

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

STRUCTURAL CARBOHYDRATES IN FORAGE CACTUS PEAR GENOTYPES IN DIFFERENT STORAGE PERIODS

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The forage cactus pear (*Opuntia* or *Nopalea*) is a cactus that has morphophysiological characteristics of tolerance to long periods of drought, besides having low amount of structural carbohydrates in its composition, a fact that influences its supply to the animal. This study was developed with the objective of evaluating the structural carbohydrates content of forage cactus pear genotypes in different storage periods of cladodes. The experimental design was completely randomized in a factorial scheme (3 × 5) with ten replications. Three genotypes of forage cactus pear (*Nopalea cochinillifera* genotype Miúda and Baiana, and *Opuntia tuna* genotype Orelha de Elefante Mexicana) and five storage periods (0, 15, 30, 45 and 60 days) were used. The cactus pear were manually harvested with a knife, preserving a residual cladodes area, and stored in a ventilated shed on wooden pallets, with a height of approximately 10 cm from the floor. After harvested, ten cladodes of each genotype were randomly selected and taken to the Animal Nutrition Laboratory of the CPCE / UFPI, where they were ground, weighed and taken to a forced air ventilation oven at a temperature of 65°C. Lignin was determined according to method 973.18 (AOAC, 2002). The determination of hemicellulose was done by the difference between NDF and ADF, and cellulose by the difference between ADF and lignin. The results were submitted to analysis of variance, regression analysis (storage period) and Scott-Knott's test (forage cactus pear genotypes) at a level of 5% of significance. There was no interaction between the periods and the genotypes. There was difference between the genotypes of forage cactus pear for lignin, where the highest levels were observed in the Orelha de Elefante genotype (48.37 g kg⁻¹). For the hemicellulose, the genotypes Miúda, Baiana and Orelha de Elefante Mexicana presented an average of 46.7, 54.3 and 45.2 g kg⁻¹, respectively, and for cellulose they presented averages of 162.6, 171.4 and 169.6 g kg⁻¹, respectively. For hemicellulose, there was a linear increase (P = 0.0016) according to the storage periods. In conclusion, the different periods of storage influenced the hemicellulose content, and regarding the evaluated genotypes in the storage the lignin presents difference.

Keywords: Cactaceae, Conservation, Chemical composition

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