

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

CHARACTERIZATION OF THE CELL WALL OF FOREST CACTUS PEAR GENOTYPES IN POST-HARVEST STORAGE PERIODS AND SILAGES

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The forage cactus pear is a crop of great importance in the semi-arid region of the country, because it is an alternative for the feeding of herds during the dry season. However, there are limitations in the operability of the harvest. Alternative ways such as post-harvest storage and silage making are presented as options to reduce costs with this operation. The objective on this work was to evaluate the alteration in the cell wall in the silage of three forage cactus pear genotypes in regard to their storage for up to 60 days post-harvest. The experimental design was completely randomized, with twelve treatments and three replicates, where the treatments were composed of the combination of three genotypes of forage cactus pear (Doce Miúda, Doce Baiana and Orelha de Elefante Mexicana - OEM) and three storage periods (0, 30 and 60 days), plus the silages of the forage cactus pear genotypes. The silages were made in experimental silos of 3.0 kg and opened after 60 days. A fresh sample of 300 g was collected for analysis from each experimental unit. The samples were placed in paper bags to pre-dry in a forced air circulation oven at 65°C for 72 hours and then ground in a Wiley mill using a 1-mm sieve. The contents of neutral detergent fiber (NDF), acid detergent fiber (ADF), total carbohydrates (TCHO) and lignin were determined. The results were submitted to analysis of variance, and the treatments compared by the Scott-Knott's test at 5% of significance level. Significant difference ($P < 0.05$) was observed for NDF, ADF, TCHO and lignin contents between the different storage periods of forage cactus pear genotypes and their respective silages. Silage from the OEM genotype showed the lowest TCHO content (761.3 g kg^{-1}) when compared to 60 days of storage. The NDF and ADF were at the lowest levels in the genotype Doce Miúda at 0 days of storage, in the Doce Miúda and Doce Baiana genotypes silages, when compared to the treatments 30 and 60 days of storage. The highest lignin contents were observed in the OEM genotype at 30 (48.0 g kg^{-1}) and 60 days (52.4 g kg^{-1}) of post-harvest storage, and in silage. The genotypes Doce Miúda and OEM stored up to 60 days as silage, maintained more satisfactory results for the composition of the cell wall.

Keywords: conservation, fermentation, *Nopalea* sp., *Opuntia* sp.

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