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Investigation of soil saturated hydraulic conductivity changes via irrigation by Ahwaz east wastewater

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Reusing of Municipal and domestic wastewater for agricultural irrigation will cause the increase of some ions, salts and suspended solids (organic and mineral) in soil. Therefore, some physical and chemical characteristics of soil will be affected .One of the most important chemical parameters in this case is soil hydraulic conductivity. The study was performed in 6 experimental plots with a size of 2.5m in 2.5m each, on the lands beside the K.S.C green space in the east of the city of Ahwaz. The irrigation waters used were the Karoun river water and Ahwaz east wastewater. The statistical design was a factorial design with three replications. The soil texture of the experimental plots were determined to be of clay loam type. Soil hydraulic conductivity of the experimental plots soil was measured in outset and after 180 days of the irrigation with Karoun river water and Ahwaz east wastewater. Analysis of the results obtained showed that Ahwaz east wastewater in comparison to Karoun river water had significantly ($P<0.05$) increased the hydraulic conductivity of the soil.

Keywords: Irrigation, Wastewater, Hydraulic, Conductivity

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