ADOPTION OF IMPROVED INDIAN BEAN PRODUCTION TECHNOLOGY

S. R. Kumbhani[1], S.D. Kavad[2] and G.R. Patel[3]

1 Assistant Extension Educationist, DEE, NAU, Navsari - 396450
2 Associate Professor, DEE, NAU, Navsari - 396450
3 Director of Extension Education, NAU, Navsari - 396450
Email : srkumbhani@nau.in

ABSTRACT

Indian bean is the most cultivated vegetable in Narmada district. This crop normally grown by the farmer in rainy season with mix cropping and inter cropping. The farmers are generally adopting old practices which results in low yield. KVK, Dediapada conducted training, demonstration on improved cultivation practices of Indian bean to the farmers. To know the status of adoption of improved Indian been production technology this study was conducted with the objectives to study the profile of the respondents, to know the level of knowledge and extent of adoption of improved Indian bean production technology and to know the association between dependent and independent variables. Two talukas were selected viz. Dediapada & Sagbara from the Narmada district. Six villages from each taluka were selected. Five respondents were selected from each selected village by randomly making total of 60 respodents. From the study it is found that majority of the respondents were in middle age group, educated up to primary school level, participated in social activities, participated in more than one extension activity, annual income up to Rs.50,000/-, engaged in farming as main occupation, respondents possessed 0.01 – 1.00 ha of land, found to have middle level of economic motivation. Predominantly they were had medium level of knowledge and adoption of improved Indian bean production technology. There was positive and highly significant association found between adoption of improved Indian bean production technology and selected characteristics viz., Education, Extension participation, Occupation and Knowledge. Whereas, there was positive and significant association between adoption of improved Indian bean production technology and selected characteristics of Social participation and Annual income.

Keywords: *knowledge, adoption, indean bean, technology*

INTRODUCTION

Indian bean is the most cultivated vegetable in Narmada district. This crop normally grown by the farmer in rainy season with mix cropping and inter cropping. The farmers are generally adopting old cropping system and cultivation practices like without definite inter space, high /low population per unit area and inadequate nutrient management practices which gave low yield. After establishment KVK at Dediapada scientists of this center provided number of training on improved cultivation practices of Indian bean to the farmers. To know the status of adoption of improved Indian been production technology this study was conducted.

OBJECTIVES

(a) To study the profile of the respondents

(b) To know the level of knowledge and extent of adoption of improved Indian bean production technology

(c) To know the association between dependent and independent variables

METHODOLOGY

From the Narmada districts, two talukas were selected viz. Dediapada & Sagbara. Six villages from Dediapada taluka and six villages from Sagbara taluka were selected. Five respondents were selected from each selected village by randomly making total of 60 respodents. The data collect from the personal interview method then tabulated, analyzed and interpreted in the light of the objectives. The statistical measures like frequency, percentage, Mean and S.D. were used.

RESULTS AND DISCUSSION

Profile of the respondents

The findings of these selected characteristics have been presented in Table 1

(1) Age

From the data presented in Table 1(1) show that more than two-third majority (65.00 per cent) of the respondents was in middle age group followed by 20.00 per cent of the respondents belonging old age group and 15.00 per cent were under young age group.

Table 1: Distribution of respondents according to their personal characteristics

n = 60

Sr. No.	Characteristics	Frequency	Percent
I	**Age group**		
1	Young (up to 35 years)	09	15.00
2	Middle (36 to 50 years)	39	65.00
3	Old (50 years and above)	12	20.00
II	**Level of Education**		
1	Illiterate	12	20.00
2	Up to primary school level	35	59.00
3	Up to middle school level	09	15.00
4	Up to high school level	03	05.00
5	College and above	01	01.00
III	**Social Participation**		
1	Participated	43	71.00
2	Not participated	17	29.00
IV	**Extension Participation**		
1	Not participated	07	12.00
2	Participated in one activity	10	17.00
3	Participated in more than one activity	43	71.00
V	**Annual Income**		
1	Above ₹ 2,00,000/-	0	0.00
2	₹ 1,50,001 to 2,00,000	0	0.00
3	₹ 1,00,001 to 1,50,000	0	0.00
4	₹ 50,001 to 1,00,000	12	20.00
5	Up to Rs. 50,000	48	80.00
VI	**Occupation**		
1	Farming	39	65.00
2	Animal Husbandry	0	0.00
3	Farming + Animal Husbandry	18	30.00
4	Service + Farming	0	0.00
5	Farming + Business	03	05.00
VII	**Land Holding**		
1	> 10 ha	0	0.00
2	4.01 – 10.00 ha	0	0.00
3	2.01 – 4.00 ha	1	01.00
4	1.01 – 2.00 ha	20	34.00
5	0.01 – 1.00 ha	39	65.00
VIII	**Economic motivation**		
1	Low economic motivation (< 13 score)	09	15.00
2	Medium economic motivation (13-15 score) 13	38	64.00
3	High economic motivation (> 15 score)	13	21.00
Mean-15			S.D-2

