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KNOWLEDGE AND PERCEIVED CONSTRAINTS OF MAIZE GROWERS IN THE RECOMMENDED PACKAGE OF PRACTICES OF MAIZE CULTIVATION

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Abstract: The study was carried out in Dindigul district of Tamil Nadu to analyze the knowledge of maize Growers in the recommended package of practices of Maize cultivation. It was found that maize was one of the major crops of the respondents. Data was collected using structured interview, from the study it was found that majority of the respondents had medium levels of knowledge on recommended package of practices of Maize. The correlation analysis revealed that independent variable, namely age, education, farming experience, contact with extension agency, mass media exposure, economic motivation, innovativeness and training undergone had positive and significant relationship with knowledge level of recommended package of practices of Maize. When partial regression coefficients were tested, it was observed that age and mass media exposure were found to be positive and significant as indicated from their significant‘t’ values. It indicated that age and mass media exposure had positively and significantly contributed for most of the variation in knowledge level of the maize farmers about the recommended package of practices of maize. But identifying the major constraints faced by the respondents were labour problem, lack of proper advisory, followed by non-availability of proper market and high cost of inputs.

IndexTerms **- Maize, Knowledge, Constraints**

I. INTRODUCTION

One of the most adaptable emerging crops is maize, which can thrive in a variety of agroclimatic conditions. Because it has the highest genetic yield potential of all the cereals, maize is referred to as the "queen of cereals" throughout the world. In every state in the union, maize is grown all year long for a variety of uses, such as pop corn in peri-urban areas, sweet corn, baby corn, green cobs and grain. Analysing farmer characteristics is crucial in any social science because it provides a clear and fundamental understanding of the farmers' backgrounds and their knowledge of the recommended package of practices for maize cultivation. At the conclusion of this study, we examine the connection between growers' knowledge and socioeconomic traits.

II. METHODOLOGY

Dindigul district of Tamil Nadu was purposively selected for conducting the research. Each taluk two blocks were selected purposively for the study where large area in under Maize cultivation. Three village from each block were selected by following random sampling method thus making a total of six villages. From each village 20 Maize farmers were selected randomly thus making a total of 120 respondents.

III. RESULTS AND DISCUSSION

Distribution of respondents based on their profile characteristics Majority of the Maize farmers were middle aged (58.33%) with primary school education (54.16%) medium experience (356.66%), farming as main occupation (100%), small farm size (53.33%), medium contact with extension agency (54.16%), medium mass media exposure (58.33%), medium economic motivation (68.33%), medium innovativeness (54.16%) and medium training undergone (53.33%) respectively.

Table 3.1: **Distribution of respondents according to profile characteristics {n=120}**

S.no	Personality traits	Categories	No. of respondents	Percentage
1	**Age**	Young	10	08.33
		Adult	70	58.33
		Old	40	33.33
2	**Family Education**	Primary	65	54.16
		Higher secondary	40	33.33
		College	15	12.50
3	**Occupation**	Agriculture	120	100.00
		Labour	0	00.00
		Service	0	00.00
4	**Farm size**	Small	64	53.33
		Marginal	25	20.83
		Large	31	25.83
5	**Farming Experience**	Low	30	25.00
		Medium	68	56.66
		High	22	18.33
6	**Mass media Exposure**	Low	30	25.00
		Medium	70	58.33
		High	20	16.66
7	**Extension contact**	Low	30	25.00
		Medium	65	54.16
		High	25	20.83
8	**Economic Motivation**	Low	9	07.50
		Medium	82	68.33
		High	29	24.16
9	**Innovativeness**	Low	35	29.16
		Medium	65	54.16
		High	20	16.66
10	**Training Undergone**	Low	36	30.00
		Medium	64	53.33
		High	20	16.66

Knowledge Level of Maize Growers on the Recommended Package of Practices of Maize Production

The knowledge of the respondents about the recommended practices of Maize cultivation was measured with the help of knowledge test development for the study. The respondents were categorized into three groups based on mean and standard deviation.

Table 3.2 reveals that, majority (49.16%) of the respondents had medium level of knowledge about recommended practices of Maize cultivation followed by low (25.83%) and high (25%) knowledge levels.

