KNOWLEDGE AND ADOPTION OF RECOMMENDED CUMIN PRODUCTION TECHNOLOGY BY THE FARMERS OF NORTH GUJARAT

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ABSTRACT

This study was conducted in Banaskantha and Patan districts. Four villages from six talukas and five cumin growers from one village were selected randomly, thus total 120 cumin growers were interviewed personally. The findings revealed that knowledge and adoption of cumin growers were found medium level regarding cumin production technology. Majority farmers had adopted simple and low cost technologies and found less adopted practices like seed treatment, disease control and insect control. Further the data revealed that characteristics like extension participation was found positive and significantly correlated with knowledge level of cumin growers whereas, land holding, social participation, extension participation and knowledge level had found positively and significantly correlated with adoption level of farmers regarding cumin production technology.

INTRODUCTION

Cumin is an important spice as well as cash crop of North Gujarat. Among all districts Banaskantha and Patan covers majority area of cumin cultivation. Tharad, Diodar and Vav talukas of Banaskantha and Radhanpur, Sami Harij taluka of Patan distrct are mainly cumin growing areas. The average yield of cumin in Banaskantha is 313 kg./ha. Which is very low as compare to yield recorded at research station (980 kg./ha.). Therefore, there is a wide gap between average yield of cumin farmers and the potential yield of the crop. The low yield of cumin crop could be attributed with the fact that the farmers might have lack of knowledge of cumin production technology and its recommended practices have not been adopted by the farmers up to desired extent.

Keeping this fact n mind the present study entitled Knowledge and adoption of recommended cumin production technology by the farmers of North Gujarat was carried out with the following objectives.

1. To study the personal and socio economic characteristics of farmers.

2. To study the knowledge level of farmers about recommended cumin production technology.

3. To study the extent of adoption of recommended cumin production technology.

4. To study the relationship between personal characteristics of farmers with knowledge and extent of adoption.

5. To seek suggestions from farmers for higher production of cumin.

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METHODOLOGY

Present study was conducted in Banaskantha and Patan district. Among all talukas three talukas from each district were selected purposively on the basis of area cultivated on cumin crop. Chansma, Harij and Radhanpur of Patan district and Diodar, Bhabhar and Vav taluka of Banaskantha district were selected purposively.

irrigation management and weeding were known to all most all cumin growers and majority of them had adopted the same practices.

Further the practices viz. manuring (74.16 per cent), basal application of fertilizers(76.66 per cent), seed rate (79.16 per cent), top dressing (88.33 per cent), insect control (68.33 per cent) and disease control (64.16

Table 1. Distribution of cumin growers according to their knowledge and adoption regarding recommended cumin production technology

n = 120

Sr. No.	Practices	Knowledge		Adoption	
		Number	Per cent	Number	Per cent
1.	Tillage	118	98.33	118	98.33
2.	Manuring	89	74.16	86	71.66
3.	Basal Application	92	76.66	85	70.83
4.	Variety	61	50.83	56	46.46
5.	Seed rate	95	79.16	93	77.50
6.	Method of sowing	116	96.66	116	96.66
7.	Seed treatment	25	20.83	9	7.50
8.	Type of sowing	117	97.50	114	95.00
9.	Top dressing	96	88.33	95	79.16
10.	Irrigation management	118	98.33	116	96.66
11.	Weeding	116	96.66	112	93.33
12.	Disease control	77	64.16	42	35.00
13	Insect control	82	66.33	50	41.66

Four villages from each taluka and five cumin growers from each village were selected randomly. Thus final sample for the study comprise 120 respondents. The interview schedule was developed and the data were collected, tabulated, analyzed and interpreted in light of objectives.

RESULTS AND DISCUSSION

The result of the study reported in Table – 1 revealed the cumin cultivation practices like tillage, method of sowing, time of sowing,

per cent) were known to majority of farmers. Among these practices all the practices were adopted by majority of the cumin growers except disease control (41.66 per cent) and pest control (35.00 per cent). Lastly the seed treatment practice was known to only 20.83 per cent farmers and it was adopted by 7.50 percent of the farmers.