IX	**Level of knowledge**		
1	Low (< 20 score)	15	25.00
2	Medium (20- 26 score)	33	55.00
3	High (> 26 score)	12	20.00
X	**Level of adoption**		
1	Low (< 15 score)	17	28.00
2	Medium (15-27)	29	49.00
3	High (> 27 score)	14	23.00

(2) Education

From the data presented in Table 1(2) show that majority (59.00 per cent) of the respondents were educated up to primary school level followed by 20.00, 15.00, 5.00 and 1.00 had up to illiterate, up to middle school level, up to high school level and up to college and above level education, respectively.

(3) Social participation

The data in Table 1(3) shows that majority (71.00 per cent and) of the respondents were participated in social activities while, 29.00 per cent of the respondents were not participated in social activities.

(4) Extension participation

From the data presented in Table 1(4) it was observed that majority (71.00 per cent) of the respondents were participated in more than one activity followed by 17.00 per cent and 12.00 per cent of the respondents were participated in one activity and not participated, respectively.

(5) Annual Income

It is apparent from Table 1(5) that majority (80.00 per cent) of the respondents had annual income up to ₹ 50,000/- whereas, (20. per cent) of the respondents had annual income between ₹ 50,001 to 1,00,000, respectively.

(6) Occupation

The data presented in Table 1(6) reveal that majority (65.00 per cent) of the respondents were engaged in farming as main occupation followed by 30.00 per cent and 5.00 per cent respondents were engaged in farming + Animal Husbandry and Farming + Business occupation, respectively.

(9) Land holding

A look into Table 1(7) shows that less than half of the Indian bean growers (65.00 per cent) were found 0.01 –1.00 ha of land followed by 34.00 per cent and 1.00 per cent of the Indian bean growers who had 1.01 –2.00 ha and 2.01 – 4.00 ha of land holding, respectively.

(8) Economic motivation

The date presented in Table 1(8) shows that majority (64.00 per cent) of the respondents were found to have middle level of economic motivation followed by 21.00 per cent and 15.00 per cent of the respondents had high and low level of economic motivation, respectively.

(9) Knowledge level

The data presented in Table 1(9) indicated that slightly more than half of the respondents (55.00 per cent) were found with medium level of knowledge about Indian bean production technologies followed by 25.00 per cent and 20.00 per cent respondents had low and high level of knowledge, respectively.

(10) Adoption level

The data presented in Table 1(9) indicated that about half (49.00 per cent) of the respondents had medium level of adoption followed by low and high level of adoption with 28.00 and 23.00 per cent of the respondents, respectively.

Association between profile of the respondents with their adoption of Indian bean production technology

Table 2 : Association between profile of the respondents with their adoption of Indian bean production technology. n = 60

Sr. No.	Variables	Correlation Coefficient ('*r*' value)
X_1	Age	-0.21956
X_2	Education	0.34929**
X_3	Social participation	0.26220*
X_4	Extension participation	0.40366**
X_5	Annual income	0.27961*
X_6	Occupation	0.35322**
X_7	Land holding	0.09670
X_8	Economic motivation	0.04433
X_9	Knowledge	0.45439**

* Significant at 5 per cent level

** Highly significant at 1 per cent level

(1) Age and adoption

The data presented in table 2 shows that the calculated value of correlation coefficient (***r*** = -0.21956) was found non-significant. It means there was no association between age and their extent of the adoption of improved Indian bean production technology. Findings are in line with Patel *et al.*, (2015).

