

KNOWLEDGE OF FARMERS ABOUT CORIANDER PRODUCTION TECHNOLOGY

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ABSTRACT

India is a land of spices. It has a unique position in the global spice scenario as the largest producer, consumer and exporter of seed spices. Coriander is an important condiment and highly valued spice grown in India. Rajasthan state alone contributes around 44 per cent of the production of the country. Coriander crop in Rajasthan is grown mainly in the Kota region. There is a wide scope to improve and increase the coriander production and productivity by enhancing the knowledge and adoption of coriander production technology. The present study was conducted in Jhalawar district of Rajasthan. There are total six panchayat samities in Jhalawar district, out of which two panchayat samities namely, Khanpur and Jhalrapatan were selected on the basis of maximum area under coriander cultivation. Four villages from each identified panchayat samiti were selected on the basis of maximum area under coriander cultivation. For selection of respondents, 120 coriander growers (40 marginal, 40 small, and 40 large farmers) were randomly selected from identified villages for data collection. The study revealed that one-fourth of the total respondents possessed medium level of knowledge while, 7.50 and 67.50 per cent coriander growers had low and high level of knowledge about coriander production technology. It was further observed that the extent of knowledge in marginal farmers was ranged 60.00 to 88.89 per cent, whereas in case of small farmers and large farmers, it was 62.50 to 93.06 and 70.00 to 97.50 per cent in all the practices of coriander production respectively. There existed a difference among marginal, small and large farmers with respect to knowledge about coriander production technology.

INTRODUCTION

India is known as the 'Home of Spices' since time immemorial. It is the world largest producer, consumer and exporter of seed spices which are being cultivated widely in the country over different agro climatic zones. Seed spices crops occupy prominent place in the total basket of spices of the country and play a significant role in our national economy. The group of spices account for about 37 per cent and 18 per cent of the total area and production of spices in the country respectively.

Coriander is an important dominant and highly valued spice grown in India. It is the first spice to be used by men as common flavouring substance. The stem, leaves and grains have a pleasant aroma. Coriander seed have aromatic odor and taste of coriander fruits due to an essential oil, which is made up of hydrocarbon and oxygenated compounds. Besides the essential oil, the seed

contains 16.1 % fatty oil, 14.1 % protein, 21.6 % carbohydrate, 32.6% fibers, 11.2 % moisture and 4.4 % mineral matters and coriander leaves are very rich in Vitamin A containing 5200 to 12000 IU per 100 g as mentioned by various authors.

India has a unique place in seed spices map of world which produces 734092 tonnes seeds from 733556 hectares area. Out of the total seed spices produce in India, coriander alone contributes 51.54 per cent whereas, in respect of area, coriander covers 63.68 per cent.

In India coriander growing states are Rajasthan, Andhra Pradesh, Madhya Pradesh, Tamilnadu, Bihar, Karnataka and Uttar Pradesh. The state of Rajasthan has a unique place in seed spices map of India which produces 442986 tonnes of seeds from 519149 hectares area. Out of the total seed spices produced in Rajasthan, coriander contributes 58.51 per cent, whereas, in respect of area, coriander

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covers 40.86 per cent.

Rajasthan contributes around 44 per cent of the total national production. The major coriander producing districts of Rajasthan are Jhalawar, Baran, Kota, Chittorgarh and Bundi. Kota region alone contributes nearly about 98 per cent of the area and production of coriander crop. Jhalawar district alone contributed 42.0 per cent of total area and about 38.27 per cent of production of the state of Rajasthan. The average productivity of coriander crop is 1144 kg/ha and there are possibilities to increase its productivity up-to 40 to 50 per cent by adoption of improved technologies. The improved cultivation practices are being diffused on a continuous basis through various agriculture development programmes among the farmers by scientific community in the region but the level of adoption of coriander technology by the farmers is not yet known. Likewise the constraints that hinders the adoption needs to be known by research and extension systems for its improvement. Hence the present study was conducted to study the knowledge of farmers about coriander production technology.

RESEARCH METHODOLOGY

The present investigation was conducted in purposively selected Jhalawar district of Rajasthan state highest area and great potential of increasing production and productivity. A prominent biggest mandi of the state for coriander is located in the vicinity of selected district. The researcher himself is resident of the area and acquainted with the farmers and their local dialect which facilitated easy rapport building and authentic data collection from the farmers.

