

Adoption of recommended potato production technology by potato growers

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ABSTRACT : The present study was conducted in 3 villages each from four Talukas of Anand district having mere potato growing area. Total 120 respondents from these 12 villages were selected by using proportionate random sampling technique and data were collected by means of personal interview. The study revealed that overwhelming majority (82.50 per cent) of potato grower's had medium to high of adoption of potato production technology. The study further indicates that land holding, annual income, irrigation facilities, extension participation, social participation, extension contact, mass media exposure, scientific orientation, risk orientation and knowledge had positive and highly significant correlation with adoption of potato growers. While the variables like education, experience and economic motivation had positive and significant correlation with adoption of the potato growers.

Key Words : Adoption, Potato, Potato production technology, Potato growers

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Potato (*Solanum tuberosum* L.) is native of the High Andes in South America and it was first introduced in India at the end of the sixteenth or the beginning of the seventeenth century. Potato is one of the important tuber crops in India. Importance of potato as vegetable in human diet has been well recognized. It has viewed in general a common man's food. Potato produces more food per unit area than wheat, paddy and many other cereals and that in much shorter time. It is also excellent in nutritive value and palatability. The current advances in potato production technology have demonstrated that improved practices have great potential for increasing the potato production. Therefore, raising the efficiency among the growers is essential element for getting desired profit from the potato cultivation. Understanding that, very few studies on this aspect have been conducted in this area and therefore, it was felt necessary to take study on correlates of potato growers in adoption of recommended potato production.

Keeping in view, the present investigation was undertaken with following specific objectives: To study the extent of adoption of recommended production technology of potato. To study the relationship between adoption of recommended production technology by potato growers and their personal, social, economic, communicational and psychological characteristics of the potato growers.

RESEARCH PROCEDURE

Anand district was chosen by researcher for the study. Anand, Borsad, Anklav and Umreth talukas of Anand district were purposively selected because these talukas have more potato growing area as compared to other talukas of the district. Twelve potato growing villages were randomly selected from those four talukas. For this study 120 potato growers were selected with proportionate random sampling technique and all 120 potato growers considered as a sample and as respondents. Extent of adoption was measured by using scale developed by Chattopadhyay (1974) with slight modification. The data were collected with the help of well structured, pre-tested, Gujarati version interview scheduled through personal contact and data were compiled, tabulated and analyzed to draw valid conclusion. The statistical tools used were percentage, mean score, standard deviation and coefficient of correlation.

RESEARCH ANALYSIS AND REASONING

The adoption process is the mental process through which an individual passes from first hearing of an innovation to its final adoption, while adoption is a decision to continue the full use of an innovation. Generally, the farmers do not

Table 1 : Distribution of potato growers according to their extent of adoption of recommended practices of potato cultivation (n=120)

Sr. No.	Adoption	Number	Per cent
1.	Low (less than 46.39 score)	21	17.50
2.	Medium (between 46.39 to 62.15 score)	72	60.00
3.	High (above 62.15 score)	27	22.50
	Total	120	100.00

adopt package of practices fully. There is only a partial adoption by them. As a result, the gap always appears between the recommended production technology and their use at farmer's field. With a view to find out the extent of adoption of recommended practices of potato cultivation, the potato growers were asked to give information about package of practices adopted by them. The data regarding extent of adoption are given in Table 1

It is clear from Table 1. that majority of the potato growers (60.00 per cent) had medium level of adoption, followed by high (22.50 per cent) and low (17.50 per cent). It revealed that great majority (82.50 per cent) of potato growers in study area had medium to high level of adoption of recommended production technology of potato.

The probable reason might be due to high literacy level, farming experience, close contact with extension agencies, active involvement in extension activities and scientific attitude of the potato growers. More over sincere efforts put forth by various extension agencies to motivate the farmers for adoption of potato production technology. This finding is in the line with the findings reported by Mewara and Pandya (2007) and Rathod (2009).

Practice wise adoption of recommended potato production technology by potato growers:

With a view to find out the practice wise adoption of recommended practices of potato cultivation, the potato growers were asked to give information about package of practices adopted by them. The data regarding this are given in Table 2.

