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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

WATER CONSUMPTION OF NELORE CATTLE AND CROSSED IN FEEDLOT

Danielle Leal MATARIM*[1], Juliana Jorge PASCHOAL[1], Pedro Felipe Della COLETTA[1]

*corresponding author: danielle.matarim@fazu.br
[1]Faculdades Associadas de Uberaba, Uberaba, Minas Gerais, Brasil

The concern with the use of natural resources, demanded by the growth of the world economy, is growing. The cattle raising uses water at all stages of production and it is necessary to seek ways to optimize this usage. This work aimed to evaluate the water consumption of Nelore cattle and F1 (Nellore x Angus cross), for identifying animals more efficient in the use of water for weight gain. Thirty-nine males were evaluated, 19 of the Nelore and 20 animals crossed. The animals were kept in feedlot for 120 days. The feedlot counted on Intergado® electronic troughs, with feeders supported on load cells that made possible the recording of the total food consumed by each animal. The animals were weighed daily on platforms installed in conjunction with the drinking fountain, which allowed the animals to weigh every time they drank water, along with water consumption information. From the data was calculated the dry matter intake, average daily gain, feed conversion and water conversion, which informs the amount of water the animal consumed for each kilogram of weight gain. The experimental design was completely randomized and for all analyzes the statistical program SISVAR, version 5.1 was used. A variance analysis was performed and the means were compared by the Tukey test ($p < 0.05$). Pearson correlation coefficients were used to evaluate the relationships between water consumption and other variables; besides the correlation between feed conversion and water conversion. The crossbred animals presented the same water and dry matter consumption, however, they presented greater weight gain (2.49 and 1.59 kg per day), resulting in better feed and water conversion (3.42 and 5.49; 11.69 and 19.52, respectively). The correlations between the variables showed that the average water consumption is more related to dry matter intake and metabolic weight, and not necessarily to the rate of weight gain. These data show that high weight gain will not imply higher water consumption. This efficiency can be explained by the efficiency of these animals in converting food into weight gain. The high correlation between feed conversion and water conversion indicates that the selection of animals that require less food to produce meat results in the selection of animals that also consume less volume of water.

Keywords: efficiency, sustainability, water conversion