

Abstract

Germination is one of the most important stage of plant growth that may be affected by different stresses in the natural environment. The purpose of this study was to investigate the effects of planting media type and different levels of gibberellic acid and indole butyric acid on seed germination characteristics of *Salvadora persica* in 1398, with two factors of litter cultivation and in four types (1-peat moss 2-cocopit 3- peat moss 50% + Sand 50% 4- cocopit50% + Sand 50%) and the second factor consisted of gibberellic acid (two levels of 250 and 250 ppm) and indole butyric acid (two levels of 250 and 250 mg/l). Than, a factorial experiment based on a completely randomized design with the effect of these two factors and distilled water as a control in three replications on seed germination and seedling growth of *Salvadora persica* was investigated. The result showed that the media had a significant effect on germination percentage, root length, shoot, seedling fresh root weight, shoot fresh weight and seed vigor index at 1 % level. Seed pretreatment with gibberellic hormone and indole butyric acid had significant effect on all traits at 1 % level and had no significant effect on root and shoot fresh weight. Due to the importance of *Salvadora persica* in terms of pharmacological, industrial and protective effects, it is recommended with Gibberellic acid 250 ppm and Cucopit sand mixed media to accelerate germination and seedling production of this species.

Key words: Cultivated litter, Germination, Gibberellic acid, Indole butyric acid, *Salvadora persica*.



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