 16 bulls and their 542 progeny and was estimated the heritability of milk, fat, and protein yields during the first lactation. Data was statistically processed with ANOVA. The findings reveal a lower heritability for milk yield (0.15 ± 0.06), a moderate heritability for fat yield (0.30 ± 0.12), and a strong heritability for protein yield (0.64 ± 0.23). These results showed that protein yield exhibits the most significant genetic influence, while milk yield demonstrates the least. The findings regarding milk yield and fat percentage should be interpreted with caution due to their proximity to the limits of the specialized data range. However, it is important to note that the observed heritability for protein percentage may be of particular difference, potentially influenced by human error or the transmission of data in an improper manner.

Key words: dairy cattle, improvement, breeding plan