

عنوان مقاله:

(Pistachio waste compost and mycorrhiza effect on nutrient concentrations and pistachio leaves development (Pistacia vera L

محل انتشار:

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خلاصه مقاله:

No study has been reported on the effect of organic and biological fertilizers on the leaf type and development of pistachio leaflets until now. A four-year field experiment was carried out to evaluate the pistachio leaflet development via nutritional status by pistachio waste compost (۰، ۱۰، ۱۵ kg seedling^{-۱}) and mycorrhizal fungi (۰، ۱۰۰، ۲۰۰ g seedling^{-۱}) consumption on two different pistachio salt-tolerant cultivars (Akbari and Badami Zarand) grown in saline-alkaline soil. Calcium, iron, manganese, and biological nitrogen fixation by free-living diazotrophs were affected by the factor 'year'. The Akbari cultivar had the highest leaf area (۴۲۸.۴ cm^۲) and micronutrient concentration. Akbari and Badami Zarand absorbed more micro and macronutrients, respectively. Leaves developed abnormally due to the high micronutrient concentration and larger leaf area. The pistachio waste compost had a greater impact on the nitrogen, iron, zinc, and manganese concentrations. Iron and zinc were only adequately supplied at the third level of the mycorrhizal fungus. Phosphorus, calcium, iron and manganese absorption in both levels fungi usage were affected by mycorrhizal dependency. Mycorrhizal dependency displayed a high positive effect on the number of ۴ (۴۱.۸%) and ۵ (۴۰.۶%) leaflets (developed leaves) in the ۱۰۰ g fungus application which was probably due to enhanced cellular differentiation in pistachio leaves. The leaf area and the number of leaflets were inversely related to each other. Alternatively, Badami Zarand which absorbed fewer micronutrients reduced the leaf area due to nutrient stress and produced ۵۷.۸% more normal leaves as a stress remedy. The seedlings of pistachio made less effort to develop normal leaves when their nutrition status was more appropriate

کلمات کلیدی:

Leaf development, Leaflet number, Mycorrhizal dependency, Nutrient sufficiency ranges, Salinity and alkalinity stress, Leaf development, Leaflet number, Mycorrhizal dependency, Nutrient sufficiency ranges, Salinity and alkalinity stress

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