54ª. Reunião Anual da Sociedade Brasileira de Zootecnia
24 a 28 de Julho de 2017
Hotel Bourbon Cataratas – Foz do Iguaçu – Brasil
ISSN 1983-4357

Theme 9 | Ruminant nutrition and production

Beef tenderness of Nellore cattle finished with supplemented yeast and probiotic in the north of Mato Grosso

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Important world markets are requiring safer, consumer-friendly food, encouraging further studies on beef information. Feed supplementation of grazing cattle may influence on the beef tenderness, mainly associated with the animal growth and fat cover degree. The determination of the physicochemical composition of the carcass becomes fundamental within this context, since it makes possible to evaluate the effect of any type of treatment to which the animals have been submitted. Aimed, with study, evaluate the beef tenderness of Nellore cattle supplemented with different additives. Twenty-eight non-castrated males of the Nellore breed were randomly divided into four supplementation groups (Group 1 = Urea; Group 2 = Urea + Optygen; Group 3 = Group 2 + Yeasts; and Group 4 = Group 3 + Probiotic). The experimental area used was of eight hectares, with Brachiaria brizantha cv. BRS Piatã, subdivided into four pens. At the end of 98 days the animals were slaughtered at the slaughterhouse located in the city of Sinop-MT, with chilling of carcass 24 hours. And after, three steaks were sampled from the right half-carcass between the 12 th and 13 th ribs, 25 mm thick, and vacuum packed for beef maturation at 2 ± 2ºC for a period of zero and 14 days. The shear force was determined in cylinders of 1.25 cm in diameter after grilled in electric grill until reaching the internal temperature of 72ºC, followed by cooling at 4ºC for 12 hours, the shear force being measured by means of the TA XT Texturometer -Plus Texture Analyzer 2i, from the brand Stable Micro System (UK), equipped with a set of Warner-Bratzler blades. Data were analyzed using the Statistical Analyzes System software in a completely randomized design. Group Urea + Optygen presented lower ($P<0.05$) beef tenderness on the two maturation periods, with 0 day and 14 days, 3.49 kgF and 4.04 kgF, respectively, in relation of other groups; with range among 2.25 kgF and 4.04 kgF. Both 0 and 14 days of maturation also did not present significant differences among the four treatments. Preliminary, the use of yeasts and/or probiotic in the bovine supplementation did not improve the beef tenderness, with lower beef tenderness of the bovine supplied with Optygen.

Keywords: Beef, carcass, shear force, tenderness