



Temperament of Zebu purebred and crossbred cattle

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The animal temperament is an important behavior trait related to animal welfare and economic efficiency of the livestock production system. Usually, temperament can be defined as the expression of fear of animals in response to human actions during routine handling. Regarding its importance, temperament has been increasingly studied in cattle production systems, especially when it is based on zebu pure or crossbred animals. The objective of this study was to evaluate the temperament of zebu cows: Gir, Nellore, Guzonel (Guzerá x Nellore crossbreeds), Nelogir (Nellore x Gir crossbreed) and their crossbreeds, Zebu x Holstein F1 heifers and milking cows. The Zebu cows were used only for the production of F1 and were not milked. The experiment was conducted at the Fazenda Experimental de Felixlandia-MG, belonging to Epamig, from August 27 to September 3, 2012. The F1 milking cows, independent of the maternal basis, were handled in the same way. So, the heifers. The females were evaluated using the methods of subjective scores (TS), and the objective ones reactivity in a mobile scale (TR) and fly speed. A total of 560 animals were evaluated during this period. For TS, temperament was rated subjectively by two trained technicians on a scale from 1 to 5: (1) very docile, (2) docile, (3) slightly aggressive, (4) aggressive, and (5) very aggressive, according to the frequency and vigor of movements of the animal's head, legs and tail. Reactivity was measured using an electronic device, called Reatest® and attached to the scale. This device is equipped with a sensor that quantifies (in points) the frequency and intensity of animal movements over a period of 20 seconds from the time when the animal enters the scale. For fly speed test, the animal was confined in a chute for a few seconds. A person opened the gate allowing the animal to exit voluntarily. As soon as the animal moved away it broke a light beam that started a timer and a second light beam that stopped the timer. The time to cover the distance between beams were converted to m/s for data analyses. The greater the time the better the temperament. Data were subject to variance analysis, and the differences between least square means were compared by the SNK test for more than two means and F test in case of two means. The behavioral tests identified significant differences in TR and TS between zebu and F1 cows' temperament ($P < 0,05$). The values of TR and TS were respectively 1382 and 1.4 for zebu cows, and 586 and 1.1 for F1 cows. F1 cows were more docile than zebu cows and among this last group, the Gir cows had the best temperament in all tests ($P < 0,05$), while the other zebu cows did not differ. On the other hand, the maternal basis of F1 cows (Gir, Nellore, Guzonel and Nelgir) did not influence the temperament of F1 cows ($P < 0,05$). The results also showed that the cows' temperament tests (3.1s; 586 and 1.1) were significantly ($P < 0,05$) different from that of the heifers (2.4 s; 1622 and 1.3) in fly speed test, TR and TS respectively. We can conclude that animals submitted routinely to the same management become more docile, regardless of genetic composition and that milking handling probably affects this trait.

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