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

CARBOHYDRATE FRACTIONATION OF JIGGS BERMUDAGRASS IN DIFFERENT SEASONS AND UNDER INTERMITTENT GRAZING BY HOLSTEIN COWS

Suelen Soares OLIVEIRA[*1], Kátia Aparecida de Pinho COSTA[1], Wender Ferreira de SOUZA[1], Eduardo Valcácer Brandstetter [1], Darliane de Castro SANTOS, Patrícia Soares EPIFANIO[1], Ana Carolina Gomes da SILVA[1], Mariana Borges de Castro DIAS[1]

*corresponding author: suelen.rv.zootecnia@hotmail.com
[1]Instituto Federal Goiano, Rio Verde, Goiás, Brasil

The viability of pasture-based animal production systems depends on the use of high-quality forages and consumption of nutrients by the animals. Among the forages, Jiggs bermudagrass, this presented a competitive production potential, during the different seasons of the year. Therefore, to evaluate the quality of this grass is essential to the ruminal degradation of fractions carbohydrates, for high yielding cows. This study aimed to evaluate the carbohydrate fractions of Jiggs bermudagrass in different seasons of the year under intermittent grazing by Holstein cows. The experiment was conducted on a dairy farm of Santa Helena de Goiás, from April 2014 to March 2015. The property is part of the "Balde Cheio" project, which seeks to promote the sustainable development of dairy ranching. The using completely randomized design with five replicates (the number of forage cuts in each season) and the four seasons (fall, winter, spring and summer) as treatments. The pasture was studied in a mob-stocking grazing system, in which each paddock was stocked at a high rate for one day and then allowed to rest for 19 days. The percentage of total carbohydrates (CT) was obtained by the equation: CT = 100 - (%crude protein +% ether extract +% ash); the fiber carbohydrate (FC), from the NDF corrected for ash and protein content (NDFcp); non-fiber carbohydrates (CNF), which correspond to fractions A+B1, by the difference between total carbohydrates and NDFcp; and fraction C, by the indigestible NDF after 144 hours of in situ incubation. Fraction B2, which corresponds to the available fraction of the fiber, was obtained by the difference between the NDFcp and fraction C. Data were tested by analysis of variance, using the software R, using the ExpDes package. The means were compared by the Tukey's test, with a significance level of 5% probability. There was a significant differences ($p<0.05$) between all the parameters analyzed for the carbohydrate fractions of the forage under the effect of the seasons. There was addition of CT, FC and fraction C, considered unavailable in the digestive behavior of ruminants of the in the winter period, reflecting the quality of the forage. This result is associated with the increase in structural carbohydrates and lignin, which reduces the proportion of potentially digestible nutrients, impairing the qualitative characteristics of the pasture. Better climatic conditions in spring and summer contributed to increase in the fraction A+B, represent carbohydrates of rapid ruminal degradation.

Keywords: climate conditions, chemical composition, *Cynodon* ssp., ruminal degradability