

عنوان مقاله:

Effects of Salinity Stress and Drought Due to Different Concentrations of Sodium Chloride and Polyethylene Glycol (6000 on Germination and Seedling Growth Characteristics of lentil (*Lens culinaris Medik*

محل انتشار:

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خلاصه مقاله:

Salinity and drought stresses are the common environmental stresses in Iran that effect on different stages of plant growth. In order to investigate the effects of drought and salinity stress on germination and seedling growth characteristics of lentil crops (including local masses of Ošnaviya and Shahindej) two separate factorial experiments in a completely randomized design with three replications was conducted in Agricultural and Natural Resources Research Center in West Azerbaijan in 2013. Drought and salinity stress treatments, including different levels of osmotic potential of sodium chloride and polyethylene glycol 6000 in the -4, -8, -12 bar and control treatment (distilled water), respectively. The results showed that drought and salinity stress exerted significant reduction effects on the traits of percentage and germination rate, radicle length, plumule length, radicle length to plumule length ratio, radicle fresh weight, plumule fresh weight and seedling fresh weight. The mean comparison showed that in relation to drought (except for radicle length to plumule length ratio) in all studied traits, the decrease in the traits were significant from control to 4 bar level, while with in salinity (except for the radicle length), in all of the traits, the decrease were not significant. However, the group comparison of the inhibitory effect of the salinity and drought stress showed no significant difference between the two stresses in relation to studied traits.

کلمات کلیدی:

Stress, lentils, drought, salinity, germination

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