

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

INFLUENCE OF FREEZING, MATURATION AND GENETIC ON THE SOFTNESS OF THE MEAT FROM CATTLE CONFINED WITH HIGH GRAIN DIET

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This study's goal is to evaluate the confined cattle's tenderness under a high grain diet, subjected to different freezing times, maturation and coming from different Zebu genetic constitutions. The used animals were Nelore (N), ½ Aberdeen Angus x ½ Nelore (AN), and ½ Canchim x ½ Nelore (CN), in the proportions, nine, nine and eight, respectively, with an average age of 18 months old and initial live weight average of 240 kg. The Commission of ethics in the use of Animals (CEUA)-UEMS certified the use of the animals in accordance with the Protocol 028/2017. After 98 days in confinement, being the 15 first days adaptation days, the animals were slaughtered by concussion, being removed samples or steaks of the Longissimus dorsi muscle with 2.54 cm thick toward the skull of the carcass after 24 hours of cooling. The steaks were destined to treatments as follows: conventional maturity (without prior freezing) and prior freezing of -20° C for 30 and 60 days before the maturation. The meats were evaluated after 0 (24 hours post mortem), 7 and 14 days of ripening. The data was subjected to the statistical program R 2.11.0 and analyzed at the 5% level of significance by Scott Knott's test. The average values in relation to the breed, were of 8.70 kgf in Nelore, differing significantly (P<0.05) from the ½ Aberdeen Angus x ½ Nelore and ½ Canchim x ½ Nelore, with averages of 7.14 and 7.62 kgf, respectively. Samples that were not frozen showed a higher shear force (9.20 kgf) (P<0.05) compared to the samples frozen for 30 and 60 days, 7.16 and 6.89 kgf, respectively. The maturation times showed significant difference (P<0.05), the steaks at time 0 showed higher shear strength, 10.07 kgf, in relation to the steaks matured for 7 and 14 days (7.07 and 6.14 kgf, respectively). The ½ Canchim x ½ Nelore and ½ Aberdeen Angus x ½ Nelore animals demonstrated meat with a lower shear force when compared to the Nelore breed, as well as the frozen meat for 30 and 60 days compared to the non-frozen samples. The matured samples were tender than the non-matured ones. The genetic constitution, as well as the freezing are factors that interfere with the shear force.

Keywords: confinement, shear force, taurine, whole grain corn, zebu

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