ABSTRACT

COMPARATIVE RESPONSES OF EGGPLANT (*Solanum melongena* L.) MICROSHOOTS TO SALINITY *IN VITRO* AND IN HYDROPONIC CULTURES

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Eggplant (*Solanum melongena* L.) cultivar "Nour" were evaluated under salt stress conditions using *in vitro* and hydroponic cultures. Plants were grown on media supplemented with (0.0 mM, 50 mM, 100 mM, 150 mM)sodium chloride (NaCl). Shoot length, root length, shoot weight, root weight, root number and leaf area were decreased with elevated salinity level in the nutrient solution. Leaf osmotic potential decreased significantly with increased salinity level in both systems. On the other hand, tissue contents of K, Ca, Mg, P, and N were decreased significantly with increased NaCl level, Increased salinity level reduced total and soluble protein in both cultures. The results of this study showed a high sensitivity of cultivar "Nour" in response to salt stress, either *in vitro* or hydroponic cultures can be sufficient for the study of eggplant responses to salinity as they have similar trend responses.