

## **Impact of plant growth regulators on vegetative characters, quality and yield attributes in chilli (*Capsicum annuum* L.) cv. G-4**

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**ABSTRACT :** Growth regulators impact on growth of plant in many different ways. Present study was based on foliar application of growth hormones to determine the effect on plants vegetative, qualitative and yield characteristics for the purpose the study was conducted at Department of Biological Sciences, Sam Higginbottom Institute of Agriculture, Technology and Sciences, Allahabad, Uttar Pradesh during the period of August 2013 to March 2014 with nine different treatments having gibberellic acid (GA<sub>3</sub>), naphthalene acetic acid (NAA) and 2,4-dichlorophenoxyacetic acid (2,4-D) and their combinations were taken and the crop selected for the experiment was one chilli variety G-4 with three replicants. Plants were sprayed three times at 30, 60 and 90 days after transplanting. The highest plant height, number of leaves, number of branches, number of flowers-fruits, fresh fruit weight, plant fresh weight, plant dry weight was observed and ascorbic acid and protein content was estimated for combination of GA<sub>3</sub> @ 10 ppm, NAA @ 20 ppm and 1ppm of 2,4-D. The combined applications of GA<sub>3</sub>, NAA and 2,4-D significantly increased vegetative growth, yield and quality of chilli compared with control. Based on the results, it can be concluded that combined applications of GA<sub>3</sub>, NAA and 2,4-D @ 10 ppm, 20 ppm and 1 ppm of 2,4-D had positive effect on plant growth, flowering, quality and yield potential.

**Key Words:** Gibberellic acid, Naphthalene acetic acid, 2,4-dichlorophenoxy acetic acid, chilli, *Capsicum annuum*L., fruit yield, quality.