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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PRODUCTION AND DRY MATTER CONTENT OF STARCH FEEDS AND DIGESTIBILITY IN SIZE SUPPLEMENTS WITH ENZYMATIC COMPLEX DOSES

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Corn is a major supplier of starch for energetic diets in feedlot. However, the structural characteristics of starch and its interaction with other components alter the digestion potential. As a result, the use of additives to manipulate rumen fermentation became indispensable. Specifically the exogenous enzymes, in high energy density diets, for their positive results in digestibility and animal performance. In this context, the objective of this work was to evaluate the production and dry matter content of faeces and the digestibility of starch of steers supplemented with doses of enzymatic complex. The experiment was carried out in Guarapuava, Paraná, at the State University of the Center-West. Thirty-two steers ½ blood angus and ½ Nellore blood weighing on average 422 kg were housed in confinement in 16 half-open bays. The experimental design was of randomized blocks, composed of four treatments 0, 2.5, 5.0, and 7.5 g of enzyme complex (Potenzya® enzyme, JBS, United States). The experiment lasted 77 days, divided into 14 days of adaptation to the diet and three evaluation periods of 21 days. The enzyme complex was added to the diet at the time of feeding the animals twice a day. At the end of each period, the total fecal collection of each experimental unit was performed for 48 consecutive hours to determine total yield and dry matter content of faeces and starch digestibility. Data from the period analyzes were submitted to analysis of variance and after the Tukey test at 5%, and the enzyme dose data were analyzed by the regression test using Proc Reg. There was no interaction (P> 0.05) between enzyme doses and confinement periods, and no difference was found for confinement periods in any of the evaluated parameters. For enzyme doses, the stool dry matter content reduced 0.46% for each gram of enzyme inclusion. Faecal production showed a quadratic behavior, and at the dose of 4.96 g animal^{-1} day^{-1}, there was lower feces production, and this reduction was due to the increase of the digestibility of the starch where the highest digestibility was in the dose of 5.08g animal^{-1} day^{-1}. The inclusion of the enzyme complex reduced the dry matter of the faeces and the dose of 5 g animal^{-1} day^{-1} increased the digestibility of the starch and reduced the daily production of feces in the dry base.

Keywords: amylases, exogenous enzymes, food additive.