عنوان مقاله:

Lifetimegenetic analysis of milk yield in Iranian Holstein cows using repeatability and pre-structured multivariate models

نویسنده:

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خلاصه مقاله:

Milk yield records from 1st to 5th lactations of Iranian Holstein cows were analyzed using repeatability and a number of multivariate models that varied in additive genetic variance structure. A total of313,006 milk yield records were used. The records were obtained from 116,531 cows born between 2001 and 2005. The animals originated from 2,355 sires and 91,212 dams. A multivariate model with heterogeneous residual co (variance) and heterogeneous genetic variance was found to be the most parsimonious model in comparison with the repeatability and the other pre-structured multivariate models.Heritability of milk trait at 1st, 2nd, 3rd, 4th and 5th locations were 0.27, 0.19, 0.14, 0.11 and 0.07, respectively using the preferred modelwhile a value of 0.18 was estimated for the heritability of the milk yields where repeatability model was applied.In comparison with the pre-structured multivariate models; the repeatability model was not an appropriate model for genetic analysis of the repeated records of milk yield in the population investigated. In the current study, homogenous genetic covariance was assumed among the different lactations which can be modelled in future studies.

کلمات کلیدی:

genetic analysis, repeatability model, pre-structured multivariate model, milk yield, Iranian Holstein cow

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