عنوان مقاله:

Covariance components and genetic parameter estimation for 18 month weight in Nguni and Tuli cattle of Zimbabwe

محل انتشار:

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نویسنده:

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خلاصه مقاله:

An animal model was applied to estimate variance components and heritability estimates from weight at 18-months (18-mo) pedigree records of two experimental herds of Nguni and Tuli cattle maintained on range at Matopos Research Station. The fixed effects included were of year of birth, sex and age of dam. Random effects were direct and maternal genetic of the animal and dam with genetic covariance of direct and maternal effects, maternal permanent environment, and random residual. Estimates of direct heritability were 0.36 ±0.001 and 0.13±0.005 for Nguni and Tuli cattle, respectively. The maternal heritability was higher for Tuli cattle, 0.18 as compared to 0.02 for Nguni cattle. Estimates of maternal permanent environmental variance as a proportion of phenotypic variance were less than 1% in both Nguni and Tuli cattle. The direct-maternal genetic correlations were small and negative for Nguni cattle, and small and positive for Tuli cattle. Permanent environmental effects were found not to be important for 18-mo in both cattle breeds studied. The genetic variance is high in Nguni cattle that response to selection is expected to be high

کلمات کلیدی:

Direct ، ، Maternal ، Tuli ، ، Nguni ، ، Zimbabwe