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GENETIC VARIABILITY FOR BEEF CATTLE TEMPERAMENT USING DIFFERENT METHODS OF ASSESSMENT

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The aim of this study was to estimate genetic parameters for temperament using three methods for assessing cattle temperament. Records from 4,590 Nellore cattle were obtained using the following methods: a) flight speed (FS) ; b) crush score (CS), ranging from 1 (very calm) to 5 (very reactive) ; and c) score of movement inside the crush (MOV), ranging from 1 (no movement) to 4 (movements frequent and vigorous). Variance components were estimated by an animal model that included the random effects of additive genetic and residual effects and fixed effects of contemporary group (CG), age of dam in annual classes (from 4 to 14), and the age of animal at measurement as covariable (linear effect). Variance components were estimated by a linear model (for FS trait) and a threshold model (for MOV and CS traits) using Bayesian inference via Gibbs sampling. Heritability estimate posterior mean was slightly higher for FS (0.18±0.05), than for CS (0.09±0.04) and MOV (0.11±0.04). Therefore, response to selection for temperament, measure by any of these methods, will be slow. Moreover, consequences of physiological and behavioral changes related to selection for these traits remain
unclear.