



RESEARCH PAPER

Effect of foliar application of boron, urea and GA₃ on various vegetative growth parameters of broccoli (*Brassica oleracea* var. *Italica*)

Sudha Verma*, S. Sengupta, B.K. Agarwal, K.K. Jha, Sanyat Mishra, Varsha Rani¹ and Ravikant Rajak
Department of Horticulture, Birsa Agricultural University, Kanke, RANCHI (JHARKHAND) INDIA

Abstract : Broccoli (*Brassica oleracea* var *italica*) is an important cole crop belonging to Crucifer family. Being native to Mediterranean region, its cultivation started in Italy in ancient roman times. It is gaining fast popularity during the last few years among the consumers particularly in and around bigger cities owing to the increased awareness about the nutritional properties as well as palatability. For better yield, application of nutrients and phyto hormones is an important consideration. Various doses of foliar application of boron, urea and GA₃ may affect the proper growth and development of broccoli. Accordingly the objective here was to study the effect of boron, urea and GA₃ on various vegetative growth parameters of broccoli. The experimental design was Randomized Block Design, with three replication and sixteen treatments, under field conditions in the year 2013-14 and 2014-15. The foliar spray of various combination of nutrient and phyto hormones was done twice at 20 days and 40 days after transplanting and status regarding plant height, number of leaves, leaf length, leaf width, stalk length and plant spread were recorded thrice at 20, 40 and 60 days after transplanting. The result shows that in general the significant increases in various vegetative parameters were noticed upto the combination of urea @ 1.0% and GA₃ @ 50 ppm. However, the combination of urea @ 1.5% and GA₃ 75 ppm had recorded with the maximum value. Thus, the urea @ 1.0% and GA₃ @ 50 ppm may be safely utilized for the better vegetative growth and development.

Key Words : Broccoli, Foliar spray, Vegetative growth

View Point Article : Verma, Sudha, Sengupta, S., Agarwal, B.K., Jha, K.K., Mishra, Sanyat, Rani, Varsha and Rajak, Ravikant (2018). Effect of foliar application of boron, urea and GA₃ on various vegetative growth parameters of broccoli (*Brassica oleracea* var. *Italica*). *Internat. J. agric. Sci.*, **14** (1) : 215-218, DOI:10.15740/HAS/IJAS/14.1/215-218.

Article History : Received : 17.08.2017; Revised : 05.12.2017; Accepted : 17.12.2017

* Author for correspondence:

¹Department of Agriculture, Jharkhand Rai University, Kamre, RANCHI (JHARKHAND) INDIA