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GENETIC CORRELATION ESTIMATES BETWEEN TEMPERAMENT AND WEIGHT GAIN IN NELLORE BEEF CATTLE

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The aim of this study was to estimate the genetic association between temperament and average daily gain (ADG) in Nellore cattle. Temperament measurements of 4,590 Nellore cattle were obtained using the following methods: 1) flight speed (FS) recording the speed at which an animal exited from the crush, 2) score of movement inside the crush (MOV), ranging from 1 (no movement) to 4 (movements frequent and vigorous). The average daily gain (ADG) was obtained from weaning (8th month) to yearling (18th month) from 72,796 animals. The (co)variance components were estimated by animal model including random effects of additive genetic and residual effects, and fixed effects of contemporary group (CG), age of dam in class and age of animal at measurement as covariable (linear effect). For ADG quadratic effect of animal age was added to the model. Bayesian inference using linear-linear model (for FS-ADG analyses) and a threshold-linear model (for MOV-ADG analyses) were applied and Gibbs sampling was performed. Markov chains of 1,000,000 cycles were generated with a sampling interval of 100 iterations. The mean ± standard deviation for ADG, VS and MOV were 0,298±0,092 kg/day, 2.17±1.03 m/s and 1.99±0.97, respectively. The genetic correlation estimates between AGD and temperament traits were low but in the expected direction, -0.13±0.12 (ADG-FS) and -0.29±0.15 (ADG-MOV). These results indicated selection for increasing ADG will not be efficient to genetically change animal's temperament. Financial support: CNPq, CAPES and FAPESP (Proc. 09/53609-7).