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EFFECT OF FEED RESTRICTION ON THE QUALITY OF MEAT OF MALE BOVINES FINISHED IN FEEDLOT

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RESUMO

The feedlot of cattle is an increasing activity; however, the greatest limitation is the cost of feeding offered, in most cases, *ad libitum*. An alternative would be to provide restricted feed during finishing; nonetheless, research on the restriction in the final stage of production are scarce as well as its effects on meat. Therefore, the objective of this work was to evaluate the effects of the feed restriction on the quality of meat of Holstein x Zebu cattle at different maturation times. The experiment was conducted in the Federal University of Viçosa, Brazil. Twenty Holstein X Zebu steer with body weight and initial age of 324 kg and 19 months, respectively, were used. The experiment lasted 84 days. The animals were randomly assigned to one of four treatments: *ad libitum* feeding for 84 days (AL84); feed restriction at 85% of DM of *ad libitum* consumption for 84 days (R84); feeding restricted to 85% of DM from *ad libitum* consumption for 28 days and re-feeding *ad libitum* for 56 days (R28) and; feeding restricted to 85% of MS of *ad libitum* consumption for 42 days and re-feeding *ad libitum* for 42 days (R42). The diet was calculated to provide 12% crude protein (% dietary DM) and daily mean gain of 1.2 kg. At the end of the experimental period, all animals were slaughtered and the carcasses were cooled in a cold room at 4°C for 24 hours. Subsequently, a sample of the Longissimus muscle was removed between the 6th and 9th ribs of the left half carcass to analyze the qualitative characteristics of the meat. The sample was fractionated into two 2,54 cm steaks, identified and packed in vacuum. A steak was immediately frozen at -18 ° C (1 post-mortem day), and the other was matured at 4 ° C for 14 days (15 days postmortem) in a refrigerator. Data were analyzed in a completely randomized design using the PROC MIXED procedure of SAS 9.0. No statistical differences were found ($P > 0.05$) for any of evaluated characteristics (meat color, Warner-Bratzler shear force, thawing losses and total) between the levels of food restriction; likewise, there was no significant difference between the proposed maturation times ($P > 0.05$). It is concluded that, during the termination phase, 15% of restriction of DM, not modify meat quality and it is still an economical and sustainable alternative for the last stage of bovine production.

PALAVRAS-CHAVE: Ciência e tecnologia de produtos de origem animal, Holstein, Longissimus, Tenderness, Zebu

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