The data in Table 2 revealed that slight more than half (54.17 per cent) of the farmers possessed medium knowledge of level regarding cumin production technology,

Table 2. Distribution of respondents according to their level of knowledge regarding cumin production technology

n = 120

Sr. No.	Category	Mean Score	Frequency	Per cent
1.	Low	Below 22.18	40	33.33
2.	Medium	22.18 to 25.02	65	54.17
3.	High	Above 25.02	15	12.50

Chi-Square = 23.10;   S.D. = 1.92

Table 3. Distribution of respondents according to their level of adoption regarding cumin production technology

n = 120

Sr. No.	Category	Mean Score	Frequency	Per cent
1.	Low	Below 20.26	38	31.66
2.	Medium	20.26 to 24.10	68	56.67
3.	High	Above 24.10	14	11.67

Chi-Square = 22.18 S.D. = 1.92

while one third of the farmers (33.33 per cent) had low level of knowledge. Whereas, only (12.50 per cent) of the total farmers possessed high level of knowledge about cumin production technology.

It can be concluded that majority of the farmers possessed medium to low level of knowledge about recommended cumin production technology.

The data in Table 3 predicate that more than half (56.67 per cent) of the cumin growers had medium level of adoption. Whereas, slightly less than one third cumin growers (31.66 per cent) had low level of adoption and only 11.67 per cent of the cumin growers had high level of adoption regarding cumin production technology.

It can be concluded from the data that majority of the farmers had medium to low level of adoption of cumin production technology.

It could be seen from the data presented in table 4 that among all the selected variables education, social participation, and extension participation were found correlated with the knowledge level of the farmers regarding cumin production technology. As far as age and land holding were concerned, the correlation coefficient was found no significant which indicates that age and land holding did not establish any relationship with the knowledge level of cumin growers.

The data further revealed that the variables viz. land holding, social participation, extension participation and knowledge level of cumin growers were positively and significantly correlated with the adoption level of cumin growers. Age was also found correlated with adoption level at 0.05 per cent level. Further it was found that education did not establish any relationship with adoption level of cumin growers.

The data presented in Table 5 revealed that the important suggestions for successful cultivation of cumin crop as given by the farmers were viz. Second irrigation should be given light and timely, Crop should be kept weed free, Do not grow highly irrigated crop around cumin crop, Irrigation should be

Table 4. Relationship between selected characteristics of the respondents with their knowledge and adoption level

Variables		Correlation coefficient (r)	
		Knowledge	Adoption
X1	Age	0.0641	0.1701*
X2	Education	0.1563*	0.1347
X3	Land holding	0.1108	0.1826**
X4	Social participation	0.1710*	0.3098**
X5	Extension participation	0.2205**	0.2926**
Y1	Knowledge	1.0000	0.7151**

* Significant at 0.05 per cent   ** Significant at 0.01 per cent

Table 5 :   Distribution of respondents according to their suggestions for higher production of cumin crop

n=120

Sr. No.	Suggestions	Number	Per cent
1.	Second irrigation should be given light and timely	112	93.33
2.	Crop should be kept weed free	110	91.66
3.	Do not grow highly irrigated crop around cumin crop	106	88.33
4.	Irrigation should be stopped during cloudy weather	104	86.66
5.	Well drained soil and application of FYM	96	80.00
6.	Irrigation bed should be prepared small and leveled	87	72.50
7.	Application of Sulphur should be done early in the morning	78	65.00
8.	Crop rotation should be followed	71	59.16
9.	Sowing should be done timely with recommended seed rate	69	57.50
10.	Use of disease free seed of improved variety	42	35.00
11.	Apply fungicide spray as per recommendation	29	24.16
12.	Seed should be treated with organo merucurial fungicide	08	06.66

stopped during cloudy weather, Well drained soil and application of FYM and Irrigation bed should be prepared small and leveled.

It is evident from the data in table 5 that farmers had not given importance to seed treatment and fungicide spray for successful cumin crop cultivation.

CONCLUSION

It is evident from the results of the study that the knowledge and adoption of recommended cumin production technology was found medium level among cumin growers. Low cost and simple cumin production practices were adopted by majority of the farmers. The knowledge level, extension participation, social participation and land holding were found positively and significantly correlated with the adoption level of the cumin growers.

REFERENCE

Verma, P. D. and Munshi, M. A. (2000). A study on adoption of Kharif groundnut production technology. Guj. J. Extn. Edu. Vol.X & XI: 37-40.