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Adoption Gap In Chilli Production Technology

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ABSTRACT
The present study was conducted In Bhiwapur panchyat samiti Nagpur district of Maharashtra state. There are ten villages were selected on the basis of chilli cultivation. From each selected village fifteen respondents were purposively selected for the study. Thus, total150 farmers were selected for the study. The "Ex-Post-Facto" design of social research was used for investigation.The findings indicated that, (52.66%) were in medium age group, (39.34%) educated up to high school level, (29.34%) were possessed semi - medium land holding, ranging between the 2.01 to 4.00 ha., (42.00%) were having annual income above Rs. 2,00,000/- , (47.33%) medium family size (05 to 08) members, more than half respondents (69.33%) were observed medium level of innovativeness, (54.00%)followed by medium risk orientation, (55.33%) had medium level of economic motivation, followed by (63.34%)medium level of usage of sources information, about improved chilli cultivation practices. As regards the relationship of the profile of the respondents with adoption gap, in case of independent variables viz. education, innovativeness, risk orientation, sources of information, and knowledge were found positively and highly significant at 0.01 per cent level of probability. The age, land holding of the respondents was significant correlations with their adoption gap at 0.05 per cent level of probability and family size, annual income, economic motivation, show non-significant relationship. Thus, the null hypothesis for these non-significant variables therefore, was accepted.
Key words: innovativeness, knowledge, improved chilli cultivation practices, relationship.

INTRODUCTION

Indian can claim to grow the largest number of vegetable crops compared to any other country of the world because varied agricultural climatic conditions in India make it possible to grow more varieties of vegetables crops all the year round in one part of the country or another. Some of the important vegetable crops which are brinjal, tomato, okra, cucurbits, chiillies, etc. Among these crops chilli one of the most important crop in view of this fact, the present study was under taken. Chilli [*Capsicum annuum* (L.)] is an important spices crop, belongs to genus *capsicum* under solanaceae family. It is a crop of tropical and sub-tropical regions and requires a warm humid climate. Though, chilli can be grown in many types of soils, well drained loamy soils rich organic matter of soils ,well drained loamy soils are ideal for its cultivation. It is indispensable spice crop used in every Indian cuisine due to its colour (due to presence of pigment capsanthin), pungency (due to an alkaloid 'capsaicin'), taste, appealing odours and flavors. Chilli fruits are rich source of vitamin A, C and E .In recent days ,it is gaining popularity as vegetable as well as spice crop apart from its medicinal value as it prevents heart attack by dilating the blood vessels (www.ikisan.com). Chilli is origin of Mexico and it was brought by Portuguese from Brazil in 1585 in Goa. Since then it has rapidly spread throughout the country and commonly considered as red pepper.
In India chilli grown in almost all states of the country. The important states growing chilli in terms of production in metric tonnes are Andhra Pradesh 685.15 fallowed by Karnataka 107, West Bengal 100, Odisha 70, Madhya Pradesh 93.57, Maharashtra 45.60, and Tamilnadu 23.06. Generally chilli arrivals from all over India hit the market from mid October to may end (Source: NHB Database 2015-16).
In Maharashtra, chilli is grown on area of 99.50 hectares contributing to the production of 45.60 tonnes with productivity of 0.46tonnes /ha (National Horticultural Board 2015-16). In Maharashtra major chilii growing districts are Nanded, Jalgaon, Dhule, Solapur, Nagpur, Amravati, Chandrapur and Osmanabad

District.out of these districts Nagpur selected for study because total area and production in Nagpur district under chilli cultivation is 14100 ha and 20090 tonnes, respectively in Nagapur Bhiwapur panchyat samiti major chilli growing area. In view of this fact, the present study was under taken with the following objectives:

- To study the profile of chilli growers.
- To find out the relationship of the profile of the chilli growers with adoption gap.

RESEARCH METHODOLOGY

The present research study was conducted in Nagpur district of Vidhrbha region in Maharashtra state. In Nagpur district Bhiwapur panchyat samiti were purposively selected for the research. Ten villages in bhiwapur panchyat samiti were purposively selected for research. These villages are considered on basis of area under chilli crop. From each village fifteen chilii growers were selected comprising total 150 respondents for the research work. An interview schedule was developed with the help of scientists of Dr. P. D. K. V., Akola. Data was collected with the help of interview schedule. Personal interview method was used for data collection. For the analysis of collected data simple statistical techniques like frequency, percentage, standard deviation and coefficient of correlation were used. One shot case study research design with "Ex-Post-Facto" research approach was used for present study.

