LEAF BLADE MASS AND LEAF:STEM RATIO IN CONVERT™ HD364 GRASS HANDLED UNDER GRAZING HEIGHTS

Diogo Rodrigues da SILVA*¹, Ulysses CECATO¹, Sandra GALBEIRO², Renan SANCHES¹, Marcos Vinícius Coidaras de Campos LUZ¹, Thiago Trento BISERRA ¹, Camila Fernandes Domingues DUARTE¹, Divaney MAMÉDIO¹

*corresponding author: diogo_rodriguees@hotmail.com
¹Maringá State University, Maringá, Paraná, Brazil
²Londrina State University, Londrina, Paraná, Brazil

The objective of this study was to evaluate leaf blade mass (LBM) and leaf:stem ratio (L:S) under different management strategies in continuous stocking. The experimental area was 16 ha, divided into 16 paddocks of approximately one hectare. A randomized block design with four replications was used. The treatments consisted of four grazing heights (15, 25, 35 and 45 cm) of the Brachiaria hybrid convert™ HD364. The LBM was evaluated in the winter, spring, summer and fall of 2016/2017, with duration of one year. Three animals per picket were used as testers and height-regulating animals, when necessary. Grass height measurements were performed once a week and the forage mass was estimated every 28 days. The LBM (kg DM.ha⁻¹) and the leaf: stem ratio were estimated based on the mass of forage and the morphological components. The data were analyzed containing the random effects of blocks, and the fixed effects of grazing height and seasons and their interactions, in the case of significance, regression analysis was carried out, evaluating the effect of height in each season. Tukey's test was used for analysis of means (5% significance). For these analyzes SAS was used. No interaction was observed between grazing height x season of the year for LBM and L:S ratio. LBM was lower in the winter season (1.12) and higher in spring, summer and fall, but without differing between them, 2.18, 2.20 and 2.40, respectively. The L:S ratio was higher in the spring season (1.75) and lower in winter, summer and fall, but not differing among them, being 1.21, 1.20 and 1.21 respectively. The lowest LBM values occurred in treatments of 15 cm (1.56) and higher in treatments of 25, 35 and 45 cm, being 1.92, 2.20 and 2.22, respectively. The highest L:S ratio was observed in treatments of 15 cm (1.66) and lower in treatments of 25, 35 and 45, being 1.40, 1.18 and 1.13 respectively, decreasing with increasing height of grazing. In general, convert™ HD364 grass in relation to the evaluated treatments showed higher values for the LBM in the treatments with higher grazing height and the L:S ratio adjusted in a linear decreasing behavior, being the lower values in the treatments with lower grazing height. By means of this, intermediate heights as 25 cm suggests a good alternative to reconcile the higher LBM values and L:S ratio.

Keywords: brachiaria hybrid, stocking rate, handle grass

Acknowledgments: CNPq for granting the grant and Dow Agrosciences for financial support.