Table 4.2: **Distribution of respondents according to their knowledge {n= 120}**

S.no	Level of knowledge	Frequency	Percentage
1	**Low**	31	25.83
2	**Medium**	59	49.16
3	**High**	30	25
	Total	**120**	**100**

Relationship between selected independent variable and knowledge of maize farmers about recommended practices

Table -3.3 revealed that, there was a positive and significant relationship between knowledge level of respondents with their age, education, farming experience, contact with extension agency, mass media exposure, innovativeness and training undergone

Table 3.3: **Relationship between selected independent variable and knowledge of maize farmers about recommended practices**

S.NO	Variable	Independent Variable	Correlation Coefficient
1	X_1	**Age**	0.631**
2	X_2	**Education**	0.203*
3	X_3	**Farming experience**	0.433**
4	X_4	**Occupation**	-0.145NS
5	X_5	**Farm size**	-0.136NS
6	X_6	**Contact with extension agency**	0.456**
7	X_7	**Mass media exposure**	0.360**
8	X_8	**Economic Motivation**	0.197*
	X_9	**Innovativeness**	0.199*
9	X_{10}	**Training undergone**	0.351**

****** **- Significant at 1 per cent level** ***** **- Significant at 5 per cent level** **NS – Non- Significant**

Combined effect of all selected independent variables on knowledge of Maize farmers in order to determine the combined effect of all the selected independent variables in explaining the variation in knowledge of respondents, Multiple Linear Regression analysis was carried out.

The computed coefficient of determination (R_2) value and partial regression coefficient (b) values with their corresponding 't' values were presented in Table-3.4. The 'R_2' and 'b' values were tested statistically for their significance.

When partial regression coefficients were tested, it was observed that age and mass media exposure were found to be positive and significant as indicated from their significant 't' values. It indicated that age and mass media exposure had positively and significantly contributed for most of the variation in knowledge level of the maize farmers about the recommended package of practices of maize. As the age increases the farmers experience increases, they know well about the cultivation practices of maize. As a result of it their knowledge level also increases. Mass media exposure makes a farmer to get variation in the knowledge level of the respondents as indicated by R_2 value, which was significant.

Thus, it could access to information sources related to farming activities like pest and disease management. As a result, knowledge level increase, thus mass media exposure was found significant.

Table 3.4: **MLR Analysis of the selected Independent variables with the knowledge of respondents**

S.NO	Independent Variables	'b' values	't' values
1	**Age**	0.764	4.562**
2	**Education**	0.023	0.228
3	**Farming Experience**	0.076	-0.514
4	**Occupation**	0.022	0.275
5	**Farm Size**	0.102	1.123
6	**Contact with extension agency**	-0.224	-.1.902
7	**Mass media exposure**	0.732	4.302**
8	**Economic Motivation**	-0.078	-1.131
9	**Innovativeness**	0.056	0.521

10	**Training undergone**	0.012	0.088

**** - Significant at 1 per cent level * - Significant at 5 per cent level**

Perceived constrains:

The perceived constraints expressed by the Maize growers have been indicated in following Table-3.5.

Table 3.5: **The perceived constraints expressed by the Maize growers**

S.NO	Constrains	Frequency	Percentage	Rank
1	**Labour problem**	87	72.5	**I**
2	**Non availability of inputs**	68	56.7	**IV**
3	**High cost of inputs**	68	57.5	**III**
4	**Lack of timely advisory**	67	55.8	**V**
5	**Inadequate training**	56	46.7	**VI**
6	**Non- availability of proper market**	76	63.3	**II**

From the above table revealed that the major constrains faced by the adopters are labour problem (72.5%), followed by non-availability of proper market (63.33%), lack of timely advisory (55.8%), inadequate training (46.7%) and high cost of inputs (57.5%).

IV. CONCLUSION

The study revealed that the majority of Maize growers had medium level of knowledge in the recommended package of practices. Further, this study assesses the relationship as well as direct and indirect effects of personal and socio-economic factors associated with knowledge level of farmers on recommended practices of maize, so for the further level of high knowledge, can be improved by adequate training programmes and by using mass media exposure techniques. The major constrains faced by the respondents are labour problem, lack of proper advisory, followed by non-availability of proper market and high cost of inputs.

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