

عنوان مقاله:

Effect of effective microorganisms on physiological and biochemical responses of UCB1 pistachio under salinity stress

محل انتشار:

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خلاصه مقاله:

A factorial completely randomized design with two factors including effective microorganisms (EM) at 0, 1% and salinity (at 0.7, 5, 10 and 13.6 dS/m) was conducted in three replication on one year old seedling of pistachio to study the effect of EM on the physiological and biochemical characteristics and nutrient uptake in UCB1 pistachio under salinity stress. Pistachio seedlings have been studied three months after salinity application. The results showed that increasing salinity decreased leaf relative water content, chlorophyll a and b and nitrogen, phosphorus, potassium and calcium content of leaf; it but increased proline, soluble sugars and sodium and chlorine content compared to the control treatment. Results of EM application showed that 1% concentration of this fertilizer increased resistance of UCB1 to salinity stress. Also, the interaction effects of salinity and EM on the relative content of leaf water, proline, chlorophyll b, soluble sugar and nitrogen, phosphorus, potassium, sodium and leaf chlorine were significant. The maximum relative content of water in leaf (87/13%), chlorophyll a (5/83mg/g.FW), chlorophyll b (2/93mg/g.FW), nitrogen (3/21%), phosphorus (0/25%), potassium (2/69%) and minimum content of sodium (7/90%) and chlorine (12/73%) was observed in treatment with 1% EM and salinity 0/7 dS/m. Based on the results of this study, application .Effective microorganism can reduce the damages of salinity stress

کلمات کلیدی:

شوری، عناصر غذایی، کلروفیل، پرولین، EM

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