

Tomato Quality Produced in Saline Soils Using Irrigation with Treated Electromagnetic Water

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Abstract : One of the main plants cultivated in protected environment is tomato crop, which presents significant growth in its demand, because it is a tasty fruit, rich in nutrients and of high added value, however, poor management of fertilizers induces the process of soil salinization, causing several consequences, from reduced productivity to even soil infertility. These facts are derived from the increased concentration of salts, which hampers the process of water absorption by the plant, resulting in a biochemical and nutritional imbalance in the plant. Thus, this study aimed to investigate the effects of untreated and electromagnetically treated water in salinized soils on physical, physicochemical, and biochemical parameters in tomato fruits. The experiment was conducted at the Faculty of Science and Engineering, Tupã Campus (FCE/UNESP). A randomized complete block design with two types of treated water was adopted, with five different levels of initial salinity (0; 1.5; 2.5; 4; 5.5; 7 dS m⁻¹) by fertigation. Although the effects of salinity on fruit quality parameters are evident, no beneficial effects on increasing or maintaining postharvest quality of fruits whose plants were treated with electromagnetized water were evidenced.

Keywords : Solanum lycopersicum, soil salinization, protected environment, fertigation

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