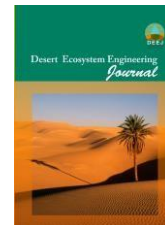




University of Kashan

Desert Ecosystem Engineering Journal

Journal homepage: <http://deej.kashanu.ac.ir>

## Effect of water stress on the germination and seedling growth of three genotypes of rangeland species *Agropyron trichophorum*

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Received: 25/11/2012

Accepted: 27/5/2013

### Abstract

Sentence determine the stability mechanisms to stress in *Agropyron trichophorum* at test with four different levels of osmotic potentials resulted from PEG 6000 including 0, -3, -6 and -9 executed in factorial and accidental manner with four interactions in hydroponic environment. Three genotypes of *Agropyron trichophorum* pasture types were used Arak (3755), Semirom (3.13), and Faridan (4007) and four drought care (-3, -6 and -9 times distilled water). In this essay the sprouting percentage root length, shoot length, seedling length, root to shoot rate, seedling dry weight, seedling fresh weight, dry to fresh weight rate sprouting rate and seed health index were determined. The results showed that with increasing the drought stress, the root to shoot rate, seedling dry weight and dry to fresh weight rate factors increased and other attributes were reduced significantly. The best levels to assess the stability to drought were the -6 and -9 load potentials in all drought levels. In general, in tested genotypes, Arak (3755) genotype showed a better sprouting in under study potentials and had a meaningful preference to other genotypes. From assessed parameters, seedling length and seed index standard showed the most possible reaction to changing potential of water.

**Keywords:** Seed, *Agropyron trichophorum*, Drought stress, Germination.

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