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The Study of Seed Coating Effects on Germination Speed of Astragalus Adscendens under Different Moisture Conditions and Planting Depth in the Boroujerd Region

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Abstract : The coated seed process is from amplifier ways that stick various materials on the outer surface of the seeds that minimize the negative environmental effects and increase the ability of Plant establishment. This study was done to assess the effects of coated seed on the germination speed of Astragalus adscendens in different conditions of drought stress and planting depth as it was conducted with a completely randomized factorial design with four replications. treatments of covering material was used in Four non coating levels (NC), mineral-based coating (CC), organic - based coating (OC) hydro gel-based coating (HC) ; treatment of moisture percent used in three levels of dried soil content, treatments of planting depth in two surfaces of planting and three times of the seed diameter was 9%, 14% and 21 % respectively. During the test, it was evaluated the germination speed attribute. The main results showed that moisture treatments and planting depth at a surface of 1% (P <0/01) was significant and has no significant effect of treatment materials. Also, In examining of the interaction between type of covering material and soil moisture were not observed significant differences for germination speed between covering treatments and controls covering, but there was a significant difference between treatments in 9% and 21%. Although in examining the triple interaction, increasing moisture and planting depth enhanced the speed of germination process, but it was not significant statistically, while it has made important differences in terms of description; because it had not growth in the moisture level of 9% and shallow cultivation (high stress). However, treatment of covered materials growth has developed significantly, so it can be useful in enhancing plant performance.

Keywords : seed coating, soil moisture, sowing depth, germination percentage
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