



# Awareness and adoption of pesticides by cotton growers

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## ABSTRACT

The present study on awareness and adoption of pesticides by cotton growers was conducted in the year 2015-16 in Amravati district. Results obtained after analysis have been summarized as below. Findings of relational analysis revealed that age, education, land holding, farming experience and innovativeness were positive and significant correlated with awareness. Social participation had shown negative and significant correlation with awareness. Whereas risk orientation had shown non-significant correlation with awareness. However, the variables like age, education, farming experience, social participation, innovativeness and risk orientation had shown positive and significant correlation with adoption. Land holding had shown non-significant correlation with adoption.

## INTRODUCTION

It is said that India is the agricultural country with a lion share of its population depend upon agriculture for livelihood. The growth and development of economy of the country be guessed from the growth of agriculture sector. It is moving very fast from subsistence agriculture from commercial agriculture and from traditional agriculture to agriculture based on science and technology.

Cotton contributes 29.8 per cent of the Indian agricultural gross domestic product, and nearly nine million hectares, which accounts for about 6 per cent of net cropped area of land in India. One of the reason that could be attributed for the low yield may be damage caused due to insects and pests drastically reducing the yield.

Available estimates show that out of the total

pesticides consumption of Rs. 2,800 crore in Indian agriculture, about Rs. 1,600 crore were spent on cotton alone, of which Rs. 1,100 crore were spent only to control bollworms (Mayee and Rao, 2002). The indiscriminate use of pesticides not only increases the financial burden of the farmers and reduces the profit margins by increasing the cost of cultivation but also creates health hazards and environmental risks.

Scientific guidance and knowledge about new insecticides coming in the market is also lacking. It is quite true that the use of insecticide protects the cotton crop and increases the yield but at the same time farmer has to look into the input-output ratio of the crop. The cost of insecticides has also gone very high causing a major constraint in its use.

Thus the proper use of plant protection measures has become essential to increase the crop yields, and

cotton is one of the most important cash crop Vidharbha, required to be protected from the pest and diseases.

## MATERIAL AND METHODS

Amravati district was purposively selected for the study. The study was conducted in Amravati and Chandur bazaar tehsils of Amravati district. The farmers were interviewed with the help of structured interview schedule personally. From two tehsil 80 respondents were selected. The interview schedule was constructed by formulating relevant questions in accordance with objectives of the study. The schedule included questions pertaining to age, education, land holding, farming experience, social participation, innovativeness, risk orientation as well as awareness and adoption.

The information from the respondent was collected by personal interview methods and their responses were considered for the purpose of present study. Data was collected. Mean, S.D. and co-efficient correlation methods were used for analysis of the data.

## OBSERVATIONS AND ANALYSIS

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

### Relation analysis:

In order to find out the relationship of the selected characteristics of respondents with their awareness and adoption, correlation co-efficient were worked out. The findings are presented in this part.

### Relationship of selected characteristics of respondents with their awareness :

The co-efficient of correlation of awareness with profile of the respondents has been furnished in Table 1.

On critical examination in Table 1, it reveals that among the 7 independent variables age, land holding were positively and significantly correlated with awareness at 0.01 level of probability. However education, farming experience and innovativeness is positive and significantly correlated with awareness at 0.05 level of probability.

With respect to age of cotton growers was found to have positive and significant relationship with awareness level. Old age farmers sticks to their old practices, while young and middle age farmers were eager to gain knowledge. The finding of the study was in consistent with the findings of Kale (2009).

