# The Cactus as a Growing Medium for Tomatoes

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In many regions of the world, the main problem is the food production in the agriculture industry. This problem is caused by different factors, such as the infertility of the land, the type of land and many other factors; but the main factor affecting the productivity is the type of climate and the type of soil of the region. In this proposal it's focused on the arid and semi-arid areas. For this reason the main objective of the research is to find a new method by grafting in the cactus for the agricultural production of countries where traditional farming is not possible. Thus proposing the next question, how does it affect the growth of the tomato plant on having been grafted on cacti? Which raised the presumption, if the graft in the cacti affects growth in plants, then the grafted plants on cacti will have a major growth than the one sowed in soil. Where the growth of the plants was the dependent variable and grafts in the cacti as the independent variable. The experimentation was carried out in a place where the amount of water and sunlight that the grafted plants would receive under the observation period were controlled. Where two grafts were implemented in the samples: prong in the edge and coronation in the center; and just two grafts samples from the needle at the edge, remained alive after the observation period. Concluding that the proposed presumption was denied, since there was not any kind of growth in plants. Although two samples were kept alive, while the others shriveled. Thus leaving key points that for next research shall be taken under more scrutiny, specifically the tissue compatibility and the amount of water inside the cacti.

**Awards Won:**