

**"Effect of Plant Growth Regulators on
Growth Yield and Quality of Brinjal
(*Solanum melongena* L.)**

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Brinjal (*Solanum melongena* L.) is the most common vegetable grown through the year in all parts of India. The reason for this popularity is its adaptability to various climatic and soil conditions prevalent in the country. In Gujarat, it is widely grown in 7800 hectares. Probably the maximum area amongst all vegetables followed by onion and potato. Brinjal is quite rich in certain nutritive elements. Its fruits are generally used as a culinary vegetable.

It has been reported that the continuous supply of exogenous growth regulators by repeated sprays at frequent intervals has effected the yield contributing factors resulting in the ultimate response of the yield. With this view an experiment to study the effects of various plant growth regulators viz. GA, IAA, NAA and PCPA; on growth, yield and quality of brinjal, was conducted for two crop seasons during the year, 1975 as well as 1976 at the Agronomy farm of the Anand campus of the Gujarat Agricultural University. In the first

year the concentrations of GA and IAA were 25, 50, 75, and 100 ppm. and those of NAA and PCPA were 20, 40, 60 and 80 ppm.; in the second year the concentrations were 10, 15, and 20 ppm of GA and IAA, whereas, for PCPA the concentrations were 5, 10 and 15 ppm.

Observations were recorded on leaf area, leaf number, dry weight of leaf punches, number of branches, number of flowers, per cent fruit set, number of fruits per plant, yield of fruits, number of fruits per plot, weight, volume and density of fruit, dry weight of fruit, protein, vitamin C, oxalic acid and seed content in brinjal fruit.

It was observed that with the increasing concentrations of GA there was an increasing vegetative growth of brinjal plant. On the other hand, increasing concentrations of PCPA and NAA brought about epinasty in increasing proportion. There was significant difference amongst the various levels of each growth regulator in respect of number of leaves and number of branches per plant.

The dry matter content of leaf punches was found to be increased, at a latter stage of plant development, by PCPA, IAA and PCPA increased the per cent fruit set, number of fruits per plant and the volume of brinjal fruit. There was no significant effect on the yield quality and seed content of fruits when treated with various growth regulators.