



## EFFECT OF BIOFERTILIZERS AND GROWTH REGULATOR ON GROWTH AND YIELD OF OKRA

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### ABSTRACT

An experiment was conducted at college in faculty of Agriculture, Shamli during *kharif* season of 2003-2004 with objectives to find out the suitable combination of biofertilizers (Inoculation with Azotobacter and Phosphate Solubilizing Bacteria each for 10 kg seeds and growth regulator Cycocel 500, 700, 1000 ppm). Okra var. PusaMakhmali. Considering the growth, yield and other quality parameters data revealed that significantly minimum height of plant was recorded by the foliar application of 1000 ppm cycocel. In respect of number of branches, number of leaves, number of internodes, number and weight of fruits, length of third internodes, yield of fruits plant<sup>-1</sup> and ha<sup>-1</sup> were significantly maximum in the plant receiving Azotobacter + 1000 ppm cycocel with good quality fruits of okra.

**Key words :** Growth regulator, Cycocel, Biofertilizers, Okra.

### INTRODUCTION

Vegetables has a vital contribution in balance diet by providing all the essential nutrients. Regular consumption of vegetables, provides many of most essential health building and protective substances, which are needed for proper growth and development of human being. Okra posses sixth position among the vegetables grown commercially in India.

Now-a-days nitrogen requirement in agriculture are met mainly by biological nitrogen fixation with the help of biofertilizers as huge amount of nitrogen present in atmosphere can be effectively used to supplement the nitrogen requirement there by reducing the use of chemical fertilizers.

Azotobacter fixes atmospheric nitrogen, non symbiotically and phosphate solubilising bacteria solubilizes insoluble form of phosphate to soluble form

by producing organic acids. Therefore, combination of Azotobacter and phosphate solubilising bacteria is of considerable economic importance as they play important role in supply of N and P.

Growth regulator like cycocel are used for increasing the production and quality of okra because it helps to reduce the vegetative growth and increase the number of branches by shortening their internodes which finally leads to the quantitative yield of okra with better quality. Keeping this view an experiment was conducted to study the effect of biofertilizers and plant growth regulator for getting higher yield and quality of okra var. PusaMakhmali.

### MATERIALS AND METHODS

The present investigation was carried out during the *kharif* season of the year 2002-2003 at college. The experiment was carried out in a RBD with eight treatments