

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

CARCASS PHYSICAL COMPOSITION AND MEAT QUALITATIVE CHARACTERISTICS OF YOUNG BULLS FED SOYBEAN HULLS AND WHOLE OR GROUND CORN

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The use of different foods such as soybean hulls and corn in different physical forms in the diet can alter the animal meat characteristics. The objective of this study was to evaluate the effect of inclusion of soybean hulls and corn grain whole or ground in the diet of young bulls and its effects on the carcass physical composition and the meat qualitative characteristics. The experiment was carried out at the “Escola de Medicina Veterinária e Zootecnia-Universidade Federal do Tocantins”. Thirty-six $\frac{3}{4}$ Holstein $\frac{1}{4}$ Zebu non-castrated calves, with four months of age and initial weight of 89 kg, were distributed in four treatments in a completely randomized experimental design with 2 x 2 factorial arrangement (758.6 g kg^{-1} of ground or whole corn grain associated with 0 or 500.8 g kg^{-1} of soybean hulls). After 198 days in feedlot the animals were slaughtered in a commercial slaughterhouse where the HH section was separated to determine the physical composition of the carcass. The *Longissimus lumborum* muscle was used to evaluate the qualitative characteristics of the meat. Data were submitted to homoscedasticity and normality tests and in all parametric variables analysis of variance and Tukey's test (5%) was performed. For the non-parametric variables, the Kruskal Wallis test and the Conover procedure (5%) were performed. There was no effect of the physical form of the corn on the physical composition of the carcass. Soybean hulls increased the percentage of muscle in the carcass and reduced the percentage of fat ($P = 0.01$), which indicates the production of meat with good nutraceutical characteristics. This might be related to the lysine content in soybean hulls, which is a limiting amino acid for growing cattle, and is 2.2 times higher than that of corn. Meat qualitative characteristics were similar, with low shear force ($2.73 \text{ kg F cm}^{-2}$). Meat color was not affected by treatments, classified as slightly dark (red intensity: 17). Carcass conformation score was higher ($P = 0.03$) for animals fed ground corn. The use of soybean hulls and ground corn favors the production of desirable meat for the consumer market.

Keywords: fat, meat color, muscle, shear force

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