

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

BULK DENSITY OF ANDROPÓGON GRASS SUBJECTED TO TWO DEFERMENT TIMES

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Pasture deferment should take place at the end of the rainy period, but each grass responds differently to water stress. The objective of this study was to evaluate the bulk density of Andropogon grass (*Andropogon gayanus* Kunth cv. Planaltina) subjected to three harvest heights during the rainy period, at two pasture closure times. The experiment was set up as a completely randomized block design with a 3 × 2 factorial arrangement consisting of three harvest heights (15, 25, and 35 cm), and two times for the onset of the closure period (May and June), with four replicates. The rainfall accumulated over the 90 days of deferment was 111.2 and 43.6 mm for the closure periods starting in May and June, respectively. Pasture height and herbage production were measured at the end of the deferment period. Bulk density was calculated by dividing the herbage mass and its morphological contents by the pasture height. All data were subjected to analysis of variance and mean comparison by Tukey's test at the 5% probability level using SAS 9.0 statistical software. There was no effect ($P>0.05$) of closure time on stem bulk density (SBD), whose mean value was $29.45 \text{ kg cm}^{-1} \text{ ha}^{-1}$. The pasture closed in June had a higher total herbage bulk density (TBD) ($20.73 \text{ kg cm}^{-1} \text{ ha}^{-1}$), which was a consequence of the greater leaf bulk density (LBD) ($73.59 \text{ kg cm}^{-1} \text{ ha}^{-1}$). The leaf blade is the component of greatest nutritional value, and its larger proportion in the pasture makes it also the component of highest quality. The precipitation volume of 111.2 mm was sufficient to accelerate pasture regrowth to the point of the grass producing inflorescences, with up to around 230.72 cm in height, when compared with the pasture closed in June, whose average height was 59.75 cm. Defoliation management in the rainy period did not affect ($P>0.05$) LBD, SBD, or TBD. The rainfall accumulated in May was sufficient to accelerate herbage recovery, with the grass reaching the end of the 90-day deferment in the reproductive stage. This did not occur for the pasture closed in June, whose LBD and TBD were higher. It is recommended to close andropogon grass pastures when the average accumulated rainfall within the 90 closure days is around 43.6 mm, which coincided with the month of June in the low Parnaíba region of Maranhão State.

Keywords: adaptability, water stress, management, precipitation

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