



Profile of the farmers adopting turmeric production technology

M.S. SAWANT¹, V.B. GEDAM² AND S.M. HADOLE*

K.K. Wagh College of Agriculture, NASHIK (M.S.) INDIA (Email : hadole_2@yahoo.co.in)

Abstract : Turmeric (*Curcuma longa*) is an important crop for its wide use in processing industry and its medicinal value. The present study was conducted in Wai tahsil of Satara district. Ten villages having maximum area under turmeric crop was selected for study purpose. From the selected villages 120 turmeric growers were randomly selected and interviewed. The data were collected, tabulated and statistically analysed. The study revealed that, highest proportion of turmeric growers belonged to 'middle' age, received 'secondary' education, 'medium' size of land holding, 'medium' size of family, 'low' level of annual income, 'medium' socio-economic status, 'medium' social participation, 'medium' cosmopolitaness, 'medium' level of source of information, 'medium' risk orientation and 'medium' experience in farming. It was also observed that the highest percentage of turmeric growers had 'medium' level of adoption of improved cultivation practices of turmeric.

Key Words : Socio-psychological characters, Adoption, Turmeric production technology

View Point Article : Sawant, M.S., Gedam, V.B. and Hadole, S.M. (2012). Profile of the farmers adopting turmeric production technology. *Internat. J. agric. Sci.*, 8(2): 311-315.

Article History : Received : 18.05.2011; Revised : 02.01.2012; Accepted : 01.03.2012

INTRODUCTION

Turmeric (*Curcuma Longa*) is important indigenous spice and one of the most ancient spices in India. In fact, it was one of the important spices which is cultivated in India times immemorial. It is grown to a limited extent in selected locations, in almost all the states of India. It is grown in Maharashtra on an area of 6789 ha with production of 8508 tones (Anonymous, 2010).

The rhizomes of turmeric are fleshy and possess a fragrant, peppery aroma, slightly bitter and musky flavour with warm spicy taste. Turmeric is an important constituent of curry powder and is utilized for unchanging flavour of food items. It is also used as a condiment in vegetables and prepared custard, because of its colour and mild flavour. It is used in pickles and other food stuff as a preservative. It is also used for dyeing wool, silk and cotton textile. As a medicine turmeric has been used in Ayurvedic system of medicine in India. It is claimed to be a stoma chic tonic, blood purifier, antiseptic, antacid and carminative.

Looking to the importance of the crop, it is necessary to increase production and productivity of the crop. However, it is observed that full production potential is not tapped by the cultivations because large numbers of farmers are still using the traditional methods of cultivations of this crop. It was felt necessary to undertake the present study of turmeric growers with following specific objectives to study the personal and socio-psychological background of the turmeric growers and to study the extent of adoption of recommended package of practices of turmeric.

MATERIALS AND METHODS

The present study was conducted in Wai tahsil of Satara district. Out of 29 turmeric growing villages, 10 villages were selected purposively, having maximum area under turmeric crop. From each village, 12 turmeric growers were selected by using random sampling method. Thus, total of 120 respondents were selected for the study. The data were collected by specially structured personal interview schedule focusing on the above

* Author for correspondence.

¹Agricultural Insurance Company of India, MUMBAI (M.S.) INDIA

²College of Agriculture, KOLHAPUR (M.S.) INDIA

objectives. Thus collected data were tabulated and analyzed to interpret the results.

RESULTS AND DISCUSSION

The results of the present study alongwith relevant discussion have been presented as under:

Profile of the farmers:

The data on personal, socio-psychological characteristics of the farmers are presented in Table 1. It is observed from Table 1 that maximum number (39.17 per cent) of the farmers were in 'middle' age group, 53.32 per cent were having 'secondary' level of education, 75.83 per cent having 'medium' size of family and 50.84 per cent had 'medium' size of holding. Majority (61.66 per cent) of the farmers were having 'medium' annual income. Most (80.00 per cent) of the farmers were having 'medium' level of socio-economic status, where as 73.33 per cent and 71.67 per cent of the farmers were having 'medium' social participation and 'medium' cosmopoliteness, respectively. It was further seen that 56.67 per cent of the farmers were using 'medium' sources of information. Most (96.66 per cent) of the farmers were having 'medium' risk orientation ability and 52.50 per cent of the farmers were having 'medium' experience of farming.

Adoption of recommended practices of turmeric:

Data in respect of practice wise adoption of turmeric production technology presented in Table 2 reveal that almost all (100.00 per cent) farmers had adopted the practice related to the recommended soil type, ploughing, harrowing while, recommended dose of FYM was adopted by 96.67 per cent of the respondents.

Under the land preparation practices, most (98.33 per cent) respondents adopted proper distance of planting, more than one third (36.42 per cent) of the respondent were having complete adoption of use of phorate where as, more than half (54.11 per cent) of the respondents were having complete adoption about use of folidol powder. All (100.00 per cent) respondents were reported to have complete adoption of the recommendations about number of furrows in on vokara and length of a vokara.

