THE ASIAN JOURNAL OF HORTICULTURE
Volume **9** | Issue 1 | June, 2014 | 193-197
e ISSN- 0976-724X | Open Access-*www.researchjournal.co.in* |

Research Paper

Article history **:**
Received : 14.12.2013
Revised : 05.05.2014
Accepted : 18.05.2014

Effect of pre-sowing growth regulator treatments on germination and seedling growth of garden rue (*Ruta graveolens* Linn.)

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ABSTRACT : The seeds of garden rue were subjected to pre- sowing treatments with gibberellic acid (50, 100, 200, 300 and 400ppm), benzyl adenine (25, 50, 100 and 200,ppm), ethrel (100,200,300,400 ppm) and distilled water as control for three hours. Germination and seedling growth parameters at definite intervals were recorded to find out the effect of these pre-treatments on germination of garden rue. The maximum germination percentage (89.33), plant height (12.30 and 16.33 cm, at 30 and 60 days after sowing (DAS), respectively), collar diameter(3.60 and 4.53mm, at 30 and 60 DAS, respectively), root length (9.50 cm), root number (25.67), fresh weight of shoots(5.81g) and vigour index I (2299.47) were recorded in the seeds treated with GA_3 at 400 ppm. Whereas, GA_3 300 ppm recorded the highest rate of germination(10.27), compound leaves (6.60 and 10.27 at 30 and 60 DAS, respectively), dry weight of shoots(1.87 g), fresh and dry weight of roots (1.94 and 0.97 g, respectively) and vigour index II(175.65). With respect to survival of seedlings in seeds treated with GA_3 at 100 and 200 ppm and BA at 100 ppm recorded highest cent per cent field survival whereas, untreated seeds recorded lowest values for all the characters studied.

KEY WORDS : *Ruta graveolens*, GA_3, Benzyl adenine, Ethrel, Vigour index

HOW TO CITE THIS ARTICLE : Vijendrakumar, R.C., Seeramu, B.S. and Halesh, G.K. (2014). Effect of pre-sowing growth regulator treatments on germination and seedling growth of garden rue (*Ruta graveolens* Linn.). *Asian J. Hort.*, **9**(1) : 193-197.