Indian Journal of Extension Education
Vol. 51, No. 1 & 2, 2015 (95-98)

Adoption of chilli Production Technology Among the chilli Growers in Sehore District of Madhya Pradesh

Abhilasha Sharma[1] , Mukesh singh [2], S. N. Sharma[3] and S. B. Tambe[4]

ABSTRACT

This study was conducted in Sehore district of Madhya Pradesh in the year of 2013-14. The study revealed that majority of the chilli growers had high adoption behaviour (46.08%) followed by medium level of adoption(36.42%) and low adoption behavior (17.50%) regarding overall recommended chilli production technology respectively. The study also revealed that the socio-economic factors had positive and significant influence on the adoption of chilli production technology, among the chilli growers .

Key words: Chilli growers, adoption behaviour, production technology, constraints

INTRODUCTION

chilli (Capsicum) was introduced in India by the Portugese in Goa in the middle of 17th Century and since then it had rapidly spread throughout the country. As tropical and sub tropical crop, chilli is cultivated largely in India, Pakistan, Indonesia, South Korea, Bangladesh and Sri Lanka. In India, area under chilli crop is 918.00 thousand hectares with an annual production of 780 thousand tonnes in the year of 2009-10. The main chilli growing states are Maharashtra, Andhra Pradesh, Karnataka, Tamil Nadu and Madhya Pradesh. These states contributed 71 per cent of the total area and 79 per cent of the total production of chilli in India.

Madhya Pradesh is the sixth largest chilli producing state in India. In Madhya Pradesh the area under chilli crop is 59062 hectares with production of 59023.1 metric tonnes. chilli crop is mainly grown in the districts Sehore, Dhar, Indore, Badwani, Khandwa, Burhanpur, Betul and Chhindwara. Sehore district is the leading district in respect of area and production of chilli in Madhya Pradesh. Looking to the present situation of resource availability with farmers, particularly the size of land under cultivation of different crops, production pattern and prime need for enhancing the production of chilli to achieve the food security for future, there seems to be no other alternative to adopt the improved/ recommended chilli production technology. Studies show that the development of improved chilli production technology has subsequently contributed for increasing chilli production in India. But the improved chilli production technology is more capital and skill intensive. It requires more manure-fertilizer, irrigation and plant protection measures with improved and high yielding varieties of seed to adopt it. There is a tremendous opportunity for increasing the production of chilli by adopting the improved technology. To achieve the higher level of production and productivity, the low level of adoption of improved chilli production technology may be a big hindrance, which hampers the production potential of chilli on farmers' field. The gap always appears between the improved chilli production technology and their use in farmers' fields. In Madhya Pradesh, Sehore district is one of the important chilli growing tracts due to suitable agro-climatic condition and availability of production resources. It is fact that the majority of the farmers are still lagging behind the adoption of improved chilli production technology in the area. It becomes a serious concern to administration, agricultural scientists and extension workers. It thus, becomes necessary to assess the adoption behaviour of chilli growers, towards improved chilli production technology. There is also growing need to approach the farmers to convince and assist them in increasing their present chilli production with use of improved technology. To perform this task successfully, it is necessary to understand the adoption behaviour of chilli growers in the area considered for study. Taking the view of above statement, the present study " on adoption behaviour of chilli production technology among the chilli growers in Sehore district of Madhya Pradesh" was conducted.

METHODOLOGY

The present study was conducted in Sehore district of Madhya Pradesh. Kasarawad block in the district was

[1]Part Time Teacher, [2] P.A. (Extension) KVK Rajgarh, [3] Asso. Professor, Extension Education Dept., Dean [4] R.A.K. College of Agriculture RVSKVV Sehore (M.P.)

selected purposively being a leading block in the area and production of chilli. A list of progressive chilli production villages was obtained from block office and out of them 10 villages were selected randomly. The list of chilli growers of the selected villages was prepared and 12 chilli growers from each village were selected by using simple random sampling method. Thus, the total 120 chilli growers were selected as respondents for the study spread over ten villages.The primary data were collected with the help of interview schedule, which was prepared on the basis of objectives of the study. The data were related with the socio-personal, economic and psychological characteristics of chilli growers and regarding level of adoption of improved chilli production technology. The data were collected and recorded in the interview schedule. Keeping in view the objectives of the study and to draw logical inferences, statistical tools like frequency, percentage, mean, standard deviation and correlation coefficient were used for analyzing and interpretation of the data.

