

The extent of adoption of recommended production technology of brinjal among the brinjal growers.

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Received : 06 December, 2012

ABSTRACT

Agriculture is the largest private enterprise in India and will continue to be the life line of the Indian economy even in foreseeable future. India has favourable climate and soils for growing large number of vegetable crops. Among various vegetables crops, brinjal is an important and indigenous vegetable crop of India and occupies second position in the world. As per production of brinjal Gujarat is ranked on fourth position. Hence, there is a scope to increase the productivity of brinjal to its potential if it would substantiate the need for promotion of brinjal cultivation technology in the farmer's field. Considering the area and production of brinjal crop in North Agro-Climatic Zone, the present study was conducted purposively in Banaskantha district. Among all the talukas of Banaskantha district, Palanpur and Deesa talukas were selected as highest area under brinjal cultivation. Six villages from each taluka and ten equal numbers of respondents from each village were selected for making a sample size of 120 respondents. To measure the extent of adoption of recommended production technology of brinjal, teacher made tests were developed. The data were collected with the help of structural and pre-tested interview schedule. Majority of the respondents (62.50 per cent) had medium extent of adoption of recommended production technology of brinjal. Among the different recommended brinjal production technology, cent per cent of the respondents were adopted irrigation and inter-culturing practices, followed by preparation of land, use of recommended variety, time of sowing, spacing and selection of soil and ranked in ascending order, respectively. Low extent of adoption of technology was observed in use of basal fertilizers, nursery management, weeding, insect pest control, top dressing of fertilizers also in ascending order.

Key words : Brinjal, production technology, adoption, north agroclimatic zone.

Agriculture is the largest private enterprise in India and will continue to be the life line of the Indian economy least in foreseeable future. Horticulture sector covering only 8.00 per cent of total crop area in the country and it contributes 24.50 per cent to G.D.P. and 54.55 per cent to export earning in agriculture sector (Chadha, 2002). Looking to the production of brinjal scenario in the world, China is dominated as it produced 44.17 per cent of the world

brinjal production followed by India 25.57 per cent, (Anonymous, 2006).

Brinjal is an important and indigenous vegetable crop of India. It contributes 9.00 per cent of the total vegetable production of the country. It occupies second position followed by Potato amongst vegetable crops. The state wise production of brinjal show that West Bengal is ranked first with 30.18 per cent production followed by Orissa 20.29 per cent, Bihar 11.28 per cent. Gujarat produces 10.76 per cent to the total production with ranked fourth. Hence, there is a scope to increase the production of

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brinjal to its potential, if it would substantiate the need for promotion of brinjal production technology in farmer's field. Raising the efficiency of the growers, it is essential for getting desired profit from the brinjal cultivation. Understanding that, no detail study has yet been carried out in this regard. Therefore, to know the adoption pattern of recommended practices of brinjal crop a study was undertaken with following specific objectives.

- [1] To find out the extent of adoption of recommended production technology of brinjal among the brinjal growers.
- [2] To ascertain the association between the selected characteristics of brinjal growers and their extent of adoption of recommended production technology of brinjal.

METHODOLOGY

The present study was conducted in the Banaskantha district of the North-Gujarat Agro climatic Zone of Gujarat state with the objective to measure extent of adoption of the various aspects of recommended production technology of brinjal by the farmers.

The study was confined with identifying the characteristics of brinjal growers that influence their adoption of recommended technology. Brinjal is grown in almost all the parts of Banaskantha district (Anonymous, 2009-10). Among all the talukas of Banaskantha, Palanpur and Deesa talukas were purposively selected for the study as they occupy maximum area under brinjal crop than other talukas of the district (Anonymous, 2010-11).

A comprehensive list of all the villages of selected taluka, where brinjal crop is grown was prepared by

the investigator in consultation with the personnel of horticultural department. From the list, six villages from each taluka were selected randomly, thus total 12 villages were selected randomly. A list of brinjal growers was prepared with the help of village level worker of selected villages. Using random sampling techniques equal number of respondents i.e., ten brinjal growers from each village were selected as respondents. Thus, a total of 120 respondents were selected.

On the basis of literature available and personal discussion with extension personnel and scientists, various recommended packages of cultivation practices of the brinjal crop were listed to know their adoption by the brinjal growers. Finally 75 practices in brinjal crop were selected for adoption. Adoption of one technique was assigned one score and zero score was given for non-adoption. The final score was calculated by simple addition of all the scores obtained. Using the procedure suggested by Sen (1967), the adoption quotient for each respondent was calculated.

RESULTS AND DISCUSSION

Extent of adoption of recommended production technology of brinjal among the brinjal growers.

Adoption is a decision making mental process to continue use of an innovation. In this study it means acceptance of full use of recommended production technology by brinjal growers. It is rigidly stated that the adoption of recommended package of practices is an instrument for making agriculture a better and more profitable enterprise. The respondents were classified into three categories on the basis of + S.D. from the mean (X). The classification in the above respect is presented in Table 1.

Table 1 Distribution of brinjal growers according to their overall adoption of recommended production technology of brinjal crop.

