

Article title	Response of <i>solanum melongena</i> L. seedlings grown under saline calcareous soil conditions to a new organo-mineral fertilizer
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Abstract

This study was planned to investigate the effect of soil application with an organo-mineral fertilizer [OMF; a 5:2:1(w/w/w) mixture of green waste compost, elemental sulphur (S) and humic acid (HA), respectively] on physical and chemical characteristics of a reclaimed saline calcareous soil ($E_{Ce} = 6.47 \text{ dS m}^{-1}$ and $\text{CaCO}_3 = 15.63\%$). In addition, growth, physiological and anatomical characters of eggplant (*Solanum melongena* L.) seedlings grown under the tested soil were investigated. The experiments were arranged in a completely randomized design with 4 experimental OMF treatments (i.e., 0, 10, 20, or 30 g kg^{-1} soil) with 10 replicates. The OMF-treated plants showed increased growth, concentrations of total soluble sugars, free proline, anthocyanin, K and Ca, ratios of Ca:Na and K:Na, and photosynthetic efficiency. An enhanced seedling anatomy was also observed with soil amendment by OMF. On the other hand, the OMF application led to a substantial reduction in soil salinity (E_{Ce}) and pH and an increase in field capacity and available water. The tested organo-mineral fertilizer could be recommended as a soil amendment for vegetable crops, including eggplant to overcome the adverse effects of salinity stress in newly-reclaimed soils.