



Effect of foliar application of growth regulators on growth of cabbage cv. PRIDE OF INDIA

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ABSTRACT

Studies on influence of GA, NAA and CCC at three different concentrations on different growth parameters of cabbage (cv. PRIDE OF INDIA) were studied at Dept. of Horticulture, Marathwada Agricultural University, Parbhani (M.S.). Among the various growth regulators and their different concentrations studied, application of GA 50 ppm was found significantly superior over most of the treatments in terms of number of the leaves, plant spread, circumference of stem, left area, fresh and dry weight of the plant, shape index of head, length of root, fresh and dry weight of root. Except treatment GA 75 ppm, which gave better results for days required for head initiation and head maturity.

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Key words : Cabbage, GA₃, NAA, CCC

Cabbage is one of the most popular vegetable in India accounting 6.3 per cent total world production. To increase the yield of the cabbage, application of major and minor nutrient are helpful. Now a days plant growth regulars have been tried to improve growth and ultimately yield. Among the growth regulators, GA₃ and NAA exhibit beneficial effect in several crops. However, information on effect of GA₃, NAA and CCC on cabbage under mild tropical conditions of Marathwada region is not available. Therefore, the present experiment was laid out to study the effect of GA₃, NAA and CCC on growth of cabbage.

MATERIALS AND METHODS

The experiment was conducted on cabbage cv. PRIDE OF INDIA during *Rabi* (winter) season 2005-2006 at Department of Horticulture, college of Agriculture, Marathwada Agricultural University, Parbhani (M.S.). The experimental site was fairly uniform, medium black cotton soil with good drainage. The trial was laid out in Randomized Block Design with ten (10) treatments and with three (3) replications. Treatment consisted of two sprays of GA₃ and NAA of concentrations of 25, 50 and 75 ppm each and CCC at 500, 750 and 1000 ppm. The growth regulators were sprayed at 15 and 30 days after transplanting. Uniform Cultural practices were adopted and observations on plant height, number of leaves per

plant, plant spread, circumference of stem, fresh and dry weight of plant and root, leaf area per plant were recorded.

RESULTS AND DISCUSSION

Data related to the effect of GA₃, NAA and CCC on growth of cabbage are presented in Table 1 and 2.

Growth parameters :

Growth is a function of various vegetative characters put together *viz.*, number of leaves, plant spread, leaf area per plant, circumference of stem, fresh and dry weight of plant etc. The different growth parameter were significantly affected by application of different growth regulator treatments.

Number of leaves :

The results of present study indicate that more number of leaves per plant were obtained when plants sprayed with growth regulators. GA₃ 50 ppm gave significantly more number of leaves (21.86) over control followed by NAA 50 ppm (21.60). Foliar application of GA₃ increased parameter owing to investigation of the physiological process of plant and stimulating effect of it to form new leaves at faster rate. Similar results have been reported by Reddy (1989) in cauliflower, Kumar *et*