Sr. No.	Extent of adoption quotient	Number	Per cent
1.	Low adoption (below 45.31 quotient)	26	21.67
2.	Medium adoption (between 45.32 to 63.37 quotient)	75	62.50
3.	High adoption (above 63.37 quotient)	19	15.83
	Total	120	100.00

Mean= 54.34

S.D. = 9.03

It is clear from table 1 that majority (62.50 per cent) of the respondents had medium level of overall adoption quotient regarding recommended production technology of brinjal, followed by 21.67 per cent and 15.83 per cent of the respondents had low and high extent of overall adoption quotient, respectively. The probable reason might be that there is growing awareness about the advantage of the vegetables crops production and gaining popularity day by day among the farming community.

Practice wise extent of adoption of brinjal growers about recommended brinjal production technology

Data in Table 2 shows that among the different recommended brinjal production technologies, cent per cent of the respondents adopted technologies namely irrigation and inter-culturing and ranked first. Preparation of land (92.50 per cent), use of recommended variety (91.25 per cent), time of sowing (76.67 per cent), spacing (71.67 per cent) and selection of soil (67.50 per cent) were also adopted higher by the respondents and ranked second, third, fourth, fifth & sixth, respectively. While low extent of adoption of technology was observed in

basal fertilizers, nursery management, weeding, insect pest control, top dressing of fertilizers in ascending order. From the above discussion, it can be concluded that considering the no-cost and low cost inputs in the package of practices were adopted more by the respondents. The recommended varieties adopted were higher due to the product choice of consumers in particular area of Banaskantha district.

Association between the selected characteristics of brinjal growers and their extent of adoption of recommended production technology of brinjal.

The adoption or acceptance of recommended agricultural technology is a unit act but a complex process involving sequence and thought of action. The action of individual farmer is governed by personal, socio-economical, situational, communicational and psychological variables with their level of knowledge and extent of adoption of improved brinjal production technology were worked out by calculating coefficient correlation. The results in this regard are depicted in Table 3.

Table 2 Practice wise adoption of recommended brinjal production technology by brinjal growers (n = 120)

Sr. No	Recommended practices	Total maximum score	Total obtained score	obtained mean score	Rank
1	Selection of soil	240	162	67.5	VI
2	Nursery management and transplanting	1320	744	56.36	IX
3	Time of sowing	120	92	76.67	IV
4	Preparation of land	240	222	92.50	II
5	Use of recommended variety	240	219	91.25	III
6	Spacing	240	172	71.67	V
7	Fertilizers				
	-Basal fertilizer	600	348	58.00	VIII
	-Top dressing	1200	448	37.33	XII
8	Irrigation	120	120	100	I
9	Inter-culturing	120	120	100	I
10	Weeding	840	449	53.45	X
11	Insect pest control	1800	810	45.00	XI
12	Disease control	1200	420	35.00	XIII
13	Harvesting	600	378	63.00	VII

Table 3 Association between the characteristics of brinjal growers and their adoption of recommended production technology of brinjal.

Sr. No.	Independent Variables	Correlation-Coefficient
1	Age	0.1926*
2	Education	0.2447**
3	Size of family	0.1713 (NS)
4	Social participation	0.0194 (NS)
5	Land holding	0.1977*
6	Annual income	0.1815*
7	Extension contact	0.2321**
8	Sources of information utilization	0.1912*
9	Scientific orientation	0.1880*
10	Level of knowledge	0.6468**

* significant at 0.05 level of probability ** significant at 0.01 level of probability NS = Non significant

It is critically observed from table 3 that out of 10 independent variables, the correlation of four variables viz., age (0.1926), education (0.2447), land holding (0.1977), annual income (0.1815), extension contact (0.2321), sources of information utilization (0.1912), scientific orientation (0.1880) and level of knowledge (0.6468) were statistically established positively and highly significant association with their level of knowledge of recommended production technology of brinjal.

For variable "size of family and social participation", the computed correlation coefficient was to be found non-significant. This might be due to that in large size of family, decision for adoption of new technology may be taken jointly and it takes some time, and adoption level found low in the case of size of family but it is up to the mark. The probable reason might be that majority of the farmers are member of Milk co-operative society. Thus, an individual to interact in a organizational way which resulted in acquisition of knowledge regarding dairy farming and are likely to receive clues from other people that would serve, as

further, reinforce supporting the concept of an innovation which motivate them for adoption of animal husbandry practices.

CONCLUSION

Among various vegetable crops, brinjal is an important and indigenous vegetable crop. However, majority (62.50 per cent) of the respondents had medium extent of adoption. The non-cost and low cost inputs in the package of practices were adopted more by the respondents, due to high cost of inputs & labours. The independent variables viz., education, extension contact and level of knowledge regarding production technology of brinjal had established positive and highly significant association with the extent of adoption of recommended production technology of brinjal. While, the independent variables like, age, land holding, annual income, source of information utilization and scientific orientation were associated positive and significant with the extent of adoption of improved production technology of brinjal. Remaining two variables viz., size of family and social participation were failed to establish any significant association with the extent of adoption of recommended production technology of brinjal.

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