The Asian Journal of Horticulture; Vol. 5 No. 2; (December, 2010) : 520-522

Received : June, 2010; Accepted : December, 2010

Research Paper

Effect of different types of growth hormones and fertilizers on yield of brinjal variety, Manjari Gota

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ABSTRACT

The present study was undertaken with 'Manjari gota' variety of brinjal. This Solanaceous vegetable was cultivated in order to observe the yield parameters like yield of green fruit per plant (kg), yield per plot (kg) yield of fruits during monsoon and summer, season, season of 2000 to 2001. The vegetable was sprayed with four types of growth hormones and two types of fertilizers along with the control (wate spray). Results obtained during this investigation clearly indicated that in Manjari gota variety of brinjal during both the seasons yield per plant as well as per hectare was recorded more under urea and SSP spray followed by GA, NAA spray. However yield per plant and per hectare significantly was long under control, CCC and ethrel spray treatments. Regarding quality data recorded during both the seasons, indicated that highest ascorbic acid content was recorded under GA and urea spray while lowest ascorbic acid content was recorded under eternal spray followed by CCC spray.

S.M. Telang, D.A. Deshmukh and S.S. Patil (2010). Effect of different types of growth hormones and fertilizers on yield of brinjal variety, Manjari Gota, *Asian J. Hort.*, **5** (2) : 520-522.

Key words : Brinjal, Foliar spray, Growth hormones, Fertilizers, Yield

The branch of horticulture, which deals with the cultivation of vegetables is popularly known as Olericulture. Brinjal (*Solanum melogena* L.) is one of the most important vegetable crops grown in India right from Himalayas to Kanyakumari. The cultivated brinjal is undoubtedly Indian in origin and has been in cultivation for long time. In Maharashtra, its cultivation is distributed in all the districts. It ranks second in the list of vegetable hectarage after onion.

It is used in cury preparation giving a taste of non-vegetarian food. The Bhurta is a coomon dish in north India prepared from the fruits which are boiled or roasted together with onion, chillies and mustard oil. Sun drying of pieces is a age old practice followed in villages of Maharashtra. These dried pieces are used for consumption in the off season. Nadkurni (1927) has given the medicinal value of brinal *viz.*, as a cure toothache, for liver ailments and while brinjal for diabetic patient.

The advantage of plant growth regulators like GA' IAA' NAA, 2.4- D can be taken to increase the yield of local variety of brinjal. The increase in fruit set as a result of application of 2.4-D in all varieties of brinjal was nearly twice of that in the non-treated plant as reported by Krishnamuthy and Subramanian (1954). Bisaria and Bhatnagar (1976) observed that IAA 100 ppm stimulated growth, increased formation of flowers, fruits and yield, while GA-200 ppm enthnced yield of brinjal.

In view of these, the present paper assesses the effects of foliar application of growth hormones and fertilizers like NAA (25 ppm), cycocel (100 ppm), Ethrel (300 ppm), control (water spray) and foliar and soil application of nitrogen (urea 2%) and phosphorus (ssp 2%) on yield and quality of brinjal variety.

MATERIALS AND METHODS

The experiment was conducted on farm located on 'Talegaon' in Nanded district about 283.5 sq. m land was equally divided into 63 plots, each plot bearing an area of 13.5 sq. m. The seeds of improved variety. 'Manjari gota' were sown in rows across the beds, 10 cm apart on 1st June 2000 and 1st January 2001 for *Kharif* and summer season, respectively. Watering was done regularly by hose can. Themate was applied after germination of seeds between two rows. Seedlingss were sprayed twice with solution of 15 ml of rogar + 25 g $CuSO_4$ (fungicide) in 10 lit. of water to protect seedlings from insect pests and diseases. Weeding and loosening of soil was done regularly