



Forage utilization efficiency of zuri grass pastures managed under different levels of light interception

H. R. Silva^{*1}, G. S. Difante¹, J. G. Rodrigues¹, D. B. Montagner², M. P. Gusmão¹, G. O. A. Monteiro¹

¹Federal University of Mato Grosso do Sul, Campo Grande/MS, Brazil; ² Brazilian Agricultural Research Corporation Beef cattle, Campo Grande/MS, Brazil.

*Master student - hitalo.rodrigues@ufms.br

The efficiency of the grazing process depends on the forage canopy structure. Therefore, management strategies based on grazing frequency can alter the forage canopy structure and the efficiency of utilization. The objective was to evaluate the efficiency of forage utilization by leaf category, pseudocolm and extended tiller in zuri grass pastures managed under four levels of light interception (IL): 80, 85, 90 and 95 %. The experiment was executed at Embrapa Gado de Corte, Campo Grande, MS. In a randomized block design, with four replications. The pastures were managed under intermittent stocking using the *Mob grazing* technique and the grazing intensity was kept fixed at 50% of the entry height. Evaluations were made using the marked tiller technique on 18 tillers along three transect lines per paddock. The leaves of each tiller were numbered, measured and classified as: expanding (without visible ligule), expanded (with visible ligule), senescent (mature leaves with senescence), intact or grazed. These tillers were evaluated at four different times (grazing events) during the 24-hour occupation period, in order to quantify the reduction caused by grazing. The length of the pseudocolm and the extended tiller were also measured. The forage utilization efficiency (UE) was determined by the proportion of the gross production of leaf tissue removed by the animals during grazing process. The data was subjected to regression analysis using Sisvar statistical software. The EU of expanded leaves, expanding leaves, pseudocolm height and extended tiller showed an increasing linear behavior ($p < 0.05$) with the increase in IL levels ($R^2 = 0.92$, 0.93 , 0.99 , respectively). The EU of the pseudocolm showed a quadratic response ($p < 0.05$), with a minimum point of 14.1% at the lowest IL level ($R^2 = 0.99$). The EU of the extended tiller showed an increasing linear behavior ($p < 0.05$), with a 20% increase between the lowest and highest IL levels ($R^2 = 0.98$). Grazing management with 80% and 85% IL should be avoided when the aim is to increase the efficiency of utilization of the forage produced.

Keywords: *Panicum maximum*, Grazing management, *Mob grazing*

Acknowledgments: CAPES, CNPq, Fundect, Embrapa Gado de Corte, UFMS