

## Correlation of adoption of Bt cotton production technology

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### ABSTRACT

The study was conducted in Nanded district of Maharashtra state to know the profile of Bt cotton growers and to find out relationship of characteristics of Bt cotton growers with adoption of Bt cotton production technology. From the study it was found that majority of the Bt cotton growers had 12 to 26 years of farm experience, educated up to Middle School, medium land holding, medium level of annual income, medium sources of information use, medium level of social participation, medium risk preference and middle socio-economic status. Education, land holding, annual income, sources of information use, social participation, risk preference and socio-economic status were positively and significantly related with the adoption of Bt cotton production technology. While, education, land holding, annual income and risk preference had substantial contribution to the adoption of Bt cotton production technology.

### INTRODUCTION

Cotton (*Gossypium* sp.) is said to be the king of cultivated crops being a main cash crop. Cotton is also known as 'White gold'. Cotton fulfills the need of clothing of human being. It is an important source of fibre and oil. Cotton seeds and seed cakes are important sources of concentrates to animals. Cotton is also used in manufacture of synthetic rubber, soaps, cosmetics, plastic, papers, explosive etc. Cotton is the prime source of natural fibre which is raw material of textile industry.

India ranks third in global cotton production after USA and China but per hectare yield of cotton in India is lowest with 300 kg per hectare against world average of 580 kg per hectare. Pest and disease attack is one of the most important factors affecting yield levels significantly. The loss due to it is to the tune of 13 to 15 per cent which is a serious concern. The bollworm complex causes significant yield losses, further, the harmful effects of insecticides leading to environmental pollution and more specifically increasing the cost of cultivation. In this context the application of biotechnology was seen as a solution and thus the efforts have resulted in developing of Bt cotton. Bt is a genetically engineered crop hence is referred transgenic cotton. This Bt cotton contains a toxic protein inducing gene from soil bore bacterium *Bacillus thuringiensis*, thus enabling the crop to produce toxin resulting in decrease bollworms infestation, reduced application of insecticides,

increase the productivity, quality of fibre and provide safety to the farmers. An attempt was made in present to know the profile of Bt cotton growers and to find out relationship between characteristics of Bt cotton growers and adoption of Bt cotton production technology.

### METHODOLOGY

Present study was conducted in Kinwat and Bhokar talukas of Nanded district of Maharashtra State as these talukas had highest area under Bt cotton. Twelve Bt cotton growers from five villages of each taluka were selected randomly. Thus, sample size comprised 120 respondents. The selected Bt cotton growers were interviewed personally at their home or at their farm as per their convenience. The data were collected with the help of structured schedule and analysed by using mean, standard deviation, frequency, percentage, correlation and regression analysis.

### RESULTS AND DISCUSSION

The findings of the present study as well as relevant discussion have been summarized under following heads:

#### Farm experience:

Table 1 revealed that majority of the Bt cotton growers (65 per cent) were had 12 to 26 years of farm experience followed by up to 11 years of farm experience (20.83 per cent) and 27 years and above farm experience (14.17 per cent).

### Key words :

Bt cotton growers, Correlation, adoption, Bt cotton production technology

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