RESULTS AND DISCUSSION

The data collected from 150 respondents from 10 villages from Bhiwapur panchayat samiti in Nagpur district were compiled into primary tables. They were transferred in secondary tables in view of the objectives of the study. Appropriate statistical tests were used for drawing the inferences. The results of the investigation are presented under following heads.

Table1. Distribution of chilli growers according to their profile characteristics
(n=150)

Sl.No	Category	frequency	Percentage
1. Age			
A	Young age(Up to 35)	49	32.66
B	Middle age(36 - 50)	79	52.66
C	Old age(Above 50)	22	14.67
2. Education			
A	Illiterate(No schools)	5	3.33
B	Primary school(1st to4 standard)	17	11.33
C	Middle school(5th to7th standard)	19	12.67
D	High school(8th to10th standard)	59	39.34
E	College(11thabove)	50	33.33
3. Land holding (ha.)			
A	Marginal(Up to1.00)	35	23.33
B	Small(1.01-2.00)	43	28.67
C	Semi Medium(2.01-4.00)	44	29.34
D	Medium(4.01-10.00)	27	18.00
E	Large(Above10.00)	1	0.66
4. Annual income			
A	Up to50,000/-	29	19.33
B	Rs. 50,001 to Rs. 1,00,000/-	26	17.34
C	Rs.1,00,001 to Rs. 1,50,000/-	18	12.00
D	Rs. 1,50,001 to Rs. 2,00,000/-	14	19.33
E	Above Rs. 2,00,000/-	63	42.00
5. Family size			
A	Small (Up to 4)	59	39.33
B	Medium (5 to 8)	71	47.33
C	Large(Above 8)	20	13.34
6. Innovativeness			
A	Low (Up to 8)	25	16.67
B	Medium (9 to 15)	104	69.33
C	High (Above 15)	21	14.00
		Mean = 11.58	S.D = 3.24
7.Risk Orientation			
A	Low (Up to 18)	36	24.00
B	Medium (19 to 23)	81	54.00
C	High (Above 23)	33	22.00
		Mean= 19.22	SD=2.96
8. Economic motivation			

A	Low (Up to 22)	44	29.34
B	Medium (23 to 24)	83	55.33
C	High (Above 24)	23	15.33
		Mean=23.09	S.D = 1.36
9. Sources of information			
A	Low (Up to 13)	31	20.66
B	Medium (14 to 21)	95	63.34
C	High (Above 21)	24	16.00
		Mean = 7.06	S.D = 5.60

1. Age
It was noticed from table 1 that more than half of the respondents (52.67%) belonged to middle age group category having age between 36 to 50 years. It was followed by (32.66%) of the respondents who belonged to young age category i.e. up to 35 years and remaining (14.67%) of the respondents were observed to be in old age category i.e. above 50 years .These finding is in the line with the finding of Kiranmayi (2013), Wase (2001).

2. Education
The results in table 1 revealed that relatively higher proportion of the respondents (39.34%) were found to be educated up to high school level education, followed by (33.33%) respondents were educated up to college level followed by (12.67%) of the respondents were observed in middle school and (11.33%) of the respondents were found to be educated up to primary school level education respectively. The percentage of illiteracy was found negligible i.e. (3.33%).Average education in the study area among the respondents were 10th (SSC). Similar findings were reported by Mate (2006), Tidke *et al*. (2012).

3. Land holding
It was observed form table 1 that (29.34%) of the respondents were observed in semi-medium i.e. 2.01 to 4.00ha of land holding, followed by (28.67%) of respondents were having small land holding between ha. i.e. 1.01 to 2.00 ha category areas. Whereas, little less than one fourth (23.33%) of respondents were having marginal category of land holding i.e. up to 1 ha. and (18.00%) of respondents having medium category of land holding between 4.01 to 10.00 ha. only 0.66 per cent of respondents comes under large i.e. above 10.00 ha. land holding category. These findings are similar supported by Mate (2006), Kiranmayi (2013).

