

Effect of NAA, GA₃ and CCC on yield and quality attributes of cabbage cv. PRIDE OF INDIA

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ABSTRACT

An experiment was carried out during *Rabi* (Winter) Season 2005-06 on Cabbage cv. PRIDE OF INDIA at Department of Horticulture, College of Agriculture, Marathwada Agricultural University, Parbhani (M.S.) Four week old cabbage seedlings were transplanted and sprayed with GA₃ and NAA (25, 50 and 75 ppm) and CCC (500, 750 and 1000 ppm) two times at 15 and 30 days after transplanting. GA₃ 50 ppm produced highest weight of head, yield per hectare and staying capacity of head while NAA 50 ppm gave best results for total soluble solid and ascorbic acid content of the head.

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Key words : Cabbage, NAA, GA₃, CCC, Yield, Quality

INTRODUCTION

Cabbage is a hardy cool season annual crop and the edible portion which gives economic yield is called "Head". In the recent years a great deal of research work has been reported on the use of plant growth regulator in vegetable crops. However, most of the studies have been carried out in the field of growth and little information is available on yield and quality improvement of vegetable crops. A trial was, therefore conducted at Department of Horticulture College of Agriculture, Marathwada Agriculture University, Parbhani during *Rabi* season 2005-2006 to evaluate the response of GA, NAA and CCC to improve yield and quality of cabbage.

MATERIALS AND METHODS

The trial was conducted at Department of Horticulture, College of Agriculture, Marathwada Agriculture University, Parbhani on Cabbage Cv. Pride of India during *Rabi* (winter) season 2005-06. The experimental site was fairly uniform, medium black cotton soil with good drainage. The trial was laid out in R.B.D. with ten (10) treatments with three (3) replications. The treatments consisted of two sprays of GA₃, NAA (25, 50, and 75 ppm) and CCC (500, 750 and 1000 ppm). The spraying was done at 15 and 30 days after transplanting. Uniform cultural practices were adopted and observations

on yield, staying capacity, total soluble solids ascorbic acid content and keeping quality were recorded.

RESULTS AND DISCUSSION

The findings of the present study have been discussed under following heads :

Yield:

Weight of head:

Data pertaining to weight of head is presented in table 1 indicates that all the growth regulator treatments increased the weight of head significantly over the control treatment. The highest weight of head was produced by the treatment GA₃ 50 pm (1.193 kg.). This might be due to apportioning efficiency *viz.* increased allocation of photosynthesis towards the economic part and hormonal balance in the plant system. The results are in agreement with Hossain *et.al.* (1990) in Cucumber, Muthoo *et.al.* (1987) showed increase in the mean fruit weight in cauliflower by spraying of GA₃.

Yield per hectare:

Table 1 revealed that plant growth regulators significantly increased the yield per hectare. The higher head yield per hectare. (362.25q/h) was observed in the treatment GA₃ 50ppm which was significantly superior

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