

Abstract

Pulse, as the second source of human nutrition, benefits from great agronomic and nutritious features. Due to study the effect of seed and embryo size on seedling establishment and yield of mung bean cultivars under drought stress condition. an experiment was conducted at the Agricultural Research Institute of University of zabol in zahak (Chah-e-Nimeh) during the growing season of 2016-2017. An experiment was conducted as split-split plot with complete randomized block design and three replications. The experiment treats, the main factor involved of irrigation treatment at three levels: 1) control (60mm evaporation using evaporation pan class A) 2) The average stress (120mm evaporation using evaporation pan class A) 3) Severe stress (180mm evaporation using evaporation pan class A) and the first factor of cultivar in two levels 1)local Sistan 2)Parto and the second sub factor include the seed size at the three levels: 1)large size 2)Medium size and 3)small size. Characteristics plant height, the germination rate, germination, leaf area index, wet weight, dry weight, number of pods per unit area, the number of seeds per pod, plant relative water content (RWC), performance per unit area, embryo size, were evaluated. The results showed that with increasing drought stress, plant height, fresh and dry weights, leaf relative humidity, number of pods per unit area and the yield of mung bean per hectare decreased. Seed size affected only plant height but did not have a significant effect on yield

Keywords: mung bean, seed size, seedling establishment, drought stress.



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The effects of seed and embryo size on seedling establishment and yield of two mung bean cultivars under drought stress condition

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