

O-73 (98)**SALINITY MAP OF THE ROOT ZONE OF TOMATO PLANT UNDER SALTWATER****Harun Kaman**, University of Akdeniz-Faculty of Agri., Dumlupinar Bulvari, 07985 Antalya, Turkey; hkaman@akdeniz.edu.tr (Presenting author)**Ahmet Kurunç**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; akurunc@akdeniz.edu.tr**Halil Demir**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; hdemir@akdeniz.edu.tr**Ahmet Tezcan**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; atezcan@akdeniz.edu.tr**Abdullah Sayici**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; say.55@windowslive.com**Mehmet Can**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; canm459@gmail.com**Ufuk Gökçen**, Akdeniz University, Faculty of Agriculture, Antalya, Turkey; ufukgokcen48@gmail.com

Salinity which is one of the limiting factors of agricultural production causes decreases in productivity by limiting plant growth when it goes up to high levels. Increased soil salinity also leads to a reduction in the availability of arable land. It is known that the losses in agricultural areas are increasing every year due to the problem of salinity. Studies on increasing crop production will also reveal the causes of salinity and the loss in production as they are investigating the need for optimum irrigation water under the name of irrigation planning. In this study, it was aimed to determine possible salt accumulation within the root region of tomato plants. Four different concentrations of saline were used in the study. According to the electrical conductivity of irrigation water, salinity treatments are as follows: T1, control; T2, 1.5 dS/m; T3, 3 dS/m and T4, 6 dS/m. The study was carried out in a glass greenhouse in Antalya-Turkey where greenhouse farming is very common. The tomato plant was irrigated with drip irrigation method in which irrigation water management can be carried out in the most efficient manner and water usage can be applied more controllably compared to other irrigation methods. The amounts of water applied to the parcels in the irrigations were calculated using the measurements taken from the Class-A evaporation pan placed in the greenhouse. In the study, soil samples were taken from plant root zone considering principles of a grid system at the end of the season. The salinity of soil samples was measured in the laboratory setting with the use of a conventional method. Then, a computer program was used to map the salinity distribution in the root zone of the tomato plant. As a result of the study and as expected, it was found that the salinity in the root of the plant increased due to the increased salty water concentration.

Keywords: Deficit irrigation, drip irrigation, greenhouse conditions, salinity