

## Abstract

*Pistacia vera* is one of the resistant plants in unfavorable environmental conditions such as drought and salinity soil, and it is the most important horticultural crop and non-oil exports. Dieback is one of the destructive disease in pistachio, which is made by the fungus *Paecilomyces variotii*, and it is a new approach to use of biological fertilizers in sustainable agriculture in order to reduce the consumption of chemical fertilizers and improve soil conditions and disease control. This study aimed to evaluate the effects of Mycorrhiza biological fertilizer on plant resistance against dieback disease, in terms of salinity. This study is provided by factorial and randomized forms with 4 repetitions on the pistachio production company of Pistachio seeding Greenhouse in Kerman and the treatments are included the first factor of salinity in four levels (0, 75, 150, 225 mm sodium chloride per liter) which were provided, and they were applied instead of irrigation of one year seeding. The second factor, Mycorrhiza fungi *Glomus intraradices*, with 15 percent of weight in flowerpot soils and the control sample in dieback condition (*P. variotii*) is done in greenhouse. The result of data contrastive average in reaction of Mycorrhiza and salinity showed that Mycorrhiza has a better effect in terms of salinity and it caused increasing of all the leaves, the number of normal leaves., the weight of wet and dry leaf, stem length, stem diameter, chlorophyll, fresh weight of stem and carbohydrates than non-mycorrhiza seedlings. Interaction reduces leaf area, the progression of the disease, duration of disease progression and carbohydrates than non-mycorrhiza seedlings were salinity levels. The fresh weight of root, stem and root dry weight, root length, total length, phosphorus, potassium, chlorophyll a and b and carotenoids were Asrminadary. Results Mycorrhiza interaction with time was not significant traits. Mycorrhiza salinity level of 150 mmol per liter during the progression of the disease and reduce disease progression compared to control. Based on the available evidence, it can be concluded that the use of biofertilizers production coincided with the seedling in nurseries can produce resistant seedlings to salt stress and diseases through the development of systemic acquired resistance is effective. It had no essential effect on fresh weight of root, dry weight of stem and root, root length, total length, phosphorus, potassium, chlorophyll a and b and carotenoids. Results of interaction effect on Mycorrhiza time was not significant on these characters. Results of interaction effect on salinity indicated that the total number of leaves and normal number of leaves were significant, and they showed the maximum number of leaves and leaf winter. The disease reduced vegetative characteristics and increased the progression of disease and the area of the wound, and Mycorrhiza in 150 mmol per liter salinity surface reduced levels of disease progression and the disease progression compared to the control. According to the available observations, it can be concluded that the use of bio fertilizers production coincided with seedling nurseries can produce resistant seedlings to salt stress and the disease is effective through the development of systemic acquired resistance.

**Keywords:** Mycorrhizal, Salinity, Pistachio, Dieback



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**Effect of mycorrhizal biofertilizer and salinity stress on  
resistant of seedling of Pistachio to Dieback disease**

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