RESULTS AND DISCUSSION

Table 1: Adoption behaviour of chilli growers towards improved chilli production technologies.

Practices	Adoption Behaviour		
	Low	Medium	High
Land preparation and ploughing of farm	20	50	50
	(16.66)	(41.67)	(41.67)
Improved varieties of chilli	16	44	60
	(13.33)	(36.67)	(50.00)
Sowing of seed	19	42	59
	(15.83)	(35.00)	(49.17)
Seed treatment	22	41	57
	(18.33)	(34.17)	(47.50)
Depth of seed and distance between row to row	21	43	56
	(17.50)	(35.83)	(46.67)
Use of rhizobium and PSB culture	24	46	50
	(20.00)	(38.33)	(41.67)
Recommended dose of fertilizer	18	42	60
	(15.00)	(35.00)	(50.00)
Use of bio-fertilizer	20	45	55
	(16.67)	(37.50)	(45.83)
Method of weed control and use of weedicide	23	43	54
	(19.17)	(35.83)	(45.00)
Plant protection measure	23	41	56
	(19.16)	(34.17)	(46.67)
Overall average adoption level	21	44	55
	(17.50)	(36.42)	(46.08)

Note: - (Figures in parentheses indicated percentages)

The study revealed that most of the chilli growers had high adoption behaviour followed by medium and low. The above findings were also reported by Rawat (2008), Hanumanaikar *et.al.* (2009) and Raghuwanshi (2011).

It is evident from the table that out of total chilli growers the most of the chilli growers had high (41.67%) and medium level (41.67%) of adoption behaviour about land preparation and ploughings of farm followed by (16.66 %) per cent chilli growers adopted low level of this practices.

The adoption of improved seed variety of chilli, the most of the chilli growers had high level (50.00%) of adoption behaviour followed by medium level (36.67%) and low level adoption (13.33%) .

Regarding sowing of seed, most of the chilli growers had high level of adoption behaviour (49.17%) followed by medium level (35.00%) and low level (15.83%).

Regarding seed treatment, most of the chilli growers had high level of adoption behaviour (47.50%) followed by medium level (34.17%) and low level (18.33%) of this practice. The most of the chilli growers adopted high level (46.67%) of depth of seed and distance between row to row practices followed by medium level (35.83 %) and low level (17.50%) of adoption behaviour.

About use of rhyzobium and PSB culture, the most of the chilli growers had high level (41.67%) of adoption behaviour followed by medium(38.33%) and low (20.00%) level.

Regarding recommended dose of fertilizer, most of the chilli growers had high level (50.00%) of adoption behaviour followed by medium (35.00%) and low level (15.00%) of adoption behaviour.

In case of use of bio-fertilizer, most of the chilli growers had high level (45.83%) of adoption behaviour followed by medium (37.57 %) and low (16.67%) level adoption behaviour of. this practice most of the chilli growers had high level (45.00%) of adoption behaviour followed by medium(35.83%) and low(19.17%) level of adoption behaviour with respect to method of weed control and use of weedicide .

Regarding plant protection measure, most of the chilli growers had high level (46.67%) of adoption behaviour followed by medium (34.17 %) and low level (19.16%) of adoption behaviour. of. this practice

Table 2: Distribution of chilli growers according to overall adoption behaviour towards production technology of chilli.

Adoption behaviour	Frequency	Percentage
Low	20	16.66
Medium	44	36.66
High	56	46.68
Total	**120**	**100.00**

The data revealed that most of the chilli growers had high adoption behaviour(46.08%) followed by medium level of adoption (36.42%) and low adoption behaviour (17.50 %) regarding overall recommended chilli production technology, respectively.

Table 3: Correlation between adoption behaviour of chilli growers of improved chilli production technology and selected independent variables.

