

Present status of adoption of Bt cotton production technology by farmers

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ABSTRACT

The study was conducted in Nanded district of Maharashtra state to know the extent of adoption of Bt cotton production technology by the farmers and to find out constraints faced by them in adoption of Bt cotton production technology. From the study, it was found that most of them had medium level of adoption of Bt cotton production technology. Regarding constraints, all the Bt cotton growers expressed the constraints of non-availability of labour for preparatory tillage and intercultivation, lack of irrigation water, high cost of fertilizers and pesticides and non-availability of sufficient quantity of female labour for cotton picking.

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 13 to 15 % 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. Therefore, the present study was undertaken to assess the extent of adoption and constraints of the Bt cotton growers in adoption of Bt cotton production technology.

METHODOLOGY

Kinwat and Bhokar talukas of Nanded district of Marathwada region of Maharashtra State were chosen purposively for the present study as it has highest area under Bt cotton. Five villages from each taluka were selected randomly. From each village 12 Bt cotton growers were selected randomly by Nth method of random sampling. 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 frequency, percentage, mean and standard deviation.

RESULTS AND DISCUSSION

The findings of the present study have been presented under following heads:

Practice wise adoption of Bt cotton production technology by farmers:

Table 1 shows that most of the Bt cotton growers were under full adoption category like picking of cotton at morning hours (88.33 %), sowing during 15 may to 5 June (69.17 %), sowing at 90 x 60cm spacing (65.83 %),

Key words :

Adoption, constraints, Bt cotton growers and Bt cotton production technology

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