



**EFFECTS OF GAMMA IRRADIATION ON INDUCE DIVERSITY AND GROWTH CHARACTERISTICS OF PURSLANE (*PORTULACA OLERACEA*.)**

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Purslane (*Portulaca oleracea* L.) is a valuable medicinal plant, containing different kinds of active ingredients. Purslane seed has several properties: it is anti-thirst, dry cough, asthma [1] and blood purifier [2]. Induced mutation can efficiently be used to create new variations as a basis for plant breeding. This study was conducted to evaluate the effect of gamma rays (doses of 0, 200, 300, 400, 500 Gray) in a completely randomized design with five replications on root length, shoot length, plant height and lateral shoot number of Purslane and also to determine the suitable dose of gamma rays for mutation induction. On the basis of multiple variance analysis using Hotelling test, significant differences were observed among different gamma treatments for evaluated traits (root length, shoot length, plant height and lateral shoot number) ( $P < 0.01$ ). By simple variance analysis, significant difference was observed for all traits ( $P < 0.01$ ). The maximum of root length, shoot length, plant height and lateral shoot number was observed in 400 Gray. Correlations among different traits were significant ( $P < 0.01$ ) and maximum correlations ( $r = 0.918^{**}$ ) was obtained between shoot length and root length.

**References**

- [1] Antczak, A., Kharitonov, S.A., Montuschi, P., Gorski P., and Barnes, P.J. *Respiration*, **2005**, 72(6): 594-9.
- [2] Rashed, A. N., Afifi, F. U., and Disi, A. M. *Journal of Ethnopharmacology*, **2003**, 88(2): 131-136.