(2) Education and adoption

The data in table 2 indicates that the calculated value of correlation coefficient (***r*** = 0.34929**) was found positive and highly significant. It reflects that there was positive and highly significant association between education and their extent of the adoption of improved Indian bean production technology.

(3) Social participation and adoption

The data presented in table 2 specify that the calculated value of correlation coefficient (*r* = 0.26220*) was found positive and significant. It indicates that there was positive and significant association between Social participation and their extent of the adoption of improved Indian bean production technology.

(4) Extension participation and adoption

On the basis of the data presented in table 2 specify that the calculated value of correlation coefficient (***r*** = 0.40366**) was found positive and highly significant. It indicates that there was positive and highly significant association between Extension participation and their extent of the adoption of improved Indian bean production technology.

(5) Annual income and adoption

The data presented in table 2 specify that the calculated value of correlation coefficient (***r*** = 0.27961*) was found positive and significant. It indicates that there was positive and significant association between annual income and their extent of the adoption of improved Indian bean production technology.

(6) Occupation and adoption

On the basis of the data shown in table 2 specify that the calculated value of correlation coefficient (***r*** = 0.35322**) was found positive and highly significant. It indicates that there was positive and highly significant association between occupation and their extent of the adoption of improved Indian bean production technology.

(7) Land holding and adoption

The data presented in table 2 specify that the calculated value of correlation coefficient (***r*** = 0.09670) was found non-significant. It indicates that there was no association between land holding and their extent of the adoption of improved Indian bean production technology.

(8) Economic motivation and adoption

The data presented in table 2 shows that the calculated value of correlation coefficient (***r*** = 0.04433) was found non-significant. It means there was no association between economic motivation and their extent of the adoption of improved Indian bean production technology.

(9) Knowledge and adoption

The data presented in table 2 shows that the calculated value of correlation coefficient (***r*** = 0.454396**) was positive and highly-significant. It means there was positive and highly-significant association between Knowledge and their extent of the adoption of improved Indian bean production technology.

CONCLUSION

From the above discussion it could be concluded that majority of the respondents were in middle age group, educated up to primary school level, participated in social activities, participated in more than one extension activity, annual income up to Rs.50,000/-, engaged in farming as main occupation, respondents possessed 0.01 – 1.00 ha of land, found to have middle level of economic motivation, Predominantly they were had medium level of knowledge and adoption of improved Indian bean production technology. There was positive and highly significant association found between adoption of improved Indian bean production technology and selected characteristics viz., Education, Extension participation, Occupation and Knowledge. Whereas, there was positive and significant association between adoption of improved Indian bean production technology and selected characteristics of Social participation and Annual income. There was no association between land holding, Economic motivation and age with their extent of adoption of improved Indian bean production technology.

REFERENCES

Bhujbal, L.Y. and Kadam, L.D. 1995. Adoption of improved package of practices of fig by the farmers. *Maharashtra Journal of Extension Education* 15:205-206

Chikala, N.J. and Deshmukh, S.K. 1998. Adoption of improved cultivation practices by orange rowers. *Maharashtra Journal of ExtensionEducation* 17:317-319

Lenin, V. 2002. Technology gap in adoption of improved Aonla cultivation by tribal farmers of Western India. *Maharashtra Journal of Extension Education,* 16:8-10

Patel, K.H., Patel, U.M. and Khanorkar, S.M. (2015). Adoption of Farmers About Scientific Cultivation of Maize in Panchmahal and Dahod District. G*uj. J. Ext. Edu.,* 26(2): 223-227

Patel,M.M.,Chatterjee, Amit and Khan, Mohmood (2003). Adoption of wheat production technology. *Indian Journal of Extension Education* Vol.39(1&2): 58-62.

Rajnish,V.P., Malik, R.S. and Punia, R.K.(2001). Adoption of rapeseed-mustard production technology. *Indian Journal of Extension Education* Vol. 7(1&2): 58-62

Reddy, V. and Ratnakar, R. 1993. Adoption of mango technology. *Maharashtra Journal of Extension Education* 11:309

Singh, H. 1999. A study on knowledge and adoption of improved cultivation practices of pigeon-pea (*Cajanus cajan L.*) by the farmers of Bagidora Tehsil in Banswara district, M.Sc. thesis submitted to Rajasthan Agricultural University

Received : August 2017 : Accepted : October 2017