

## Encouraging Attributes in Adoption of Pomegranate Cultivation Practices by the Pomegranate Growers

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### ABSTRACT

*Pomegranate is one of the important fruit crop of Gujarat state. Now-a-days in Gujarat, pomegranate crop is cultivated on the commercial basis and exported to various countries. In Gujarat, area under pomegranate cultivation is 4638 hectare and production is about 50255 mts. In Banaskantha district area under pomegranate cultivation was 400 hectares and production was 2600 metric tones in the year 2012. The present study was conducted in Banaskantha district of Gujarat state. Among all the talukas of Banaskantha district Palanpur and Vadagam talukas were selected purposively as they occupy higher area under pomegranate cultivation. Five villages having highest area under pomegranate cultivation were selected purposively from each taluka. Using proportionate random sampling technique, 120 respondents were selected. Ex-post facto research design was adopted for the measurement of psychological characteristics. The results revealed that about two-third respondents (67.50 per cent) were found having medium level of adoption of recommended pomegranate cultivation practices. Whereas age, education, knowledge, risk preference, economic motivation, scientific orientation, attitude and source of information were positively and significantly related with extent of adoption of pomegranate cultivation practices.*

**Keywords :** Adoption, Adoption Quotient, Cultivation

### INTRODUCTION

Agriculture is a way of life for India, as more than 70.00 per cent resides in villages and its occupation continues to be predominantly agriculture. The agricultural production of arid and semi-arid region is uncertain and unsuitable due to low and erratic rains coupled with adverse climate. Now a day in Gujarat, pomegranate crop is cultivated on the commercial basis. The pomegranate fruits are exported to various countries. The fruit processing industries, marketing facilities and post-harvest technologies are available in the state. In India production of pomegranate is nearly about 4 to 5 lakh tonnes. In Gujarat, area under pomegranate cultivation is 4638 hectare and production is about 50255 metric tonnes. In Banaskantha, area under pomegranate cultivation is 400 hectares and production is 2800 metric tonnes. The farmers in Banaskantha district face some problems and constraints in the adoption of improved package of practices of pomegranate cultivation. Hence, it is necessary to develop a suitable

strategy to overcome the constraints faced by the farmers in adoption of pomegranate technology. For this purpose, it is necessary to have a detail analysis of the constraints. If the extent of the constraints can be identified and appropriate solutions to overcome these constraints are formulated, the area and production of the pomegranate can be increased.

### OBJECTIVES

- 1 To find out extent of adoption of pomegranate cultivation practices by the pomegranate growers.
- 2 To study the relationship between selected characteristics of pomegranate growers and their extent of adoption of pomegranate cultivation practices.

### METHODOLOGY

The present investigation was carried out in Banaskantha district of Gujarat state. Banaskantha district is surrounded by Mehsana district in the South, Sabarkantha

district in the East, Patan district in the West and Marwar and Sirohi area of the Rajasthan state in the North, respectively. The present study was confined to ex-post-facto research design as the independent variables had already operated in the study area. Kerlinger (1976) stated that ex-post-facto research design is worthy to apply when the independent variables have already acted upon. Among the twelve talukas of Banaskantha district, Palanpur and Vadagam talukas were selected for the study because the area and production of these two taluka is higher than other talukas of the districts. Five villages having highest area under pomegranate cultivation were selected purposively from each taluka. Thus, ten villages were selected for the purpose of study. A list of the farmers having at least three years old pomegranate orchards was prepared for each village. Using proportionate random sampling technique, 120 respondents were selected.

The extent of adoption is the degree to which a person actually adopts a practice on full scale. For the purpose of measurement of extent of adoption of various recommended practices of pomegranate crop, a structured schedule was developed. A list of recommended practices to be followed in case of pomegranate crop cultivation was prepared in consultation with the literature and agricultural scientists. Respondents were asked questions to know whether they were following them or not. Each question pertaining to recommended practice was given a score of 0 and 1 for no adoption and complete adoption, respectively. A respondent's general adoption level was determined by using adoption quotient (AQ) developed by Sengupta (1967).

$$\text{Adoption Quotient} = \frac{\text{Number of practices used}}{\text{Number of Recommended practices}} \times 100$$

## RESULTS AND DISCUSSION

### Extent of adoption of pomegranate cultivation practices by the pomegranate growers

The "Adoption process" is the mental process through which an individual passes from first hearing about innovation to its final adoption. While "adoption" is a decision to continue full use of innovation. With a view to find out extent of adoption of scientific pomegranate cultivation practices, the pomegranate growers were asked to give the information about the package of practices adopted by them. On the basis of score obtained by the respondents,

the "Adoption Quotient" was calculated for each respondent. Based on Adoption Quotient, respondents were classified into three categories.

**Table 1: Distribution of the respondents according to their level of adoption quotient** n=120

Sr. No.	Category	Number	Per cent
1	Low (0 to 33.00 per cent)	11	9.17
2	Medium (33.01 to 66.00 per cent)	81	67.50
3	High (66.01 to 100.00 per cent)	28	23.33

The result presented in Table 1 indicate that majority (67.50 per cent) of the respondents were having medium level of adoption. On the other hand 23.33 per cent of respondents fall under the category of high level of adoption whereas only 9.17 per cent of respondents were having low level of adoption.

