

THEME 5 | GRASSLANDS AND FORAGES

Chemical composition of Piatã grass silage (*U. brizantha* cv. BRS Piatã) with additives

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In the central-west region of Brazil, the seasonal distribution of rainfall generates an imbalance in the production of fodder. Moreover, during the dry period, the nutritive value of the fodder decays, due to the advance in the maturation of the plants. To alleviate this problem, several alternatives have been pointed out and used to supply food deficits in herds where basal feeding is like fodder plants, and the most usual is a conservation of fodder for the manufacture of silage. The objective of this study was to evaluate the effect of the addition of additives on a chemical composition of the silage of *Urochloa brizantha* cv. BRS Piatã. The piatã grass used to make the silage was established in the experimental area of Embrapa Agrossilvipastoril in Sinop - Mato Grosso, being cut and ensiled in experimental PVC silos. Before ensiling, the crushed material was submitted to the different treatments: without additive - (control); With Sila Prime bacterial inoculant; With SilAll 4x4 SW bacterial inoculant; With milled grain corn (MGM); Crude glycerin (GB) and soybean molasses (MSJ) in the amount of 100 g.kg⁻¹ of natural matter. The experimental silos were opened in different fermentation periods (3, 7, 14, 28 and 56 days). To perform the chemical analysis, approximately 500g samples of the material were collected at time zero and day 56, representing the last day of opening. The factorial scheme (5 x 6) was used in the completely randomized design (DIC) with three replicates per treatment, totaling 90 experimental silos. The material collected was pre-dried at 55°C in an oven with forced air ventilation and ground in a knife mill with a 1mm diameter porosity sieve. The content of dry matter (DM), organic matter (OM), crude protein (PB) (N x 6.25), acid detergent fiber (FDA) and neutral detergent fiber (NDF), Lignin, Ethereal extract (EE), total carbohydrates (CHOT), non-fibrous carbohydrates (CNF), hemicellulose (HEM), indigestible neutral detergent fiber (NDFD). The silage control and inoculated with inoculants presented a mean of 247.07 g.kg⁻¹ of dry matter (DM), while silage containing corn grain (MGM) obtained the highest value. The use of GB, MSJ and MGM promoted better levels of DM, NDF, FDA, CNF (304, 303 and 348 g.kg⁻¹ MS, respectively) and consequently higher NDT content (mean 713 g.kg⁻¹ MS). The silages containing GB and MSJ presented similar values (mean of 303.61 g.kg⁻¹). GB silage presented a lower CP (80.97 g.kg⁻¹ MS) difference of 38% in relation to the mean of the control silage and with MGM, which had the highest values (131.33 and 133.41 g MSK or MGM (100 g.kg⁻¹ MV) were recommended as they provided increases in MS, CNF and NDT contents of the silages.

Keywords: Crude glycerin, dry matter, organic matter, soybean molasses

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