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CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

FORAGE PRODUCTION AND MORPHOLOGICAL COMPOSITION OF *Urochloa decumbens* GRASS IN SILVOPASTORAL SYSTEM

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This study was carried out at the farm of the Ilha Solteira Faculty of Engineering, in Selvíria, MS. The experimental design was a completely randomized design with two treatments and 10 replicates, in a test area of *Eucalyptus grandis* progenies planted in double rows at a spacing of 2.0 x 2.5 x 4.0 m. The treatments corresponded to the area below the double lines of *E. grandis* (High shading) and the area between the double *E. grandis* lines (moderate shading). Ten samples were collected by treatment, weighed to evaluate the total dry matter (DM), and subsamples were separated in leaves, stem (hemp + leaf sheath), and dead material, and destined for oven drying at 65ºC for 72 hours and , weighed again to establish the DM of each fraction. Statistical analysis was performed using the statistical program R. The means were compared at a significance level of 5% of probability by the Tukey test. The production of total dry mass (DM) (645 kg.ha^{-1}), as well as leaf DM production (272 kg.ha^{-1}), stalk (204 kg.ha^{-1}) and dead material (169 kg.ha^{-1}) were significantly higher ($p < 0.05$) for the treatment with moderate shading than the treatment with high shading, which were 145.48; 80.82; 49.28; 15.39 kg of DM ha^{-1}, respectively. From the high shade treatments yields, 145.48 kg of DM ha^{-1}, and moderate shading, 645.24 kg of DM ha^{-1}, and occupancy rates in the total area of 35% and 65% for high and moderate shading, respectively, the available DM for grazing (470 kg DM ha^{-1}) was estimated. Forage DM yields in both treatments were low, due to the spacing between the rows of trees that limited the entrance of light into the soil. The proportions of leaves, stem and dead material fractions presented different results, with a significant difference ($p < 0.05$) only for the leaf fraction, in which the proportion was higher in the high shading treatment (55%) than in the moderate treatment shading (41%). This behavior occurs because in the shade the plant increases the effective leaf area to increase the area of incident light capture. The use of forage in silvopastoral areas is a good option for raising ruminants, with cost reduction with mechanical control of pasture, and forage production of *Urochloa decumbens*, although smaller in the more shaded area, has a higher proportion of leaves.

Keywords: dry matter, *Eucalyptus grandis*, leaf.