

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## PRODUCTION, CHEMICAL COMPOSITION AND *IN VITRO* DIGESTIBILITY OF PAIAGUAS GRASS HAY UNDER REGROWTH AGES

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The advance in the age of cut of tropical grasses results in an increase in the amount of accumulated forage, however, it reduces the quality of the same one. The *in vitro* digestibility and chemical composition of forages are more pronounced in tropical grasses, especially with the advancement of their age. In this sense, looking for cutting ages that leads to an efficient management and that allows the balance becomes essential for the system and to generate knowledge of forages recently launched by the market. Thus, the objective of this work was to identify the best cutting age of Paiaguás grass through production, chemical composition and *in vitro* digestibility of hay. Four regrowth ages (21, 35, 49 and 63 days) were evaluated with four replicates. The dry matter (DM) production was determined by the forage mass in 1m<sup>2</sup>, cut close to the soil, in a representative way of the canopy. After cutting the age determined, the forage mass was harvested and spread in a covered place until reaching dry matter content between 80-85%, and then baled. The content of DM, organic matter (OM), neutral detergent fiber (NDF), acid detergent fiber (ADF), crude protein (CP) and hay lignin were determined according to procedures described by Detmann et al. (2012). The *in vitro* digestibility coefficients (IVD) of DM, OM, NDF and ADF of the hays were determined according to Ítavo et al. (2015). There was an increasing linear effect ( $P = 0.0001$ ) on the total dry matter production, with a mean that varied from 1404.89 to 4055.46 kg ha<sup>-1</sup>. Increasing linear effect was observed for DM and OM, and decreasing for IVDNDF and IVDADF. Paiaguás grass hay yielded quadratic behavior ( $P < 0.05$ ) with age increase on CP, IVDDM and IVDOM, with minimum values of 64.76; 609.88 and 653.91 g kg<sup>-1</sup> at 57, 53 and 54 days, respectively. The inverse was observed for NDF, ADF and lignin, with maximum values of 811.34; 520.28 and 67.03 g kg<sup>-1</sup> of DM at 52, 46 and 58 days, respectively. The best age of regrowth for hay production of *Brachiaria brizantha* cv. Paiaguás was at 35 days of age, by production of satisfactory forage mass, chemical composition and *in vitro* digestibility more efficient compared to the other ages.

**Keywords:** *Brachiaria brizantha*, dry matter, forage conservation, nutritive value

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