ZOOTECNIA BRASIL
Centro de Convenções da PUC-GO | Goiânia-GO
27 a 30 de agosto de 2018

55ª REUNIÃO ANUAL DA SOCIEDADE BRASILEIRA DE ZOOTECNIA

ZOOTEC 28º CONGRESSO BRASILEIRO DE ZOOTECNIA

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

RUMINARY PARAMETERS OF FEEDED SHEEP WITH DIFFERENT LEVELS OF INCLUSION OF DIETARY BEER WASTE RESIDUE

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The objective of this study was to evaluate ruminal parameters of sheep fed with different levels of inclusion of wet brewery residue (WBR) in the diet. The research was approved by the Animal Ethics and Experimentation Committee, under protocol 21/2011. The experiment was carried out in the goats and sheep sector of the Federal Institute of Maranhão, Campus São Luis - Maracanã. Twenty sheep were used without defined racial pattern, with an average weight of 17.5 kg ± 1.51 kg, with approximately eight months of age, were distributed in four treatments according to the inclusion levels of WBR in the diet (0%, 10%, 20% and 30%), with five replicates. 100 ml samples of ruminal fluid were collected with the aid of esophageal probe at 0, 2, 5 and 8 hours after the diet. Samples were rapidly filtered using cotton gauze for pH determination; then two 25 mL aliquots of the storage fluid were withdrawn into plastic vials containing 1.25 mL of 6 N HCl and frozen at -18 ° C. The experimental design occurred in a 4 x 4 factorial arrangement, with four diets and four periods. Data were submitted to analysis of variance and comparison of means, using the Tukey test, at a 5% probability level. There was no effect (P> 0.05) of interaction between inclusion levels of WBR and time after feeding, for the concentrations of propionic acid and ruminal pH values. There was an effect of inclusion of WBR on total acetic acid and total volatile fatty acids (TVFA) concentrations (P < 0.05), where the treatment with 0% had higher mean values (1.85 and 59.99 mMol) than the treatment with 20% inclusion (24.43 and 48.58 mMol). The treatment with 10% WBR influenced (P < 0.05) in the acetate / propionate ratio after 2 hours of feeding. The effect of the interaction time and treatment (P < 0.05) on the NH_3 values at the 20% level of WBR, with a lower value at 2 hours (9.60 mMol) and higher at 8 hours (30.03 mMol) after feeding. The inclusion of WBR in the sheep diet, in the ratio of 20%, altered ruminal parameters such as, NH_3, TVFA and the acetate/propionate ratio.

Keywords: alternative food, animal nutrition, small ruminants

Acknowledgments: Federal Institute of Maranhão, Campus São Luis – Maracanã.