

Physiological studies on the effect of salt stress on some olive cultivars

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The present study was carried out on one year old potted transplants of coronaiki, Manzanillo and Aghizi olive cultivars in Horticultural Research Institute nursery; Giza Governorate during two successive seasons of 2000 and 2001. It was aimed to investigate salt tolerance of three olive cultivars grown in sandy soil and possibility of minimizing the depressive effect of salt stress. Thus two experiments were conducted using the complete randomized block design with three replications, whereas each was represented by 3 transplants (grown individually in 30.0 cm diameter plastic pots filled with specific weight of sandy soil (6.0 kg) brought from eastern desert along Cairo, Esmailia Road) 65 km from Cairo. V-I- Experiment 1: Effect of salinity concentration, sodium adsorption (S.A.R.) and chloride level (Cl:SO₄ ratio) on transplants of 3 olive cvs. grown on sandy soil. Investigated treatments were representative of different thirty nine (39) combinations between three olive cvs. (coronaiki, Manzanillo and Aghizi), and 3 levels of saline concentrations (2000, 4000 and 6000 ppm); two sodium absorption ratios (3 & 6) and two Cl:Sat ratios (low & high) beside irrigation with tap water as control.