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STUDY ON THE EFFECT OF SALINITY STRESS ON VEGETATIVE CHARACTERISTICS IN MEXICAN MARIGOLD

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Salinity is one of the major problems for plants in some areas. As salinity levels increase, plants extract water less easily from soil, aggravating water stress conditions. High soil salinity can also cause nutrient imbalances, result in the accumulation of elements toxic to plants, and reduce water infiltration. In order to evaluate the effect of salinity on vegetative tratits of Marigold, was conducted an experiment in compeletely randomized design with 6 treatments including different concentrations of NaCl (25, 50, 75, 100 and 150 mM as well as distilled water as control treatment) in three replications. Based on the obtained results, salinity stress especially in the range of 100 and 150 mm NaCl had harmful influence on morphological traits and vegetative indexes of marigold such as prolin, chlorophyll a and b, stem height, stem diameter, root length, root diameter as well as foliage fresh and dry weight and consequently on its biologic yield. Thus, planting Marigold in sever salinity stress, is not economic due to low vegetative yield, but in light salinity (especially in the range of 25 and 50 mM NaCl) can be tolerant.

Keywords: Tagets erecta, Vegetative Growth, Salt stress.