

### Nutritional value of Marandu grass forage submitted to variable or fixed rest periods

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Pasture management that considers physiological and morphological characteristics of forage plants can promote a more suitable grazing interval for grasses throughout the year. The objective of this study was to assess the influence of the fixed rest period, and that of a period based on the interception of 95% photosynthetically active radiation on the nutritional value for a *urochloa brizantha* (marandu grass) pasture. The experiment was carried out from October 2011 to May 2012, at the Jose Henrique Bruschi Experimental Field (CEJHB), belonging to the Gado de Leite unit of the Brazilian Agricultural Research Corporation (EMBRAPA), located in the municipality of Coronel Pacheco, Minas Gerais. In order to define the interval between grazing periods, the treatments consisted of assessing two strategies: (1) animal entrance in the paddocks when the pasture reached 95% of interception of photosynthetically active radiation; and (2) pasture management through a fixed 30-day rest interval between grazing periods. In both treatments, the occupation period was three days, aiming for a 25-centimeter tall post-grazing residue. The experimental design was randomized blocks with two plots and three replicates within a block. The nutritional value of the pasture was always assessed the day before the animals entered the paddock. The results were analyzed as repeated measures over time using the PROC MIXED procedure of the SAS<sup>®</sup> statistical program. The variable grazing interval provided a shorter grazing interval (22.8 days vs. 30 days), lower pre-grazing height (35.9 cm vs. 42.3 cm) and lower total forage mass productivity (5.506 kg/ha.cycle vs. 7,288 kg/ha.cycle) than the fixed grazing interval. It was observed that the intervals between grazing had a ( $P<0.05$ ) effect on forage crude protein (CP) levels. The variable interval between grazing periods provided a higher ( $P<0.05$ ) CP content in the pasture, which was due to the high percentages of blades and low percentages of stems observed. A difference ( $P<0.05$ ) was observed in neutral detergent fiber (NDF) and acid detergent fiber (ADF) levels as a result of the intervals between grazing. The fact that the content of NDF and ADF is lower for the variable intervals demonstrates less accumulation of those constituents in the cell wall, leading to the supposition that the cell wall has thickened for the fixed grazing period. The values of dry matter in vitro digestibility (DMIVD) were influenced ( $P<0.05$ ) by the interval-between-grazing criteria. The variable period resulted in a higher value of DMIVD than that of the 30-day fixed grazing period.

**Keywords:** forage, management, pasture structure

**Acknowledgments:** UFRRJ, Embrapa Gado de Leite