Large-scale multiplication of cactus pear forage cv. Baiana resistant to carmine cochineal

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Abstract - The cactus pear forage is used by ranchers of the semiarid regions of the northeast as the main source of food for animals such as cattle, goats and sheep that can withstand long droughts. But cactus pear forage plantations are being decimated by the carmine cochineal causing great losses to farmers. The cactus pear forage is multiplied by cuttings of cladodes and the demand for large quantities of resistant material is a serious practical problem that can be solved with large-scale multiplication by *in vitro* micropropagation. This study aimed at large-scale production of healthy plantlets of cactus pear forage resistants to the carmine cochineal. Were used explants, from cv. Baiana, derived from *in vitro* developed shoots and cultured on MS medium (Murashige and Skoog, 1962) supplemented with 1.0 $mg.L^{-1}$ of 6-benzylaminopurine (BAP), associated to 0.1 $mg.L^{-1}$ of naphthalene acetic acid (NAA) or indole acetic acid (IAA) or indole butyric acid (IBA), plus 30 $g.L^{-1}$ saccharose and solidified with 6 $g.L^{-1}$ agar, with pH 5.7, in a completely randomized design with number of replications equal to 13, 20 and 22, respectively. After 8 months of subcultures, the shoots from each treatment were excised and induced to *ex vitro* rooting in styrofoam trays containing vermiculite substrate, without using growth regulators. Before the sprouts were excised, the following variables were measured: number of shoots, height of aerial part and number of roots. Statistical analysis was performed using the SAS program applying the Test F at 5% significance level. It was noted that, for the variables analyzed, there was no statistical difference between the different combinations of growth regulators tested in the culture medium, which shows no significant effect of auxins NAA, IAA and IBA on these variables.

Keywords: micropropagation, *in vitro, Nopalea cochenillifera*, culture medium, auxins.

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