

## KNOWLEDGE OF COTTON GROWERS ABOUT INTEGRATED PEST MANAGEMENT

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### ABSTRACT

*Cotton is one of the most important commercial fibre crops of India. Today it continues to rule as the “King of Apparel Fibre”. It is playing a key role in economic, political and social affairs of the world. It is known as “white gold” due to its importance in agricultural as well as industrial economy. Cotton is one of the major kharif crop grown under both irrigated and rain-fed conditions in India. Cotton is widely grown in all districts of Gujarat state. The low yield of cotton could mainly be attributed to the fact that, the cotton growers have not still adopted Integrated Pest Management. So, the present study was conducted in Surendranagar district of Gujarat state. Total 120 farmers were selected for the study. The ex-post facto research design was used for the research study. The results revealed that exactly 51.67 per cent of farmers belonged to middle age group, 28.34 per cent of farmers belonged to middle school level of education, 61.66 per cent of the farmers had medium farm experience and 45.83 per cent farmers had received one training, 34.18 per cent farmers had five to six members in family, 46.66 per cent farmers had ₹ 1,00,001 to ₹ 1,50,000 annual income, 56.66 per cent farmers had medium land holding, 63.34 per cent farmers had medium level of social participation, 67.50 per cent of the farmers had medium level of mass media exposure, 45.00 per cent of the farmers had medium scientific orientation, 62.50 per cent of farmers belonged to medium risk orientation group and 54.84 per cent farmers had medium level of innovativeness. Majority (75.00 per cent) of cotton growers had medium level of knowledge about Integrated Pest Management.*

**Keywords:** cotton, farmers, integrated pest management, fibre, knowledge

### INTRODUCTION

Cotton is one of the most important commercial fibre crops of India. Today, it continues to rule as the “King of Apparel Fibre”. It is playing a key role in economic, political and social affairs of the world. It is known as “white gold” due to its importance in agricultural as well as industrial economy.

It provides a livelihood to farmers and people engaged in related activity in India by way of support in agriculture, processing, and use of cotton in textiles. Apart from its value as fibre, the potential of cotton is used such as edible oil (seed oil) and cotton cake as cattle feed and hull meal. Other by-products like particle board, corrugated boxes are enormous. Cotton is one of the major *kharif* crop grown under both irrigated and rainfed conditions in India. Besides food and housing, clothing is one of the primary needs of human being.

Surendranagar district is one of the remarkable cotton growing districts of the state. The farmers of the district are pioneer in introducing cotton cultivation.

### OBJECTIVES

- (1) To study the personal, socio-economical, communicational and psychological characteristics of cotton growers
- (2) To assess the knowledge of cotton growers regarding Integrated Pest Management

### METHODOLOGY

The present study was carried out in Surendranagar district of Gujarat State. 3 talukas from Surendranagar district were selected for the study of the respondents. From each selected taluka 4 villages were selected randomly and from each selected village, 10 farmers were considered as respondents, thus total 120 farmers, who grow the cotton crop, were considered as respondents for the present study. An interview schedule based on objective of the study was developed and respondent were personally interviewed for collection of information. Ex-post facto research design was used for the research study (Kerlinger, F. N., 1976). All the responses were recorded and transferred to master

excel sheet. The data were compiled, scored, tabulated and analyzed to give statistical treatment in such a way that they might give proper answers to the specific objectives of the study.

**RESULTS AND DISCUSSION**

**Profile of the farmers**

**Table 1: Distribution of farmers according to their personal, socio-economical, communicational and psychological characteristics**

(n = 120)

Sr. No	Category	Frequency	Percent
<b>(I) Personal characteristics</b>			
<b>1</b>	<b>Age</b>		
	Young age (Up to 35 years)	25	20.83
	Middle age (36 to 50 years)	62	51.67
	Old age (Above 50 years)	33	27.50
<b>2</b>	<b>Education</b>		
	College/post-graduation	18	15.00
	Higher school	28	23.33
	Middle school	34	28.34
	Primary school	22	18.33
	Functionally literate	15	12.50
	Illiterate	03	02.50
<b>3</b>	<b>Farm experience</b>		
	Low farm experience (Up to 5 years)	15	12.50
	Medium farm experience (6 to 10 years)	74	61.66
	High farm experience (Above 10 years)	31	25.90
<b>4</b>	<b>Training received</b>		
	No training	18	15.00
	One training	55	45.83
	Two training	37	30.83
	Three training	06	05.00
	More than three training	04	03.36
<b>(II) Socio-economical characteristics</b>			
<b>5</b>	<b>Size of family</b>		
	1 to 2 members	03	02.50
	3 to 4 members	36	30.00
	5 to 6 members	41	34.18
	7 to 8 members	29	24.16
	Above 8 members	11	09.16
<b>6</b>	<b>Annual income</b>		
	Above ₹ 2,00,000	09.00	07.50
	₹ 1,50,001 to 2,00,000	24.00	20.00
	₹ 1,00,001 to 1,50,000	56.00	46.66
	₹ 50,001 to 1,00,000	24.00	20.00
	Up to ₹ 50,000	07.00	05.84

