

## **COROLLARY OF CULTIVATORS' MANAGERIAL ABILITY ON ADOPTION OF PLANT PROTECTION TECHNOLOGY OF CHILLI**

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### **ABSTRACT**

*With a view to know whether the managerial ability of the growers had any influence on adoption of plant protection technology by the chilli growers, this study was undertaken. The majority of the respondent chilli growers possessed medium level of managerial ability of plant protection measures in chilli. Similar trend was observed in the extent of adoption of plant protection technology of chilli. The significant and positive correlation was observed between the literacy level, social participation, extension participation & managerial ability; and the extent of adoption.*

### **INTRODUCTION**

Chilli is an important cash crop of India and also important earner of foreign exchange. Khan et. al. (1976) revealed that the productivity of chilli is low due to impact of pests and diseases. In Gujarat, plant protection measures are the most important input to boost up production of chilli crop. In order to get sustainable yield, the IPM shall be adopted as per recommendation.

For adoption of any technology, over and above technological knowledge and availability of necessary input; the managerial ability plays an important role. The research efforts are futile, unless it fetch sustainable high yields at farmer's field. The present study was undertaken with a view to know whether the managerial ability of the growers had any influence on adoption of plant protection technology of chilli; with the following specific objectives:

1. To study managerial ability of growers in regard to plant protection technology in chilli crop.
2. To find out the extent of adoption of plant protection measures in chilli crop by growers.
3. To investigate the relationship between the personal characteristics including managerial ability of the growers and their extent of adoption of plant protection measures in chilli crop.

### **METHODOLOGY**

The Gandhinagar district was purposively selected for the present study with a consideration not only as chilli is important crop of the area but also as the produce from this area has achieved premium quality reputation in the market. A two stage simple random sampling technique was used for this study for selection of respondents. The Gandhinagar and Kalol taluka were purposively selected. From the list of important chilli growing villages, five

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**Table 1: Distribution of farmers on the basis of level of managerial ability**

Level of Managerial Ability	No. of farmers	Per cent
Low	17	14.91
Medium	80	70.18
High	17	14.91
<b>Total</b>	<b>114</b>	<b>100.00</b>

villages in each taluka were randomly selected. The lists of chilli growers were obtained from each village panchayat. In all 114 respondents were selected by proportionate random sampling.

An interview schedule for collecting information was specifically constructed. It also consist a specially designed test to measure the growers' managerial ability for use of plant protection measures in chilli crop. The test consist high value of reliability (reliability coefficient 0.8352) and also a high value of validity (validity coefficient 0.9138). For every respondent, managerial ability index was calculated. To measure the extent of adoption of respondents, a simple test was structured and used and "adoption quotient" (AQ) was calculated. On the basis of mean and standard deviation, all the respondents were classified into low, medium and high categories of adoption.

Correlation of coefficient was used to measure relationship between the personal characteristics including the managerial ability of the growers and their extent of adoption of plant plant protection measures in chilli.

## **RESULTS AND DISCUSSION**

### **MANAGERIAL ABILITY**

The managerial ability of farmers may help them to take decision at the right time for adoption of any technology. A specially constructed test was applied to know the level of managerial ability of chilli growers. From the test values, managerial ability index was calculated for each respondent and on the basis of that the respondents were grouped into three categories of managerial ability.

The distribution of respondents as per their level of managerial ability is presented in Table 1. It is obvious from the Table 1 that majority of the respondents possessed medium level of managerial ability. An equal number of respondents fall in the categories of low and high level of managerial ability.

### **ADOPTION OF PLANT PROTECTION MEASURES**

The data in regard to the extent of adoption of plant protection measures were collected. On the basis of the response values, adoption quotient was calculated for each of the respondents. Owing to AQ values, the respondents were

**Table 2: Distribution of the chilli growers according to their extent of adoption**

Extent of adoption	Number	Per cent
Low (up to 10)	21	18.42
Medium (Above 10 to 42)	75	65.79
High (Above 42)	18	15.79
<b>Total</b>	<b>114</b>	<b>100.00</b>

classified in three groups. The data in this regard are presented in Table 2.

Data presented in Table 2 indicate that nearly two third of the respondents (65.79 per cent) were categorized under medium level of adoption whereas, 18.42 per cent

technology and also in improving their managerial ability (Ashok Patel & R.K. Patel, 2000). Further, the level of knowledge of the farmers is also significantly contributes in increasing their managerial ability (Patel R.K. & Ashok Patel, 2000).

**Table 3: Relationship between personal characteristics of chilli growers and their extent of adoption of plant protection measures**

Sr. No.	Personal characteristics	Correlation Coefficient
1.	Age	(-) 0.157 NS
2.	Literacy	0.169 NS
3.	Social participation	0.306 **
4.	Extension participation	0.403 **
5.	Size of land holding	0.030 NS
6.	Economic condition	(-) 0.004 NS
7.	Level of knowledge	0.610 **
8.	Managerial ability	0.885 **

\*\* Significant at 0.01 level of probability

NS Non-significant even at 0.05 level of probability

of the respondents with low level of adoption and 15.79 per cent of the respondents had high level of adoption.

#### **RELATIONSHIP BETWEEN PERSONAL CHARACTERISTICS AND ADOPTION**

The data pertinent to relationship between personal characteristics of the chilli growers including their managerial ability and their extent of adoption of plant protection measures in chilli crop are presented in Table 3.

It was observed from Table 3 that personal characteristics namely, age, literacy, size of land holding and economic condition of chilli growers had no significant correlation with extent of adoption of plant protection measures in chilli. Contrarily, it is highly correlated with social participation, extension participation, level of knowledge and managerial ability of chilli growers. The social participation and extension participation are the key components for enhancing the knowledge and changing the growers' attitude towards a

#### **CONCLUSION**

It is clear from the results of the study that majority of the respondents possessed medium level of managerial ability. Similarly, majority of the respondents had a medium level of adoption of plant protection measures. Further, adoption of plant protection measures was associated with social participation, extension participation, level of knowledge and managerial ability of the chilli growers indicating that any increase in these variable were found to elevate adoption level.

#### **REFERENCES**

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