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A comparison of three cattle temperament assessment methods

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The aim of this study was to compare three methods to assess cattle temperament. Data from 335 Nellore young bulls were recorded, measuring: 1) score of movement in the crush (MOV), from 1 (no movement) to 4 (movements frequent and vigorous); 2) flight speed (FS), recording the speed that an animal exit a crush; and 3) flight distance (FD), using scores from 1 (when an animal allows to be touched) to 5 (when an animal shows aggression towards the observer; this measure was done with the animal kept in a 30 m² pen). The qualitative behaviour assessment method (QBA) was used as a reference to explain the variation of each method's approach to cattle temperament. It was adapted to assess cattle temperament using 12 terms (active, relaxed, fearful, agitated, calm, attentive, positively occupied, curious, irritable, apathetic, happy and stressed). The observer indicates his qualitative assessment of an animal's expression by scoring each term on a line of 125 mm, where the minimum represents absence of the term expression, and maximum an intense manifestation of it. Pearson's coefficients of correlation were estimated to assess the association between the tests and between each test and each QBA term, assuming $P < 0.01$. Significant correlations were found between MOV and FS (0.194) and FS and FD (0.194), but not between MOV and FD (0.008). Regarding the QBA terms: MOV was significantly correlated with the terms active (0.240), calm (-0.216) and relaxed (-0.200); while FS was significantly correlated with active (0.555), agitated (0.501) and attentive (0.484); and FD with happy (-0.288), calm (-0.236) and apathetic (-0.222). Most of the correlation coefficients were low, only FS showed moderate values with some QBA terms. We conclude that there are variations in the methods' approach to cattle temperament; with FS addressing more the expressions of activity and agitation. Probably the differences in aspects of temperament approached are due to the context in which each test is applied. **Financial Support:** FAPESP.