The selected district consist of six panchayat samities, out of which two panchayat samities namely Khanpur and Jhalrapatan with maximum area under coriander crop production were selected for the study purpose. Initially a complete list of all the major coriander growing villages of the selected panchayat samities was prepared in consultation with the personnel of revenue department and Agriculture department of the concerned area. From prepared list, 4 villages from each panchayat samiti were identified on the basis of maximum area under

coriander crop. Thus, in all eight villages were selected for the present investigation. To select the respondents, a comprehensive list of all coriander growers was prepared separately for all selected villages of identified panchayat samities. In preparing the list, the help of revenue personnel and agricultural supervisor of the concerned area was taken for authenticity of information. Farmers were categorized in to three categories i.e. large, small and marginal farmers. The respondents were selected randomly from each category of the farmers. Following the procedure laid down above a sample of total 15 respondents i.e. 5 in each category from every selected village was taken. Thus the study sample was comprised of 120 respondents. (i.e. 60 from each panchayat samiti). Keeping in mind the objectives of study, the interview schedule was developed for collection of data from the selected respondents.

RESULTS AND DISCUSSION

Knowledge of farmers about coriander production technology

This part of chapter deals with the existing knowledge of farmers about coriander production technology. Keeping this view in mind, the extent of knowledge of farmers about coriander production technology was assessed. The results are presented in subsequent tables.

Distribution of respondents according to their knowledge about coriander production technology

To get an overview of the knowledge level, the respondents were grouped into (i) low (< 61), (ii) medium (61 to 75) and (iii) high (> 75) knowledge level category on the basis of calculated mean and standard deviation of the obtained knowledge scores. The distribution of respondents in each category is given in table 1.

The data in Table 1 reveals that out of 120 respondents, majority of respondents (67.50 %) fell in high level of knowledge group whereas, 25.00 per cent growers were observed in the medium level of knowledge group and remaining 7.50 per cent respondents possessed low level of knowledge about coriander production technology.

Table 1. Distribution of respondents on the basis of level of knowledge about coriander production technology

n = 120									
S. No.	Knowledge level	Marginal farmers		Small farmers		Large farmers		Total	
		f	%	F	%	f	%	f	%
1	Low(<61)	8	20.00	1	2.50	0	0.00	9	7.50
2	Medium(61 to 75)	11	27.50	15	37.50	4	10.00	30	25.00
3	High(>75)	21	52.50	24	60.00	36	90.00	81	67.50
	Total	40	100.00	40	100.00	40	100.00	120	100.00

f = frequency, % = per cent

Further analysis of table indicates that 52.50 per cent marginal farmers, 60.00 per cent small farmers and 90.00 per cent large farmers had high level of knowledge about coriander production technology respectively. Whereas, 27.50, 37.50 and 10.00 per cent marginal, small and large farmers possessed medium level of knowledge about coriander production technology respectively. It is interesting to note that non of the large farmers was reported in the low level knowledge category.

On the basis of above data, it could be inferred that fair majority of large farmers possessed high level of knowledge about improved practices of coriander production. With the results at hand it

can be safely concluded that the existing knowledge of large farmers is comparatively higher than the marginal and small farmers in the study area. The higher knowledge of large farmers can be attributed to their high degree of innovation proneness, high socio-economic status and more cosmopolite orientation. The findings are similar with the findings of Kumari (2006).

Aspect -wise knowledge of respondents about coriander production technology

To get a clear picture aspect-wise extent of knowledge of coriander growers worked out. For this mean per cent scores were calculated. The results of the same have been presented in Table 2.

Table 2. Extent of knowledge of farmers about improved coriander cultivation practices

n=120									
S. No.	Improved practices	Marginal farmers		Small farmers		Large farmers		Total	
		MPS	Rank	MPS	Rank	MPS	Rank	MPS	Rank
1.	Soil and field preparation	66.67	7	71.67	6	80.83	5	73.06	6
2.	Soil treatment	60.50	10	64.50	10	70.00	11	65.00	11
3.	High yielding varieties	66.67	7	69.52	8	73.81	9	70.00	8
4.	Seed treatment	60.00	11	66.67	9	79.17	7	68.61	9
5.	Time of sowing	88.89	1	93.06	1	97.50	1	93.15	1
6.	Seed rate & spacing	74.38	4	78.75	3	86.88	3	80.00	3
7.	Fertilizer application	68.33	6	73.33	5	79.17	6	73.61	5
8.	Irrigation management	78.75	2	86.25	2	91.25	2	85.42	2
9.	Weed management	61.11	9	62.50	11	73.89	8	65.83	10
10.	Plant protection measures	69.75	5	70.50	7	78.38	10	72.88	7
11.	Harvesting, threshing & storage	74.72	3	77.78	4	82.50	4	78.33	4