Data highlighted that 100.00 per cent respondents had complete adoption of the recommendations *viz.*, use of disease and pest free rhizomes, selection of recommended variety and weight of rhizomes used for planting, proper time of planting while, more than half (54.11 per cent) of the respondents had completely adopted chemicals for seed treatment. All (100.00 per cent) of the respondents adopted the recommended intercrops.

Regarding the irrigation management, all (100.00 per cent) of the respondents had completely adopted recommended time of application of first irrigation and irrigation interval,

Table 1 : Distribution of respondents according to their personal and socio-psychological characteristics

Sr. No.	Characteristics	Respondents (n=120)	
		Frequency	Percentage
1.	Age (Years)		
	Young (Up to33)	43	35.83
	Middle (34 to 45)	47	39.17
	Advanced (46 and above)	30	25.00
2.	Education		
	Illiterate	11	9.17
	Primary	20	16.68
	Secondary	64	53.32
	College level	25	20.83
3.	Size of family (Member)		
	Small (Up to 4)	16	13.34
	Medium (5 to 9)	91	75.83
	Large (10 and above)	13	10.83
4.	Size of land holding		
	Small (Up to 2.00 ha)	53	44.16
	Medium (2.01 to 4.00 ha)	61	50.84
	Big (4.01 and above)	6	5.00
5.	Annual gross income (Rs.)		
	Low (Up to 133300)	74	61.66
	Medium (133301 to 181600)	40	33.34
	High (181601 and above)	6	5.00
6.	Socio-economic status (Score)		
	Low (Up to 31)	11	9.17
	Medium (32 to 41)	96	80.00
	High (42 and above)	13	10.83
7.	Social participation (Score)		
	Low (Up to 2)	27	22.50
	Medium (3 to 5)	88	73.33
	High (6 and above)	5	4.17
8.	Cosmopoliteness (Score)		
	Low (Up to 7)	13	10.83
	Medium (8 to 13)	86	71.67
	High (14 and above)	21	17.50
9.	Sources of information (Score)		
	Low (Up to 21)	32	26.67
	Medium (22 to 30)	68	56.67
	High (31 and above)	20	16.66
10.	Risk orientation (Score)		
	Low (Up to 15)	1	0.84
	Medium (16 to 23)	116	96.66
	High (24 and above)	3	2.50
11.	Experience of farming (Years)		
	Low (Up to 5)	37	30.83
	Medium (6 to 9)	63	52.50
	High (10 and above)	20	16.67

Table 2 : Practice wise adoption level of turmeric growers

Sr. No.	Recommended practices	Level of adoption of turmeric growers					
		Complete adoption		Partial adoption		No adoption	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1.	Selection of land for planting	120	100.00	--	--	--	--
2.	Preparatory tillage						
	One deep ploughing(30 cm)	120	100.00	--	--	--	--
	Harrowing (3 times)	120	100.00	--	--	--	--
	Use of FYM(70-80 CIs/ha)	116	96.67	4	3.33	--	--
3.	Planting						
	Land preparation						
	Distance between ridges and furrows (60-75 cm)	118	98.33	2	1.67	--	--
	Use of phorate (15 kg/ha)	44	36.42	20	16.66	56	46.92
	Use of folidol (50 kg/ha)	65	54.11	9	7.50	46	38.39
	No. of furrows in one vakora (4-5)	120	100.00	--	--	--	--
	Length of vakora (3.35 m)	120	100.00	--	--	--	--
	Selection of seed (rhizomes)						
	Disease and pest free	120	100.00	--	--	--	--
	Variety (Krishna, Shelam, Kadapa, Rajapuri)	120	100.00	--	--	--	--
	Weight of rhizome (40 gm)	119	99.17	--	--	1	0.83
	Time of planting (April-May)	120	100.00	--	--	--	--
	Seed treatment (Chloropyriphos 20 g/10 lit. Water + Blitox 25g)	65	54.11	--	--	55	45.89
4.	Intercropping	120	100.00	--	--	--	--
	Ladies finger, Chilli, Bean, Coriander, Methi, Spinach						
5.	After care						
	Irrigation management						
	First irrigation(2-3 days after planting)	120	100.00	--	--	--	--
	Period between two subsequent irrigation (6-8 days)	120	100.00	--	--	--	--
	Total no. of irrigation (18-22)	111	92.51	8	6.66	1	0.83
	Weed management						
	First weeding(3 weeks after planting)	120	100.00	--	--	--	--
	Total no. of weeding (5-6)	120	100.00	--	--	--	--
	Earthing up						
	First light earthing up	116	96.67	4	3.33	--	--
	Second earthing up (3-4 months after planting)	120	100.00	--	--	--	--
	Fertilizer management						
	120 N:60P:60 K kg/ha	118	98.33	2	1.67	--	--
	Splitting on N in 2 doses	116	96.67	--	--	4	3.33
	½ N, full P and K (at planting)	118	98.33	--	--	2	1.67
	½ N application (3-4 months after planting)	118	98.33	--	--	2	1.67
6.	Plant protection						
	Control of rhizome fly	60	50.00	--	--	60	50.00
	Control of rhizome rot	58	48.33	--	--	62	51.67
	Control of turmeric blight	27	22.50	--	--	93	77.50