### (A) Practice wise adoption of pomegranate cultivation practices by the pomegranate growers

**Table 2: Practice wise adoption of pomegranate cultivation practices by the pomegranate growers** n=120

Sr. No.	Suggestions	Frequency	Per cent
1	Improved variety	108	90.00
2	Bahar treatment	104	86.67
3	Harvesting	98	81.67
4	Planting	97	80.83
5	Propagation	94	78.33
6	Fertilizer	87	72.50
7	Plant protection	73	60.83
8	Irrigation	68	56.67
9	Intercropping	54	45.00

The data presented in Table 2 indicated that all nine practices of pomegranate cultivation have been adopted by the pomegranate growers. Among the nine practices of pomegranate cultivation, improved variety of the pomegranate was adopted by majority of the (90.00 per cent) pomegranate growers, while bahar treatment, it was adopted by the 86.67 per cent of the respondents followed by harvesting and

planting 81.67 and 80.83 per cent, respectively.

**Relationship between selected characteristics of pomegranate growers and their extent of adoption of pomegranate cultivation practices**

Since adoption is a mental process, the role of situation or an environment is very crucial. Behaviour takes place in situation, which has profound influence on the individual's action. It was therefore assumed that the adoption of pomegranate cultivation practices is governed by personal, socio-economic, psychological and communication characteristics. An attempt was therefore made to ascertain the relationship if any, between selected personal, social, psychological and communication characteristics of the respondents and their extent of adoption of scientific pomegranate cultivation practices. This was ascertained by computing co-efficient of correlation ('r' value).

**Table 3: Relationship between selected characteristics of the farmers and their extent of adoption of pomegranate cultivation practices n=100**

Sr. No.	Variables	Coefficient of correlation ('r' value)	
<b>I</b>	<b>Personal</b>		
	1	Age	-0.1052 NS
	2	Education	0.2915**
<b>II</b>	<b>Socio – Economic</b>		
	3	Occupation	0.0557 NS
	4	Size of land holding	0.0493 NS
	5	Social Participation	0.1107 NS
<b>III</b>	<b>Psychological</b>		
	6	Knowledge	0.2467**
	7	Risk preference	0.1837*
	8	Economic motivation	0.1880*
	9	Scientific orientation	0.2531**
	10	Attitude	0.1982*
<b>IV</b>	<b>Communication</b>		
11	Sources of information	0.2184*	

\* Significant at 0.05 level of probability

\* Significant at 0.01 level of probability

NS=Non Significant

The data presented in Table 3 reveal that the value of calculated correlation coefficient was -0.1052 which was non-significant indicating no relationship between age of pomegranate growers and their adoption of scientific pomegranate cultivation practices. Education of the farmers had significant relationship with extent of adoption of

pomegranate cultivation practices. The 'r' value being 0.2915 was found positively significant at 0.01 level of significance. It can be seen from Table 3 that occupation of the farmers had non-significant relationship ('r' = 0.0557) with extent of adoption of pomegranate cultivation. It is apparent from Table 3 that calculated correlation coefficient value 'r' = 0.0493 was non-significant indicating that there was no significant relationship between land holding of pomegranate growers and their extent of adoption of pomegranate cultivation practices. It is apparent from Table 3 that calculated correlation coefficient value 'r' = 0.1107 was non-significant indicating that there was no significant relationship between social participation of pomegranate growers and their extent of adoption of pomegranate cultivation practices. The data in Table 3 indicate that the calculated correlation coefficient ('r' = 0.2467) was positively significant at 0.01 level of significance. It can be observed from Table 3 that risk preference of pomegranate growers had positively significant relationship ('r' = 0.1837) with extent of adoption of pomegranate cultivation practices. It is apparent from Table 3 that calculated correlation coefficient 0.1880 was found significant at 0.05 level of significance indicating positive and significant relationship between economic motivation of pomegranate growers and their extent of adoption. It can be observed from Table 3 that scientific orientation of pomegranate growers had positive and significant relationship ('r' = 0.2531) with extent of adoption of scientific pomegranate cultivation practices at 0.01 level of significance. It can be observed from Table 3 that attitude of pomegranate growers had positive and significant relationship ('r' = 0.1982) which extent of adoption of scientific pomegranate cultivation practices at 0.05 level of significance. The data presented in Table 3 indicate that the calculated correlation coefficient (r = 0.2184) was significant at 0.05 level of significance.

**CONCLUSION**

It can be concluded that majority (67.50 per cent) of the respondents were having medium level of adoption and all nine practices of pomegranate cultivation have been adopted by the pomegranate growers. Among the nine practices of pomegranate cultivation, improved variety of the pomegranate was adopted by majority of the (90.00 per cent) pomegranate growers, while bahar treatment was adopted by the 86.67 per cent of the respondents followed by harvesting and planting 81.67 and 80.83 per cent, respectively.

It was also concluded that education (0.2915\*\*), knowledge (0.2467\*\*), risk preference (0.1837\*), economic

motivation (0.1837\*), scientific orientation (0.1880\*), attitude (0.1982\*) and sources of information (0.2184\*) of the farmers had significant relationship with extent of adoption of pomegranate cultivation practices. Similarly age, occupation, land holding had non-significant relationship with extent of adoption of pomegranate cultivation. No significant relationship between social participation of pomegranate growers and their extent of adoption of pomegranate cultivation practices.

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