Data in Table 2 shows that among the different recommended potato production technologies, cent per cent of the potato growers adopted technologies namely land preparation, time of planting, sowing method, manual weed control, harvesting method and post-harvest handling sorting/grading, followed by earthing up (91.66 per cent), latest variety (86.66 per cent), manures / FYM (85.00 per cent), selection of tubers for planting (83.33 per cent), seed rate and irrigation management (81.66 per cent), plant spacing (78.33), recommended dose of chemical fertilizers (68.33 per cent), seed treatment (61.66 per cent) and insect pest control (60.00 per cent).

While low adoption of technology was found in disease control (43.33 per cent) and chemical control of weeds (31.66

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

Sr. No	Recommended practices	Number	Per cent
1.	Land preparation	120	100
2.	Time of planting	120	100
3.	Sowing method	120	100
4.	Improved variety	104	86.66
5.	Selection of tubers for planting	100	83.33
6.	Seed rate	98	81.66
7.	Seed treatment	74	61.66
8.	Spacing	94	78.33
9.	Manures / FYM	102	85.00
10.	Chemical fertilizers	82	68.33
11.	Irrigation management	98	81.66
12.	Earthing up	110	91.66
13.	Weeding		
	Manual weed control	120	100
	Chemical weed control	38	31.66
14.	Insect pest control	72	60.00
15.	Disease control	52	43.33
16.	Harvesting	120	100
17.	Post-harvest handling, sorting / grading	120	100

per cent).

Higher level of adoption due to good farming experience, medium to high literacy level, good mass media exposure, extension contact and suitability of technology in local situation and potato crop has been cultivated by majority of farmers in Anand district for last 5-10 years. Lower level of adoption might be due to poor knowledge about some practices, unsuitability of technology in their own situation, higher cost and complexity of technology.

Relationship between the characteristics of potato growers and their level adoption of recommended technology of potato crop:

The data with regard to relationship of independent variable with adoption are presented in Table 3 reflect that the independent variables like land holding, annual income,

Table 3 : Relationship between the characteristics of potato growers and their level adoption of recommended technology of potato crop (n=120)

Sr. No.	Independent variables	Correlation-Coefficient ('r' value)
1.	Age	0.0040 (N.S.)
2.	Education	0.2254*
3.	Experience in potato cultivation	0.2521*
4.	Size of family	0.0133 (N.S.)
5.	Social participation	0.4288**
6.	Land holding	0.2854**
7.	Annual income	0.3642**
8.	Irrigation facilities	0.4156**
9.	Extension contact	0.4739**
10.	Mass media exposure	0.4524**
11.	Participation in extension activity	0.4245**
12.	Economic motivation	0.2344*
13.	Scientific orientation	0.3320**
14.	Risk orientation	0.5323**
15.	Knowledge level	0.7630**

* and ** indicate significance of values at P=0.05 and 0.01, respectively
NS =Non-significant

irrigation facilities, extension participation, social participation, extension contact, mass media exposure, scientific orientation, risk orientation and knowledge had positive and highly significant correlation with adoption of potato growers. While the variables like education, experience and economic motivation had positive and significant correlation with

adoption of the potato growers. While the variables like age showed positive and non-significant and size of family showed non-significant correlation with adoption of recommended production technology of potato.

Conclusion:

The study revealed that majority of the potato growers belonged to medium level of adoption. Most of potato growers were found in non-adaptor category in respect of certain important items like chemical weed control and disease control. All the selected attributes of the potato grower's except age and size of family showed positive and significant correlation with their adoption level. So as to enhance adoption level, it is necessary to involve the farmers in extension education programme. It would facilitate the dissemination of recent technologies.

LITERATURE CITED

- Mewara, R.C. and Pandya, R.D. (2007). Knowledge and adoption level of tomato growers regarding value added techniques in Navsari. Rural India, September 2007.
- Rathod, J.J. (2009). A study on adoption of recommended plant protection measures by chilli growers in Anand district of Gujarat state. M.Sc. (Ag.), Thesis, Anand Agricultural University, Anand campus, Anand, GUJARAT (India).
