

GENETIC, PHENOTYPIC AND ENVIRONMENTAL CORRELATIONS AMONG BODY WEIGHTS AT SEVERAL AGES IN CANCHIM CALVES

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Body weights at birth (BW), 205 days (WW), 12 months (BW12), 18 months (BW18) and 24 months (BW24) taken for 1565 Canchim calves born to 82 sires during a 15 years period of breed development were analysed according to a mixed model which included the effects of sire, birth year of calf, birth month, age of dam, sex, generation number of calf and birth year x sex, birth month x sex and age of dam x sex interactions. Genetic correlations were estimated from paternal half sib covariance.

Genetic correlations and respective errors of estimation were the following: 0.34 ± 0.18 ; 0.13 ± 0.19 ; 0.14 ± 0.19 and 0.16 ± 0.20 between BW and the subsequent weights; 0.74 ± 0.09 ; 0.76 ± 0.10 and 0.51 ± 0.16 between WW and BW12, BW18 and BW24; 0.92 ± 0.05 and 0.80 ± 0.08 between BW12 and subsequent weights and 0.91 ± 0.05 between BW18 and BW24.

In general, all phenotypic and environmental correlations among the weights were positive and had similar magnitudes of the genetic correlations. Adjacent records showed higher relations as compared to the more distant records.

ESTIMATION OF GENETIC COVARIANCE FROM JOINT REGRESSION AND ANALYSIS OF VARIANCE STATISTICS

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Most methods of estimating genetic parameters consist of equating observed covariances between relatives to their expectations in terms of a genetic model and then fitting the pa-