4. Annual income
It was evident from table 1 that distribution of the respondents according to annual income in Table 1, it may be proposed that relatively higher proportion (42.00%) of the respondents were having annual income above Rs 2,00,000/- followed by slightly less than one fifth (19.33%) of respondents were having annual income up to Rs 50,000/-.The (17.34%) of the respondents were having annual income between Rs 50,001 to Rs 1,00,000 followed by (12.00%) of the respondents having annual income between RS 1,00,001 to Rs 1,50,000 and (19.33%) of the respondents having annual income between Rs 1,50,000 to Rs 2,00,000/-. Similar types of finding were reported Ananta, (2016) in soybean crop.

5. Family size
The data furnished in Table-1 indicated that majority (47.33%) of the chilli growers had medium family size (5 to 8 members) followed by 39.33 per cent of chilli growers belonged to small family size (Up to 4 members).Whereas 13.34 per cent of chilli growers belonged to large family size (Above 08 members). Similar findings are quoted by Mate (2006), Kiranmayi (2013).

6. Innovativeness
It was observed from the above table 1, that maximum number of the respondents (69.33%) were observed in medium level of innovativeness, followed by less than one fifth (16.67%) of respondents were observed in low level of innovativeness and remaining (14.00%) respondents were having high level of innovativeness. Similar types of finding were reported by Tidke *et al*. (2012), Ganesh Kumar *et al.* (2013).

7. Risk orientation
It was revealed from Table-1 that 54.00 per cent of respondents had medium level of risk orientation, whereas 24.00 per cent of respondents had low level of risk orientation followed by 22.00 per cent of the respondents were having high level of risk orientation. Similar findings were reported by Singh *et al*. (2011).

8. Economic motivation
It was revealed from table 1 that more than half (55.33%) of the respondents had medium category of economic motivation, followed by (29.34%) respondents had low category of economic motivation. Only (15.33%) respondents had high category of economic motivation. These findings are in accordance with the findings of Ganesh Kumar *et al.* (2013) in chickpea crop and Praveenbabu *et al*. (2016) in paddy crop.

9. Sources of information.

It can be observed from Table-1, that relatively higher proportion of respondents (63.34%) were having medium level of sources of Information, While slightly more than one fifth (20.66%) of respondents were having low level of sources of information and Only (16.00%) of respondents were having high level of sources of information. Similar types of finding were reported by Mane (2012).

Table2: Relationship of the profile of the respondents with adoption gap regarding recommended chilli cultivation practices

Sl. No.	Independent variable	Correlation coefficient ('r')
1	Age	0.16566*
2	Education	0.25866**
3	Land holding	0.172776*
4	Annual income	0.036288NS
5	Family size	0.021735NS
6	Innovativeness	0.42706**
7	Risk orientation	0.211442**
8	Economic motivation	-0.04256NS
9.	Sources of information	0.317463**
10.	Knowledge	0.780501**

* Significant at 0.05% level of probability
** Significant at 0.01% level of probability
NS –Non significant

The relationship between profile characteristics of chilli growers with adoption gap in chilli production practices was tested by computing the correlation coefficient(r), the data presented in table2.

It is revealed from table 2 that, in chilli the independent variables viz. education, innovativeness, risk orientation, sources of information, and knowledge were found positively and highly significant at 0.01 per cent level of probability.

 The age, land holding, of the respondents was positive and significant correlation with their adoption gap at 0.05 per cent level of probability and family size, annual income, economic motivation, show non significant relationship. Thus, the null hypothesis for these non- significant variables therefore, was accepted. Similar finding are near about to the findings of Ahire and Shinde ,Maghade, 2007, Waman, *et al,* 2006, Kiranmayi (2013).

CONCLUSION

In case of profile characters medium age group, educated up to high school level, possessed semi -medium land holding, ranging between the 2.01to4.00 ha., annual income above Rs. 2,00,000/- ,medium family size(05 to08) members, more than half respondents were observed medium level of innovativeness, followed by medium risk orientation, had medium level of economic motivation, followed by medium level of usage of sources information, about improved chilli cultivation practices

Among the selected characteristics *i.e.* education, innovativeness, risk orientation, sources of information and level of knowledge was found to have positive and significant correlation with extent of adoption gap among the chilli growers.

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