Contd.... 2

Contd..... Table 2

7.	Harvesting						
	Period of harvesting (8-9 months)	117	97.50	3	2.50	--	--
	Yield of dried turmeric (60-75 qtl/ha)	120	100.00	--	--	--	--
8.	Post harvest technology						
	Boiling						
	Traditional method	120	100.00	--	--	--	--
	Scientific method (CAO + NaOH)	1	0.83	--	--	119	99.17
	Testing of well boiled turmeric	117	97.50	1	0.83	2	1.66
	Drying						
	Spreading in single layer	120	100.00	--	--	--	--
	Collection of dried turmeric (9-10 days)	120	100.00	--	--	--	--
	Polishing						
	Polishing by using drum	120	100.00	--	--	--	--
	Use of turmeric powder	1	0.83	--	--	119	99.17
	Grading						
	According to size	119	99.17	--	--	1	0.83
	Separating mother rhizomes	120	100.00	--	--	--	--
	Storage						
	Storing in gunny bags	120	100.00	--	--	--	--
	Storing in pev's	8	6.64	--	--	112	93.36

where as 92.51 per cent of them had adopted recommended number of irrigations. 100.00 per cent of the respondents had adopted recommended weed management practice. All (100.00 per cent) respondents adopted the practice of second earthing up while, 96.67 per cent of the respondents had followed first light earthing up operation. In case of fertilizer management it was observed that majority (98.33 per cent) of the respondents had adopted recommended dose of fertilizers and applied $\frac{1}{2}$ N, full P and K at planting and use of $\frac{1}{2}$ N after 1-4 months of planting while, 96.67 per cent of the respondents had applied N in two split doses.

Data further revealed that one half (50.00 per cent) of the respondents had adopted recommended plant protection measures for control of rhizome fly, less than one half (48.33 per cent) of the respondents had adopted plant protection measures for control of rhizome rot and only 22.50 per cent of the respondents were found adopting completely the plant protection measures for control of blight disease of turmeric.

Almost all (97.50 per cent) of the respondents had adopted the proper time of harvesting.

As regards to post harvest technology, all (100.00 per cent) of respondents had adopted traditional methods for boiling of turmeric while, 0.83 per cent respondents had adopted scientific method for boiling turmeric. About all (97.50 per cent) respondents reported adoption of test for determining proper boiling of turmeric. 100.00 per cent respondents were found to have complete adoption of the recommended drying practice for turmeric, use of drum for polishing turmeric, where as few (0.83 per cent) of the

respondents adopted use of turmeric powder for polishing. Almost all (100.00 per cent) turmeric grower used grading of turmeric according to size, separate mother rhizome, used gunny bags for storing turmeric, where as few (6.64 per cent) of the respondents have been reported to adopt the use of pev's for storing of turmeric.

Table 3 revealed that majority (82.50 per cent) of the respondent belonged to 'medium' adoption category, followed by 'low' (15.83 per cent) of adoption, while negligible (1.67 per cent) of the respondents belonged 'high' adoption category. This finding is in conformity with that of Anchale (1996), Aghav (1997) and Phadtare (1999).

Conclusion:

It was concluded from the results that, highest proportion of turmeric growers belonged to 'middle' age, received 'secondary' education, 'medium' size of land holding, 'medium' size of family and 'low' level of annual income. Majority of turmeric growers were having 'medium' socio-economic status, 'medium' social participation, 'medium' level of cosmopolitanism, 'medium' level of sources of information, 'medium' risk orientation and 'medium' experience of farming.

It was observed that majority of the respondents had medium adoption level with respect to recommended package of practices for turmeric cultivation and only comparatively small percentage had high level of adoption. In order to increase the adoption of recommended practices of turmeric cultivation by farmers as per expectation, it is necessary to arrange demonstrations, conduct field visits and use more

number of communication channels for diffusion of innovations in the field of agriculture, especially about turmeric cultivation. This will result in desired level of adoption of improved turmeric production technology.

Phadtare, D.A. (1999). A study of extent of adoption regarding improved cultivation practices of onion (var. N-53) in Khatav tahsil of Satara district. M.Sc. (Ag.) Thesis, Mahatma Phule Krishi Vidyapeeth, Rahuri, Ahmednagar, M.S. (INDIA).

REFERENCES

Aghav, R.S. (1997). A study an adoption of vegetable production technology of farmers. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).

Anchule, M.M. (1996). A study an production technology of exportable grapes used by growers. M.Sc. (Ag.) Thesis, Marathwada Agricultural University, Parbhani, M.S. (INDIA).

WEBLIOGRAPHY

Anonymous (2010). Statistics, Spice Board of India at <http://www.indiaspice.com>.

*_*_*_*_*_*_*_*_*_*