FACTORS ASSOCIATED WITH THE KNOWLEDGE LEVEL OF THE FARMERS ABOUT IMPROVED AGRICULTURAL PRACTICES OF MUSTARD CULTIVATION IN JALORE

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India is a major producer of oilseeds crops. India occupies the first position in acerage & production of mustard in the world but still facing acute shortage of vegetable oils for last two decades. The rising internal demand due to increase in population, rapid industrialization, non-availability of new land, are the some factors responsible for this position. There are several other factors which are responsible for low productivity of mustard crops. Thus, there is vast scope to increase the average yield of mustard through providing adequate technical know-how to farmers. Keeping the above information in mind, the present study was undertaken with the following objectives –

1. To study the level of knowledge of adopter and non-adopter farmers about improved mustard cultivation.

2. To study the difference between knowledge level of adopter and non-adopter farmers about improved mustard cultivation.

3. To find out relationship between independent variable and knowledge level of the farmers.

METHODOLOGY

The present study was conducted in Bhinmal tehsil of Jalore District in Rajasthan. Out of the Bhinmal tehsil 5 Gram Panchayat comprising 10 villages was randomly selected. From each village 10 respondents were selected randomly in which 50 were adopter and 50 were non adopter farmers. Thus, the total sample consisted of 100 respondents. The data were collected through a well structured interviews schedule by applying a personal interview technique and statistical tests like frequency, percentage, 't' test, correlation regression were applied for analysis of data.

RESULTS & DISCUSSION

1. Knowledge level of adopter and non-adopter farmers–An attempt was made to determine the knowledge level of adopter and non-adopter farmers regarding the improved agricultural practices of mustard cultivation with the help of a teacher made type of test. The respondents were assigned scores based on their performance in the test. One mark was given for every right answer and zero for wrong answer. The range of knowledge scores were from 0 to 100. This range of scores was divided into four levels i.e. 0 to 25, 26 to 50, 51 to 75 and 76 to 100. The distribution of farmers by level of knowledge is given in table 1.

Table.1. Knowledge level of adopters & non-adopters about the improved agricultural practices of mustard cultivation.

Know-ledge scores	Adopters N = 50			Non Adopters N = 50		
	No. of farmers	%	Rank	No. of farmers	%	Rank
0 – 25	–	–	–	17	34	II
26 – 50	9	18	III	32	64	I
51 – 75	29	58	I	1	2	II
76–100	12	24	II	–	–	–

Table 1. shows that the farmers differed very much in their knowledge level about the improved agricultural practices of mustard cultivation.

To compare, majority of the adopter (58+24=82 percent) were in high knowledge level and only 18 per cent were in low knowledge level. While among non-adopters most of the farmer (64+34 =98 per cent) were in low knowledge level and only 2 per

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cent were of higher knowledge level. It leads to the conclusion that the adopter farmers had higher knowledge than non-adopter farmers about improved agricultural practices of mustard cultivation. This may be due to the fact that the most of the adopter farmers were educated and they had large size of land holding. This might have helped the adopter farmers to expose to more agricultural literature. While no adopter farmers had low knowledge due to illiteracy and they were older in age, orthodox & stubborn in nature & could not accept any new technology.

2. Difference in knowledge level between adopter and non-adopter farmers–To test the difference in knowledge level between adopter & non-adopter farmers about improved agricultural practices of mustard cultivation, pooled 't' test was used. The result has been presented in the table 2.

Table 2. Difference in knowledge level between adopter & non-adopter farmers about improved agricultural practices of mustard cultivation.

