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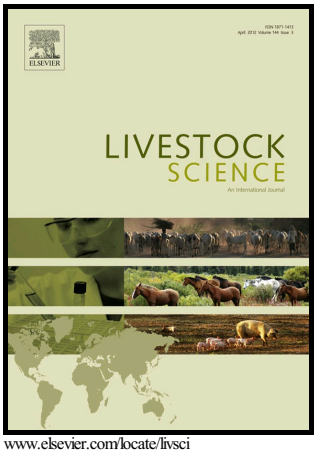

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Genetic parameter estimates for temperament, heifer rebreeding, and stayability in Nellore cattle

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ABSTRACT

The aim of this study was to estimate heritability for five temperament and two reproductive traits in Nellore cattle and to estimate genetic and phenotypic correlations among them. Temperament was evaluated using the movement (MOV), tension (TEN) and crush (CS) scores (measured with animals inside the squeeze chute) as well as the flight speed (FS) and temperament score (TS). Reproductive traits included *i*) heifer rebreeding (HR), which evaluates heifers' ability to become pregnant, given that they had calved once; and *ii*) stayability (STAY), which measures cows' ability to calve at least 3 offspring before reaching 65 months of age. We used Bayesian inference and Gibbs sampling in a two-trait analysis to estimate genetic parameters applying a linear model for FS and threshold models for MOV, TEN, CS, TS, HR and STAY. The animal model included contemporary group as a fixed effect, direct additive genetic and residual effects as random effects, and animal age at yearling as a covariate (with linear and quadratic effects). Heritability estimates for MOV, TEN, CS, FS, TS, HR and