Evaluation and determination seed sizes best of barley (*Hordeum Vulgare L.*), cultivar of Bahman in the winnowing time

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Abstract:

In order to study seed size impacts and salinity stress on germination and seedling growth of barley (cultivar of Bahman), a factorial experiment was carried out using Randomized Complete Block Design with three replicates in laboratory of Seed & Plant Certification and Registration Research Department of Mashhad at 2010. The first factor of the experiment was seed sizes (a>2, 2>a>1.8 and 1.8>a>1.7 seed diameter (mm)) and the second factor was salinity stress levels (0, 5, 10, 15 and 20 ds/m). In this research some characters as percent of germination, germination rate, shoot length, radicle length and seed vigor were studied. The results indicated that increase in the salinity stress caused a signification in germination percent and seedling growth. Also results of data analysis showed effect of seed size on percent of germination, germination rate, shoot length, radicle and seed vigor were significant in 1% level and seed size a>2 (mm) compare to other sizes on the studied characters was significant. The best seed size for seed winnowing time according to results of this experiment was size a>2 (mm) that the same size was acceptable by Seed & Plant Certification and Registration Research Institute in Karaj.

Keywords: Barely, Bahman's cultivar, Seed size, Salinity stress, Germination percent