

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

EFFECTS OF DIETARY STARCH CONTENT AND AMYLOLYTIC EXOGENOUS ENZYMES ON PERFORMANCE AND CARCASS TRAITS OF FEEDLOT FINISHED CATTLE

Saulo da Luz e SILVA*, Henrique Bueno SILVA, Daniel Silva ANTONELLO, Juan Fernando Morales GÓMEZ, Mariane BELINE, Bruna PAVAN, Danilo Brito BAMBIL, Helena Viel Alves BEZERRA

*corresponding author: sauloluz@usp.br

College of Animal Science and Food Engineering – University of Sao Paulo, Pirassununga, Sao Paulo, Brazil

This study was carried out to evaluate the effect of the dietary starch content and amylolytic exogenous enzymes (AEE) on performance and carcass traits of feedlot Nellore cattle. Forty-eight non-castrated animals (300 ± 34 kg body weight [BW]; 16 mo old) were allocated, according to the initial BW (block), in four collective pens (12 animals/pen), equipped with electronic gates to control individual feed intake, in a randomized block design with a 2 x 2 factorial arrangement (starch content x AEE) and 12 replications per treatment. The animals were fed diets containing 10% of roughage (sugarcane bagasse) and 90% concentrate (soybean meal, mineral mixture, corn grain and citrus pulp). In the high starch content (HSC; 49.2% of starch) concentrate had 80% of cracked corn grain, whereas the low starch content (LSC; 35.7% of starch) diet the corn grain was replaced by 20% of ground citrus pulp. The AEE source was the commercial product Amaze® (Alltech Inc. Ltda, Araucaria, Parana, Brazil). Animals were gradually adapted to the finishing diets and facilities over a 30-d period and fed for a total of 136 days. Average daily gain (ADG), feed efficiency (G:F), dry matter intake (DMI), and BW were evaluated. At slaughter, hot carcass weight (HCW), dressing percentage (DP) and kidney, pelvic and inguinal fat (KPIF) were also evaluated. All data were analyzed using the MIXED procedure of SAS software, using the starch level, AEE and its interaction as a fixed effect and block as a random effect. There was no starch content x AEE interaction for any trait. Animals fed HSC had lower DMI (7.2 x 8.5 kg d⁻¹; *P* = 0.0134) and higher G:F (0.18 x 0.15 kg ADG kg DMI⁻¹; *P* = 0.0176) than animals fed LSC. However, no effect of the starch content was observed on final BW, ADG, HCW and KPIF. Despite of that, animals fed HSC diet had higher DP (56.1 x 55.1%; *P* = 0.0304) than those fed LSC. There was no effect of AAE on final BW, ADG, DMI, G:F, HCW, DP and KPIF. In conclusion, AAE inclusion does not improve performance and carcass traits of Nellore cattle fed high concentrate diet with HSC and HSC improve feed intake and efficiency when compared with LSC.

Keywords: feed additive, feed efficiency, high concentrate diet, Nellore.

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