With respect to education cotton growers was found to have positive and significant relationship with awareness level. High education status helps in increasing the awareness about pesticides. The finding of the study was in consistent with the finding of Gunjal (2007) and

Sr. No.	Correlates	'r' value
1.	Age	0.2729**
2.	Education	0.2297*
3.	Land holding	0.3003**
4.	Farming experience	0.2469*
5.	Social participation	-0.2579*
6.	Innovativeness	0.2241*
7.	Risk orientation	-0.1632NS

\* and \*\* indicate significance of values at P=0.05 and 0.01, respectively NS =Non-significant

Sr. No.	Correlates	'r' value
1.	Age	0.2453*
2.	Education	0.2675*
3.	Land holding	0.0054NS
4.	Farming experience	0.2435*
5.	Social participation	0.3254**
6.	Innovativeness	0.3255**
7.	Risk orientation	0.2621*

\* and \*\* indicate significance of values at P=0.05 and 0.01, respectively NS=Non-significant.

Kale (2009).

With respect to land holding of cotton farmer there was positive and significant relationship with awareness level. As the land holding of farmer is more. They want to exercise more components or aspects of technology on their land. Larger size of land motivated them to adopt new technology for that purpose firstly farmers had to aware about new technology. It quit possible that land holding affects on the awareness level. Similar finding was reported by Kale (2009).

With respect to the farming experience in cotton cultivation showed positive and significant relationship with their awareness. According to present study majority of cotton farmers belonged to medium level of farming experience. It quite possible that farmers gain knowledge or became aware through their past experience which was helpful to farmer in decision making. Thus, experience in farming of cotton farmers was positive significant because farmers became aware trough their past experience. These results are in line with the findings of George *et al.* (2012).

With respect to social participation there was negative and significant relationship with awareness. More social participation increases the awareness level of cotton farmers. The finding of the present study is in accordance with the findings reported by Kale (2009) and Gunjal (2007).

With respect to innovativeness there was significant relationship with awareness. This might be due to the majority of respondents educated upto high school level. More innovativeness increases the awareness level of cotton farmers.

The characteristic risk orientation showed non significant relationship. It might be due to the low economic condition of farmer.

### **Relationship of selected characteristics of respondents with their adoption :**

The co-efficient of correlation of adoption with profile of the respondents have been furnished in Table 2.

It is evident from Table 2 that social participation and innovativeness were positively and significantly correlated with adoption at 0.01 level of probability. The variables like age, education, farming experience and risk orientation positively and significantly correlated with adoption at 0.05 level of probability.

With respect to age of cotton growers was found to

have positive and significant relationship with their adoption. Younger farmers are more energetic and they work for more excellence in their life. This could be the reason for positive and significant relationship with adoption. The similar report had reported by Savant (2011). Education broadens the vision of an individual. The educated person more access to extension agencies, development organization and inclined to use of innovations by taking the high risk. The finding of the present study is in accordance with the findings reported by Gaikwad *et al.* (2011).

With respect to land holding of cotton farmer there was non significant relationship with adoption. But majority of farmers were belong to low land holding category. It quite possible that they were not to keen interest to know about new technology. The finding of the present study is in accordance with the findings reported by Neethi and Sailaja (2013).

With respect to farming experience of cotton growers there was positive and significant relationship with adoption. It quite possible that most of the farmers learn new things from their experience. Thus, experience in farming of cotton farmers was significant with their adoption level. The finding of the present study is in accordance with the findings reported by Neethi and Sailaja (2013).

With respect of innovativeness of cotton farmers had positively significant relationship with their adoption level. This might be due to majority of respondents possessed education upto high school. These finding in line with the finding of Tidke *et al.* (2012).

With respect to risk orientation of cotton farmers was found to positive and significant relationship with adoption level. According to present study majority of farmers belonged to medium level of risk orientation. It quite possible that farmers take calculated risk according to the source they possessed. The finding supported by the finding made by the George *et al.* (2012).

The variables land holding did not show any significant association with adoption possessed by respondents.

### **Conclusion:**

Findings of relational analysis revealed that age, education, land holding, farming experience and innovativeness were positive and significant correlated with awareness. Social participation had shown negative and significant correlation with awareness. Whereas risk

orientation had shown non-significant correlation with awareness.

However, age, education, farming experience, social participation, innovativeness and risk orientation had shown positive and significant correlation with adoption. Land holding had shown non-significant correlation with adoption.

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