Effect of Brackish Water on Citrus (Citrus Aurantifolia) Growth and soil Chemical Properties in a Newly Established Orchard.

Ismail S.M. 2013,

Abstract:

A field experiment was conducted for evaluating the effect of brackish water on citrus growth and soil chemical properties during 2008-2009. For the study, one-year-old citrus seedlings were transplanted and were drip irrigated with two types of brackish (saline) water. One with high salinity (SW) having an electrical conductivity (ECi) of 7.16 dS/m. The other with low salinity (GW) having ECi of 1.36 dS/m. Results of the study revealed that, only 14% of the total transplanted seedlings were succeeded with limited growth under SW compared to 82% with increased growth parameters under GW. Results of soil properties revealed accumulation of salts at the fringe of the irrigated area under the emitter in both irrigation waters, but the phenomenon was largely accelerated under SW. Frequent irrigation with saline water increased the accumulation of Na and Cl which decline soil chemical propertied, cause nutrients imbalance and increase toxicity, consequently plant damage.

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