Characteristics	'r' value
Age	0.166 N.S.
Education	0.268**
Farming experience of chilli	0.063 N.S.
Socio economic status	0.641**
Economic motivation	0.465**
Risk preference	0.251**
Innovativeness	0.293**
Information seeking behaviour	0.226*
Mass media exposure	0.128 N.S.
Extension participation	0.023 N.S.
Level of knowledge	0.534**

*= Significant at p= 0.05
**= Significant at p= 0.01

The results of correlation analysis in above table revealed that characteristics namely education, socio economic status, economic motivation, risk preference, innovativeness and level of knowledge were positively and significantly (0.01 % level) related to adoption behaviour of chilli growers,. On the other hand, characteristics namely information seeking behavior were positively and significantly (0.05 % level) related to adoption behaviour of chilli growers.

The socio-economic and psychological characteristics namely age, farming experience of chilli, mass media exposure and extension participation with adoption behaviour of chilli growers was found non-significantly related. The above findings were also in line with Joshi (2004), Kushwaha *et.al.* (2004), Chouhan (2007) and Jain (2007).

Table 4: Constraints faced by chilli growers in adoption of improved chilli production technology.

Constraints	Frequency (n=120)	Percentage	Rank
Lack of high yielding varieties of seed	25	20.83	XI
Unavailability of seed at time	45	37.50	VII
Lack of credit facilities at time	58	48.33	II
Lack of proper resources and capital	32	26.67	IX
Lack of proper information at time	46	38.33	VI
Lack of technical knowledge	75	62.50	I
Lack of training programme related with improved technology	48	40.00	V
Lack of irrigation facilities	35	29.17	VIII
Non performance of visits by agricultural personnel time to time	28	23.33	X
Costly agricultural inputs	57	47.50	III
Lack of proper market	49	40.83	IV

The constraints analysis was done based on the opinion survey of the sample of chilli growers. The above table revealed the major constraints as perceived by the chilli growers. Important constraints perceived by chilli growers 'lack of technical knowledge, followed by 'lack of credit facilities at time', 'costly agricultural inputs' , and lack of proper market.

CONCLUSION

On the basis of results of the in study, it may be concluded that higher number (46.08%)of chilli growers had high adoption behaviour. The study further revealed that the socio economic factor namely education,socio economic status, economic motivation, risk preference , innovativeness, information seeking behavior and level of knowledge were positively and significantly related to adoption behaviour of chilli growers, respectively. On the other hand, characteristics namely age ,farming experience of chilli, mass media exposure and extension participation were found to have non significant relation with adoption behaviour of chilli growers. The study also revealed that major constraints perceived by the chilli growers was lack of technical knowledge, lack of credit facilities at time, and costly agricultural inputs.

Paper received on : February 05,2015
Accepted on : February 16,2015

REFERENCES

Chouhan,D.K. 2007. "A study of the technological knowledge possessed by the tribal cotton growers and its adoption in Manawar block of District Dhar (M.P.)". *M.Sc. (Ag.) Thesis (Unpublished), R.A.K. COA, JNKVV, Jabalpur*

Joshi,P.J. 2004. Extent of knowledge and adoption of farmers about modern practice of cotton in Bhal area of Gujarat. *M.Sc. (Agri.) thesis, G.A.U., Anand Campus, Anand.*

Kushwaha,R.; Singh,V.B. and O.P.Daipuria, 2004. Knowledge of solonacious vegetable growers towards plant protection measures-correlation and path analysis. 2nd National Extension Education Congress. *Society of Extension Education, Agra and MPUAT*, Udaipur.pp63-64.

Hanumanaika; R. H Jadhav; S.N.Ashalatha and K.V.Hind 2009. Extent of adoption of recommended technology by the chilli growers in Tunga Bhadra Project area of Bellary district of Karnataka . *Agri- Horticultural (Muzaffarnagar).*32(4): 367-370.

Raguwanshi,M. 2011. A study on adoption behaviour of vegetable growers in relation to their socio-economic and psycho attributes in Hoshangbad district of Madhya Pradesh. *M.Sc.(Ag.) Thesis, submitted to RAK College of Agriculture, Sehore (M.P.).*

Rawat Dhirandra, 2008. A study of the technology knowledge and its adoption by the chilli growers of Badwaha Block of Sehore district of M.P. *M.Sc.(Ag.) Thesis, submitted to RAK College of Agriculture, Sehore (M.P.).*