

عنوان مقاله:

Genetic Analysis of Postnatal Mortality and Calving Traits in Iranian Holstein Herds Using Threshold-Linear Models

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خلاصه مقاله:

This study was conducted to estimate the additive genetic components of calf mortality in the first month of age, calving difficulty, and birth weight in Holstein dairy cows in the central regions of Iran. The records comprised *۶*1, Y•• calves born between 199• and Y•11 from *۶*• dairy herds. Different threshold-linear models in three groups of univariate, bivariate, and multivariate models were used. The frequency of calf mortality was Y.*۶*%. Distribution of calving difficulty score was *۶*Δ.1Y% in the first category (no assistance), *Ψ*•.*۶۶*% in the second, *Ψ*.1Y% in the third, and 1.1% in the fourth (major assistance). Averages of birth weight and dam age were *F*•.*ΨF* kg and *Y۶*9.*F* days, respectively. Direct Heritability estimation for calf mortality varied from •.•*Δ* to •.•*ΥY*. The estimated heritability for calving difficulty ranged from •.•*ΨY* to •.•*Δ*•. Heritability for birth weight was estimated about •.*YY*. The results of this study showed that there were genetic variations for all traits. Although there was no strong additive genetic correlation between the traits, an environmental correlation between mortality and other traits was observed. Results suggested that implementation of threshold models for mortality trait was more favorable, but they were not reflected in genetic analysis of calving difficulty records. Furthermore, current findings indicated that benefit from the use of multi-traits models for genetic .evaluation of postnatal mortality depended on the methodology (linear or threshold model) used for mortality trait

کلمات کلیدی:

Birth weight, Calf mortality, Calving difficulty, Genetic parameters, Linear- Threshold models

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