

EFFECT OF NAA AND GA ALONG WITH UREA ON CERTAIN QUALITY ATTRIBUTES OF CABBAGE (*Brassica oleracea var. capitata*)

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ABSTRACT

An experiment was carried out during *rabi* 2001-2002 on cabbage cultivar Pride of India at Department of Horticulture, College of Agriculture, Marathwada Agricultural University, Parbhani. Four weeks old seedlings were transplanted and NAA or GA (both at 25, 50, 75 or 100 ppm) alongwith their combinations and 1 per cent urea was applied at 15 and 30 days after transplanting. 50 ppm GA produced significantly more compact heads and GA 100 + NAA 100 ppm resulted in the highest staying capacity as well as keeping quality. Highest ascorbic acid content resulted from the treatment with 75 ppm NAA.

Key words : Quality attributes, NAA, GA, Urea, Cabbage.

Cabbage is a hardy cool season annual crop and the edible portion which gives economic yield is called "head". In recent years a great deal of research work has been reported on the uses of plant growth regulators in vegetable crops. However, most of the studies have been carried out in the field of growth and yield of vegetable crops and very little information is available on the uses of plant growth regulators in quality improvement of vegetable crops.

A trial was, therefore, conducted at Department of Horticulture, College of Agriculture, Marathwada Agricultural University, Parbhani during *rabi* season 2001-2002 to evaluate the response of GA and NAA to quality improvement of cabbage.

MATERIALS AND METHODS

The trial was conducted at the Department of Horticulture, College of Agriculture, MAU, Parbhani on cv. 'Pride of India' during *rabi* (winter) season 2001-2002. The soil of experiment site was fairly uniform, medium black cotton soil with good drainage. The trial was laid out in R.B.D. with fourteen (14) treatments with three (3) replications. The treatments consisted of two sprays of GA or NAA at concentration 25, 50, 75 or 100 ppm alongwith their combinations and 1 per cent urea was sprayed at 15 and 30 days after transplanting. Uniform cultural practices were adopted and observations on compactness of head, staying capacity,

keeping quality and vitamin C content were recorded.

RESULTS AND DISCUSSION

Data relating to the effect of GA and NAA along with urea on quality of cabbage are presented in the Table 1.

Quality parameters :

Compactness of head :

The results obtained in present investigation indicated that the different growth regulator treatments significantly increased the compactness of head. The maximum compactness of head was observed in GA 50 ppm treatment, which was followed by NAA 50 ppm treatment.

Chhonkar and Singh (1959) found that the GA treatment markedly improved the compactness of cabbage head. Chauhan and Singh (1970) reported that GA at 15 ppm double spray gave the maximum compactness of head. Similarly Patil and Patil (1989) found that NAA 50 ppm produced significantly more compact heads. The results obtained in the present investigation are in agreement to those reported by earlier workers. The application of GA and NAA might have produced the better development of tissues through the cell elongation and cell division, which might have resulted in the increase in compactness of head.

Staying capacity :

It is evident from the results presented in Table 1