

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

## CORRELATION AMONG GROWTH AND YIELD CHARACTERISTICS OF NINE GENOTYPES OF FORAGE CACTUS

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Spineless forage cactus cultivated worldwide and is used in arid and semi-arid regions, with many uses, from animal feed to human consumption. Thus, studies that involve morphological and productive characteristics and that aim the identification and characterization of new alternatives of genetic material that can be cultivated deserves attention. Based on that, the objective of this study was to evaluate the correlations among growth and yield characteristics of nine genotypes of forage cactus. The present study was carried out at the Experimental Station of the State Agricultural Research Facility of Paraíba, in Tacima, PB, Brazil. Before planting, soil fertility analysis and correction was performed, the planting was carried out in November 2015 and the harvesting occurred in December 2016. A randomized block design was used, with nine treatments and three replications, with 20 plants per experimental unit. Nine genotypes were evaluated: (Negro Michoacan, Polotitlan, Tamazunchale, Texas, Califórnia, Blanco San Pedro, Nopalea Uruapan, Negro Michoacan II and Doce), belonging to the genus *Nopalea*. The production of total fresh weight (TFW), total dry mass (TDM), water accumulation (WA) in t ha<sup>-1</sup>, rainfall efficiency (RE) in kg dry matter mm<sup>-1</sup>, number of cladode per plant (NCP) in unit, cladode length (CL), cladode width (CW), cladode diameter (CD), cladode thickness (CT), plant width (PW) and plant height (PH) measured in cm. Aiming the identification of associative effects among the variables, a Pearson correlation analysis was performed at 5 and 1% of significance. Very high, high and moderate positive correlations were significant at 5 and 1% significance among the yield parameters (TFW, TDM, WA, RE) and plant growth (PW and PH). It was also found that growth characteristics related to the size of the cladode (CL, CW, CD and CT) presented negative and low correlations, significant or not at 5 and 1% of significance with the yield parameters. The plant growth parameters (NCP, PW and PH) were the ones that most correlated with the yield characteristics (TFW, TDM, RE and WA). Differently from the characteristics related to the size of cladode (CL, CW, CD and CT) which presented low and negative correlations with the yield characteristics. It can be concluded that the production of fresh matter, dry matter, rainfall efficiency and water accumulation, correlate positively with the number of cladodes per plant, plant height and plant width.

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