<b>7</b>	<b>Land holding</b>		
	Big (Above 10 ha)	08	06.66
	Medium (4.01 to 10 ha)	68	56.66
	Semi medium (2.01 to 4 ha)	14	11.66
	Small (1.01 to 2 ha)	23	19.16
	Marginal (0.01 to 1 ha)	07	05.86
<b>8</b>	<b>Social participation</b>		
	Low social participation (Below 1.36 score)	26	21.66
	Medium social participation (1.36 to 3.32 score)	76	63.34
	High social participation (Above 3.32 score)	18	15.00
<b>(III) Communicational characteristic</b>			
<b>9</b>	<b>Mass media exposure</b>		
	Low mass media exposure (Below 8.73 score)	12	10.00
	Medium mass media exposure (8.73 to 13.73 score)	81	67.50
	High mass media exposure (Above 13.73 score)	27	22.50
<b>(IV) Psychological characteristics</b>			
<b>10</b>	<b>Scientific orientation</b>		
	Very low (Up to 25.20 score)	03	02.50
	Low (25.21 to 36.40 score)	09	07.50
	Medium (36.41 to 47.60 score)	54	45.00
	High (47.61 to 58.80 score)	41	34.16
	Very high (Above 58.80 score)	13	10.84
<b>11</b>	<b>Risk orientation</b>		
	Low risk orientation (Below 10.81 score)	21	17.50
	Medium risk orientation (10.81 to 16.49 score)	75	62.50
	High risk orientation (Above 16.49 score)	24	20.00
<b>12</b>	<b>Innovativeness</b>		
	Low innovativeness (Below 2.28 score)	28	23.33
	Medium innovativeness (2.28 to 4.66 score)	67	54.84
	High innovativeness (Above 4.66 score)	25	20.83

The result demonstrated in Table 1 indicates revealed that exactly 51.67 per cent of farmers belonged to middle age group, 28.34 per cent of farmers belonged to middle school level of education, 61.66 per cent of the farmers had medium farm experience and 45.83 per cent farmers had received one training, 34.18 per cent farmers had five to six members in family, 46.66 per cent farmers had Rs. 1,00,001 to Rs. 1,50,000 annual income, 56.66 per cent farmers had medium land holding, 63.34 percent farmers had medium level of social participation, 67.50 per cent of the farmers had medium level of mass media exposure, 45.00 per cent of

the farmers had medium scientific orientation, 62.50 per cent of farmers belonged to medium risk orientation group and 54.84 per cent farmers had medium level of innovativeness. This finding was in concurrence with the findings of Preethi *et al.*, (2015).

### Knowledge of the farmers about Integrated Pest Management

**Table 2: Distribution of the respondents according to their knowledge about integrated pest management (n=120)**

Sr. No.	Category	Frequency	Per cent
1	<b>Low knowledge</b> (Below 50.77 score)	19	15.84
2	<b>Medium knowledge</b> (50.77 to 77.39 score)	89	74.16
3	<b>High knowledge</b> (Above 77.39 score)	12	10.00

The data presented in Table 2 indicated that 74.16 per cent of the cotton growers were from medium level knowledge group with respect to Integrated Pest Management. The considerable amount (15.84 and 10.00 per cent) of respondents was in low and high knowledge group, respectively. This might be due to fact that the respondents had medium level of farm experience, social participation and mass media exposure. These factors might have favourably helped the cotton growers in getting more knowledge about Integrated Pest Management. This finding was in concurrence with the findings of Sinde (2011), Dhenge (2013), Dodiya *et al.* (2016), and Khatri and Chauhan (2020).

### CONCLUSION

Cotton is important cash crop in more than 80 countries. India is one of the major cotton producers in the world. However, main losses in cotton production are due to susceptibility to insect pests and contribute to lower yield. So, Integrated Pest Management is important practices for the betterment in cotton crop production and productivity purpose. The study shows that majority of respondents were in middle to old age group, middle to graduate level of

education, medium to high level of farm experience, majority of farmers received one to two trainings, 5 to 6 members in the family, ₹ 1,00,001 to ₹ 1,50,000 of annual income, small to medium size of land holding, low to medium level of social participation, medium to high level of mass media exposure, medium to high level of scientific orientation, medium to high level of risk orientation and medium to high level of innovativeness. The studies revealed that Great majority of the respondents have medium level of knowledge about Integrated Pest Management.

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