

BT-COTTON GROWERS' KNOWLEDGE ABOUT DISTINCTIVE FEATURES OF BT-COTTON

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ABSTRACT

With a view to measure the farmers' knowledge about distinctive features of Bt-cotton and to understand the relationship between selected characteristics of Bt-cotton growers and their knowledge about distinctive features of Bt-cotton, the study was conducted in Vadodara district of Gujarat state, with a sample of 160 cotton growers. The results indicate that majority of the Bt-cotton growers had medium level of knowledge about distinctive features of Bt-cotton. The analysis of correlation of personal, social and economic variables reflects that variables like age, education, land holding, annual income, mass media exposure, extension participation, innovativeness and overall modernity had significant influence on their level of knowledge.

INTRODUCTION

Cotton is one of the most important commercial crops playing a key role in economic, political and social affairs of the world. Because of its importance in agricultural as well as industrial economy, it is also called as "white gold". Cotton is cultivated in about 60 countries of the world. Bt-cotton is the most expensively studied cotton variety today. Bt is a short form for *bacillus thuringiensis* a naturally occurring gram positive soil bacterium. The use of Bt-cotton to control insect pest is not new. Insecticides containing Bt. and its toxins (eg. dipel, thuricide, vectobac) have been sold for many years (Coben et.al., 1999). What is new in Bt-crop is that a modified version of the bacterial cry gene has been incorporated into the plants own DNA, so that the plants cellular machinery produces the delta endotoxin as part of the plants normal development (Stewart et al. 1996). India grew Bt-cotton for the first time in year 2002. Bt-cotton is newly introduced cotton hence

it was thought worthwhile to measure the farmers' knowledge about distinctive features of Bt-cotton. Keeping in view above facts the study was conducted with the following objectives.

1. To know the Bt-cotton growers' knowledge about distinctive features of Bt-cotton.
2. To know the relationship between some selected characteristics of Bt-cotton growers and their knowledge about distinctive features of Bt-cotton.

METHODOLOGY

The present study was carried out in Karjan, Sankheda, Dabhoi and Shinor talukas of Vadodara district of Gujarat state. Five cotton growing villages were randomly selected from each taluka. The total twenty villages were selected for the study and randomly eight Bt-cotton growers who had minimum one year experience were selected from each village making a total sample of 160 respondents. Measurement of knowledge of

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Table 1. Distribution of Bt-cotton growers according to their level of knowledge about distinctive features of Bt-cotton

Sr. No.	Category	Frequency	Percent
1	Low knowledge (Below 40 score)	23	14.38
2	Medium knowledge (40.00 to 78.00 score)	105	65.62
3	High knowledge (Above 78.00 score)	32	20.00
Total		160	100.00

Bt-cotton growers about distinctive features of Bt-cotton was done by using teacher made test. To analyze the data statistical tools like mean, percentage, standard, deviation and co-efficient of correlation were used.

RESULTS AND DISCUSSION

Growers' knowledge about distinctive features of Bt-cotton

Knowledge is the cognitive behavior of an individual. The body of knowledge is the product of learning process. Once the knowledge is acquired, it produces changes in the thinking process of an individual which would lead to further changes in attitude and help the farmers in making rational decisions. It is prerequisite for adoption of any agricultural innovation.

A look at table 1 reveals that 65.62 percent of Bt-cotton growers had medium level of knowledge followed by 20.00 per cent and 14.38 per cent of them who had high and low level of knowledge respectively.

Relationship between personal, socio-economic and psychological characteristics of Bt-cotton growers and their knowledge level

The knowledge of respondents is mostly influenced by personal socio-economic and psychological characteristics of the individual. So for this purpose the coefficient of correlation (r) for independent variable was worked out and presented in Table 2.

The co-efficient of correlation between age and knowledge was found negative and it was significant at 1 percent. This indicates

Table 2 : Relationship between selected Personal, Socio-economic and Psychological characteristics of Bt-cotton growers and their knowledge level

Sr. No.	Characteristics (Independent variables)	'r' Correlation co-efficient with knowledge
1.	Age	-.25048**
2.	Education	.32186**
3.	Size of family	.04633
4.	Social participation	.14549
5.	Mass media exposure	.33205**
6.	Extension participation	.19957**
7.	Occupation	.05091
8.	Size of land holding	.18138**
9.	Annual income	.19633**
10.	Irrigation potentiality	.13751
11.	Scientific orientation	.09032
12.	Innovativeness	.30134**
13.	Risk orientation	-.07566
14.	Overall modernity	.27749**
15.	Economic motivation	.02283

** Significant at 0.01 % level of probability.

that with the increase in age, knowledge level of the Bt-cotton growers about distinctive features of Bt-cotton decreased. This may be due to the fact that the older age people are generally traditional and conservative and they like to continue with their traditional knowledge.

The variables like education, size of land holding, annual income, mass media exposure, extension participation, innovativeness and overall modernity were significantly correlated with knowledge while occupation, size of family, social participation, irrigation potential, scientific orientation, risk orientation and economic orientation had no significant correlation with knowledge of Bt-cotton growers about distinctive features of Bt-cotton.

CONCLUSION

From the above study it can be concluded that majority of the Bt-cotton growers had medium level of knowledge about distinctive features of Bt-cotton. The analysis of correlation of personal, social and economic variables reflects that variables like age, education, land holding, annual income, mass media exposure, extension participation, innovativeness and overall modernity had significant influence on their level of knowledge.

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