

***Stylosanthes guianensis* cv. BRS Bela managed as organic fodder bank for supplementation of lactation crossbred cows in the Cerrado.**

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The sustainable and economic livestock technologies are necessary for organic animal production systems in the Cerrados. The objective of this study was evaluate the protein fodder bank composed of *Stylosanthes guianensis* cv. BRS Bela for supplementation of lactation crossbred cows (H × Z). The bank was established in December-2014 in a clay soil area of 1 ha and evaluations started in the next dry period in 2015. The soil was corrected with 2 Mg ha⁻¹ of dolomitic lime and 1 Mg ha⁻¹ of gypsum. At planting, it was applied 2 Mg ha⁻¹ of chicken manure (1.9% N, 2.0% P₂O₅ and 2.7% K₂O), 289 kg ha⁻¹ of termophosphate (17% P₂O₅) and 265 kg ha⁻¹ of fonolito (8% K₂O). The experimental design was change-over with three periods (21 days), three treatments and four cows by repetition. Statistical analysis was made using the SAS proc mixed, considering randomized effect of animal and least squares means were compared by Tukey-Kramer test (P=0.05). The treatments were maize silage exclusive; silage and fodder bank access and silage plus concentrate (1.6 kg cow⁻¹ day⁻¹). Twelve lactating cows ³/₄ (H × Z) weighting 538 kg were used for evaluations. In each period, four cows were conducted every day to the fodder bank between the two daily milking times. The legume forage mass in the bank ranged from 3.4 to 4.7 t ha⁻¹ during the three periods (July to September). The daily milk production (9.7 L) of cows with access to the protein bank was superior (P < 0.05) than cows consuming only silage (8.8 L), but inferior (P < 0.05) to the cows consuming silage and concentrate (12.5 L). The silage intake per litre of milk produced for fodder bank treatment (0.67 kg 100 kg LW⁻¹) was similar (P > 0.05) to the silage plus concentrated (0.70 kg 100 kg LW⁻¹) and inferior (P < 0.05) to silage exclusive treatment (0.88 kg 100 kg LW⁻¹). The cow access to the *S. guianensis* fodder bank improve the milk production compared to the cows that consumed exclusive silage. There was a reduction in the silage intake per litre of milk produced when cows accessed the fodder bank. Besides the improvement of milk production, the utilization of *S. guianensis* cv. Bela as protein bank could be a strategy to reduce concentrate intake and the costs of production in the farm.

Key Words: fertilizer, forage, legume, management, milk, organic