Improved Practices	Mean score obtained by		Difference in Mean Score	't' value
	Adopter	Non-adopter		
1. Improved Seed	6.96	3.06	3.90	3.61**
2. Seed treatment	2.20	0.33	1.87	2.60**
3. Fertilizer application	5.26	2.60	2.66	3.36**
4. Weed control	3.40	2.08	2.66	2.86**
5. Plant Protection	4.08	2.50	1.32	2.67**
Total	21.90	10.57	11.33	3.38**

** Significant at 0.01 level of probability.

Table 2. reveals that there was a significant difference in knowledge level between adopter and non adopter farmers with regards to five main practices of mustard cultivation. Viz. improved seed, seed treatment, fertilizer application, weed control and plant protection measures. The adopter farmers possessed higher knowledge as compared to the non-adopter farmers in all the improved practices. This may be due to the fact that adopter farmers were literate than non-adopter farmers. This leads to expose the adopter farmers to the agricultural literatures. This might have helped the

adopter farmers to gain more knowledge than the non-adopter. This finding is in the line with that of Sharma (1983) & Mishra (1981) where he found that contact farmers had a significant knowledge than the not-contact farmers.

3. Relationship of selected independent variables with the knowledge level of adopter farmers–The relationship between selected independent variables and the dependent variables i.e. knowledge level of adopter farmers about the improved mustard cultivation was tested with the help of zero order correlation and regression. The results have been presented in table 3 & 4.

Table 3. Relationship of the independent variables with the knowledge level of the farmers about improved agricultural practices of mustard cultivation.

S. No.	Independent variables	Zero order correlation (r) values
1.	Age	-0.3994**
2.	Caste	-0.1286
3.	Occupation	0.2270
4.	Education	0.5210**
5.	Social Participation	0.1682
6.	Size of holding	0.3379**
7.	Farm power	0.5239**
8.	Farm implements	0.5781**
9.	Irrigation potentiality	0.6059**
10.	Credit behaviour	0.4109**
11.	Sources of information utilized	0.7219**

** Significant at 0.01 level of probability.

A critical examination of the data presented in table-3 reveals that education, size of holding, farm power, farm implement, irrigation potentiality, credit behaviour and sources of information utilized were positively and significantly related with knowledge level of adopter farmers about improved agricultural practices of mustard cultivation at one per cent level of probability. Age was negatively and significantly related with the knowledge level of adopter farmers, at one percent level of probability. the finding support this statement with that of Somasundram and Singh (1978).

4. Multiple regression equation with variables.–To predict important independent variables the technique of multiple regression was

used. The following symbols have been used to denote the variables. Dependent variable : Y_1 = Knowledge level of the farmers Independent variables–as in table 4.

Table–4. Multiple regression analysis of eleven independent variable with knowledge level of farmers.

S. No.	Independent variables	b-value	s-error	t- value
X1	Age	-0.0614	0.1854	-0.3313
X2	Caste	-2.1223	1.6508	-1.2857
X3	Occupation	-1.7974	1.6551	-1.8859
X4	Education	1.1470	1.1948	0.9600
X5	Social participation	0.1570	1.1647	0.1348
X6	Size of holding	-7.9687	4.8866	-1.6307
X7	Farm Power	1.4938	1.8087	0.8259
X8	Farm implements	0.8683	0.9298	0.9338
X9	Irrigation potentiality	0.1210	0.1340	0.9034
X10	Credit behaviour	2.7142	2.5209	1.0767
X11	Source of information utilized	0.5661	0.1644	3.4439**

Determination coefficient (R) = 0.6813
Intercept constant (a) 57.7598
F – calculated = 7.3861 ** with 11.38 d.f.s.
** Significant at 0.01 level of probability.

Table 4. shows that all the independent variables taken together explained the variation in the knowledge level of adopter farmers to the extent of 68.13 percent. The respective 'F' value significant at 1 per cent level at 11, 38 degree of freedom was 7.3861. Thus the result implied that all the eleven independent variables would account for a significant amount of variation in the knowledge level of farmers. The 't' test of significance indicates that coefficient of regression (b-value) was significant only for the sources of information utilized (XII). Table 4 also depicts that regression coefficients were non-significant for $X_1, X_2, X_3, X_4, X_5, X_6, X_7, X_8, X_9, X_{10}$.

CONCLUSION

The knowledge about the improved agricultural practices of mustard cultivation among the farmers can be increased by more utilized source of information like increase the training facility, more literature about new technology and farmers should use more new mode of communication like TV, Radio and want of Research station for the knowledge.

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