MPS = Mean per cent score

The data presented in table 2 show that large farmers of the study area possessed 80.83 per cent

knowledge about soil and field preparation aspect of coriander production technology. Whereas,

knowledge of small and marginal farmers about this practice were comparatively less with 71.67 per cent and 66.67 per cent. Regarding knowledge about soil treatment, it was noted that marginal, small and large farmers had knowledge 60.50, 64.50 and 70.00 per cent respectively. Majority of the respondents were not aware of chemicals used for the soil treatment for killing termites in their fields among marginal group of farmers.

Thus, from the above discussion, it could be concluded that the extent of knowledge in marginal farmers ranged from 60.00 to 88.89 per cent, in small farmers it was from 62.50 to 93.06 per cent, whereas in case of large farmers the extent of knowledge was observed to be from 70.00 to 97.50 per cent in all the improved practices of coriander cultivation technology. Further, it was depicted that large farmers had more knowledge than small and marginal farmers about the coriander cultivation practices in the study area.

Comparison of knowledge among marginal, small and large farmers about coriander production technology

To find out the significance of difference among the marginal, small and large farmers with respect to knowledge about improved coriander cultivation technology, analysis of variance test (F test) was applied. The results are presented in table 3.

Hypothesis

NH01 : There is no difference among marginal, small and large farmers with respect to knowledge about improved coriander cultivation technology.

RH1 : There is a difference among marginal, small and large farmers with respect to knowledge about improved coriander cultivation technology.

The data accorded in table 3 shows that calculated 'F' value 31.04 is higher than tabulated value at 1 per cent level of significance. Thus, the hypothesis (NH01) is rejected and alternative hypothesis i.e. "there is a difference among marginal, small and large farmers with respect to knowledge about improved coriander cultivation technology" was accepted. It infers that there was a difference in

knowledge among marginal, small and large farmers about coriander cultivation technology.

Table 3. Comparison of knowledge among marginal, small and large farmers about coriander cultivation practices

n =120

** Significant at 1 per cent level of significance

Table further shows that by comparing the mean value with critical difference (C.D.) value, it

Source of variation	df.	SS	MSS	F Value
Between the categories of farmers	2	1833.75	916.88	31.04**
Error	117	3456.25	29.54	
Total	119	5290		

was found that there was a difference between large

S. No.	Categories of farmers	Mean value	CD	CV
1.	Marginal farmers	60.75		
2.	Small farmers	70.75	0.50	7.56
3.	Large farmers	77.13		

and small farmers, small and marginal farmers, large and marginal farmers about knowledge of coriander production technology. The mean value further indicate that large farmers had higher knowledge mean than small and marginal farmers about coriander production technology. This reveals that large farmers possessed more knowledge than small and marginal farmers about coriander production technology.

The data further shows that there was a significant difference between large and small farmers, marginal farmers, large and marginal farmers about knowledge of coriander production technology. This reveals that large farmers possessed more knowledge than small and marginal farmers about coriander production technology. Higher knowledge of large farmers about improved practices of coriander cultivation was not unexpected. The large farmers of the study area has contacts with transfer of technology (TOT) centers including KVK, located in the district. Further more they have better mass media exposure and

cosmopolitan outlook due to higher socio-economic status which might have contributed in increasing the knowledge of this category in comparison to others.

CONCLUSION

The study revealed that one-fourth of the total respondents possessed medium level of knowledge while, 7.50 and 67.50 per cent coriander growers had low and high level of knowledge about coriander production technology. It was further observed that the extent of knowledge in marginal farmers was ranged 60.00 to 88.89 per cent, whereas in case of small farmers and large farmers, it was 62.50 to 93.06 and 70.00 to 97.50 per cent in all the practices of coriander production respectively. There existed a difference among marginal, small and large farmers with respect to knowledge about coriander production technology.

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