

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## CORRELATION BETWEEN ESCROTAL CIRCUMFERENCE AND PRODUCTION EFFICIENCY OF FEEDLOT NELLORE CATTLE

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Reproductive traits and its correlations with performance characteristics have been studied, but the literature is still scarce about the relationship between testicular measurements and productive efficiency. Therefore, the objective of this study was to evaluate the correlation between scrotal circumference (SC) and the production efficiency of feedlot Nellore cattle. Twenty-four male Nellore cattle, with a mean age of 24 months and mean initial weight of 470.95 kg, were evaluated. The animals had an adaptation period in the feedlot for 21 days, and were allocated in this system for another 90 days. The animals were submitted to a conventional diet with 52.6% corn silage and 47.4% dry matter concentrate, formulated to 1.3 kg day<sup>-1</sup> gain. The SC (cm), scrotal length (SL, cm) and scrotal width (SW, cm) were measured. The experimental design was performed in randomized blocks, and the animals were blocked by SC, where 12 animals were used in treatment 1 (T1), with 31 to 34 cm of SC, and treatment 2 (T2) were used 12 animals, with SC of 35 to 42 cm. The initial live weight (ILW, kg), final live weight (FLW, kg), dry matter intake (DMI, kg) and average daily gain (ADG, kg dia<sup>-1</sup>) data were obtained through the Intergado® System. To do this, each animal received an earring with individual identification chip, which measured every food and water intake and daily weighed the animals. Through this data, it was obtained the values of feed conversion ratio (FCR, kg of dry matter consumed kg<sup>-1</sup> weight gain), gross efficiency (GE, kg of weight gain kg<sup>-1</sup> dry matter consumed) and residual feed intake (RFI, difference between observed consumption and expected consumption). Data were submitted to variance analysis and means were compared by Tukey's test at 5% of probability, using SISVAR 5.6. The Pearson correlation coefficient test was also performed at a 5% probability using SAS software. There was no significant difference ( $p > 0.05$ ) between treatments and the means of DMI, ADG, FCR, GE and RFI. Also, there was no correlation between the SC and the FCR, GE and RFI variables ( $p > 0.05$ ). There was a positive correlation ( $p < 0.05$ ) between SC and ILW (0,58), FLW (0,70), DMI (0,59), ADG (0,51), SL (0,61) and SW (0,78). Animals with higher SC tend to gain more weight and reach higher slaughter weight, however, with higher dry matter intake, making them, therefore, less efficient.

**Keywords:** Feed efficiency, testicular biometry, weight, Zebu.

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