

**THEME 5 | GRASSLANDS AND FORAGES****Biomass production and chemical composition of elephant grass cv. BRS Capiaçú at different ages of regrowth**

Gabriela V. Bedeschi*¹, Mirton Morenz², Francisco J.S. Lédo², Antônio V. Pereira², Juarez C. Machado², Fernando C.F. Lopes², Paulino J.M. Andrade², Jailton C. Carneiro²

¹Animal Science Institute/Federal Rural University of RJ; ²Embrapa Dairy Cattle

*Master's degree student – gabrielavb_@hotmail.com

In intensive milk production systems roughage supplementation planning is critical to the success of the activity. The elephant grass (*Pennisetum purpureum* Schum.) presents excellent potential for use in the green-chopped or silage form, due to the high forage productivity, with good nutritional value. The elephant grass cultivar BRS Capiaçú, recently launched by Embrapa, presents as a main characteristic the high biomass production, which contributes significantly to the reduction in production costs, being fundamental the knowledge of the nutritive value of the forage, associated to forage productivity. Thus, the objective was to study the biomass productivity and chemical composition of the cultivar BRS Capiaçú, generating information that helps guide the harvest management, and use in the herd feeding. Four cutting ages (50, 70, 90 and 110 days of regrowth) were evaluated using a randomized block design with five replicates. Forage production (FP), dry matter (DM), crude protein (CP), neutral detergent fiber (NDF), lignin (LIG) and in vitro dry matter digestibility (IVDMD), were determined. The data were submitted to analysis of variance using the procedure for mixed models, and the means studied by regression ($P \leq 0.05$). The FP increased linearly as a function of regrowth age ($P < 0.001$), with values of 5.1, 13.2, 17.3 and 22.4 ton ha⁻¹, at ages of 50, 70, 90 and 110 days, respectively, being observed increases of 163, 31 and 28%, in the intervals of 50-70, 70-90 and 90-110 days, respectively. The DM content presented a linear positive response ($P < 0.001$), with mean values of 8.5, 12.6, 15.0 and 17.9, as a function of the regrowth ages. As expected, there was an increase in the fibrous fraction and a reduction in CP and IVDMD levels with the plants maturity. The values of NDF and LIG presented a linear positive response ($NDF = 55.35 + 0.132 * \text{age}$, $P < 0.001$; $LIG = 0.92 + 0.064 * \text{age}$, $P = 0.034$), with negative impact on IVDMD, which presented linear reduction ($IVDMD = 72.36 - 0.166 * \text{age}$, $P < 0.001$) as a function of regrowth ages. The CP levels also presented negative linear response ($CP = 12.57 - 0.066 * \text{age}$, $P < 0.001$). The highest raises in biomass production were observed up to 90 days, indicating that from this age smaller increases in forage production were obtained, with a significant reduction in nutritive value. The results obtained indicate that, for forage fed in the green-chopped form, the cutting should be carried out up to 70 days, in order to obtain a high production of biomass of good nutritive value. However, for the production of silage, considering the DM contents, the harvest should be performed between 90 and 110 days of regrowth.

Keywords: *Pennisetum purpureum*, roughage supplementation, tropical grass

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