https://doi.org/10.56572/gjoee.2023.35.1.0018 Gujarat Journal of Extension Education Vol. 35 : Issue 1 : June 23

AN ANALYSIS OF SOCIO-PERSONAL CHARACTERISTICS OF MANGO GROWERS

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ABSTRACT

Socio-personal characteristics of the respondents viz- age, education, farm experience, social participation, land holding, annual income, yield index, extension contact, mass media exposure, innovativeness, scientific orientation, risk orientation, achievement motivation, economic motivation was studied. A multistage, purposive and random sampling technique was selected for the study. To study the profile of mango growers about rejuvenation technology of Gir Somnath district of Gujarat, a study with ex post facto research design was conducted in four talukas named Talala, Kodinar, Una and Sutrapada of Gir Somnath district. The interview schedule was prepared and pre-tested to collect the data. Total 120 respondents were surveyed through personal interview technique. It was revealed that 51.67 per cent of respondents belonged to middle age group, about 41.67 per cent of respondents belonged to middle or secondary school level of education and 60.00 per cent had medium farm experience. Majority (70.83 per cent) of the respondents were under the category of medium social participation, 40.84 per cent had found with medium size of landholding and about 37.50 per cent had medium level of annual income and 57.50 per cent had medium level of yield index. 54.17 per cent belonged to medium extension contact, 60.83 per cent had medium mass media exposure, 64.17 per cent had medium level of innovativeness, more than half (56.67 per cent) of the respondents had medium level of scientific orientation, further 58.33 per cent had medium level of risk orientation. Nearly half (49.17 per cent) of the respondents had medium level of achievement motivation, slightly more than half (52.50 per cent) had medium level of economic motivation.

Keywords: *achievement motivation, education, mango growers, rejuvenation technology, socio personal*

INTRODUCTION

Despite concerted efforts to industrialize the Indian economy, the agricultural sector continues to serve as the primary source of livelihood for the rural population, with initial emphasis placed on cereal crops in early planning stages. However, it was not until the Fourth Five Year Plan that national attention and investment support were extended to horticultural crops. Since then, the horticulture sector in India has experienced notable advancements, now contributing to 30% of the overall agricultural output. Over time, there has been an augmented allocation of plan outlay for horticulture within the domain of Agriculture & allied activities, escalating from 3.9% during the 9th Plan to 4.6% during the 12th Plan, signifying the burgeoning significance of the horticulture sector in India (Anon., 2017a).

Mango (*Mangifera indica* L.), an ancient fruit deeply rooted in Indian heritage, holds a strong case for being designated as the national fruit. Regarded as one of the most exquisite fruits cultivated in India, it enjoys unparalleled popularity among the Indian populace and has consistently earned the title of the "King of Fruits." The decline in mango productivity can be attributed to various factors, predominantly stemming from inadequate management practices. These encompass unsuitable site and climatic conditions, intercropping practices, insufficient nutritional provisions, improper planting techniques, usage of undesirable planting materials, prevalence of insect infestations, pests and diseases, as well as other biotic and abiotic stressors.

India alone account for nearly 80 % of the world mango production. Status of mango production at national level 22.5 lakh MT (Anon., 2018a) in 2017-18 and at state level 1.207 lakh MT (Anon., 2018b) in 2018-19. Major mango producing areas in Gir Somnath district are Una, Kodinar, Talala, Gir Gadhada, Veraval. Flowering in the mango crop starts during the January and ends during February. Major fruit set period of mango is March-April. Mango season with local varieties starts from the May that continues up to the July. Kesar varieties are exported to other states from Gir Somnath district. Veneer grafting, epicotyle grafting and inarching are the main plant propagation methods of mango in Gir Somnath district. A substantial quality is being

exported to different parts of the world. Mango pulp is rich in vitamin A, vitamin C and carbohydrate.

Keeping in view the economic importance of mango and its commercial value, the present study was carried out to know the socioeconomic characters of the farmers indulged in mango cultivation.

OBJECTIVES

(1) To know the socio-personal characteristic of mango growers in study area

(2) To determine the association between selected characteristics of the mango growers and their perception level about rejuvenation technology

METHODOLOGY

The present study was conducted in Gir Somnath district of Gujarat state during 2019-20. *Ex-post facto* research design was followed for carrying out the study. The simple random sampling was used for selection of taluka, village, and respondent. Gir Somnath district is comprised of nine talukas and out of them 4 talukas were selected randomly for the study viz; Talala, Kodinar, Una and Sutrapada. Three villages were selected randomly from the each selected taluka. Thus, total 12 villages were selected for the study. Thus, 120 mango growers were selected as sample

An interview schedule was developed in accordance with the objectives of the study and it was pretested. The data of this study were collected with the help of structured interview schedule. The collected data was interpreted in order to make the finding meaningful.

The socio-personal variables studied in the present investigation are as follows:

Age: The age of the mango growers was measured as the number of completed years reported by the respondent at the time of interview.

Education: The education of the respondents was measured as the level of education in terms of the educational standard that respondents had passed. The respondents were divided into different categories on their level of education in terms of educational standard one has passed. It was measured with the help of scale developed by Pandya and Pandya (2008).

Farm Experience: It was measured with the help of the scale developed by Bora (1986). To measure farm experience, one score was given for each year for an informal apprentice during young age under the supervision of a senior member of the family. Two scores were given for each year to the respondent as an adult farmer who worked independently in managing his farm. The summation of these two categories of the s core was taken as the respondent's score for farm experience.

Social Participation: It was measured with the help of the scale developed by Subramanium (1986) with the necessary modification to suit in the present study.

Size of land holding: It was measured with help of structured schedule on the basis of total land possessed by the respondents. On the basis of land possessed in hectares, the respondents were grouped into six categories using scale developed by Pandya and Pandya (2008).

Annual income: This indicates the total annual income expressed in rupees earned by the respondents from farm enterprises. The actual income in monetary term was taken into account. On the basis of arbitrary method, the respondents were categorized in to following five groups. The frequency and percentage were calculated for each category as very high, high, medium, low and very low category of annual income, respectively.

Yield index: The respondents were asked to mention the total area in hectare under mango cultivation and total production of mango (in quintal). The yield of mango on a farm of respondents compared with the average yield of 100 respondents (quintal/ha) in terms of percentage.

Extension contact: It is the degree of involvement of mango growers in different extension activities. The respondents were asked to indicate the frequency of their contact in with extension personal on a three-point continuum viz. regularly, occasionally and assigned scores 2, 1, and 0 respectively.

Mass media exposure: To measure the mass media exposure of the respondents, the scores were assigned to respondents on the basis of frequency of their use of various sources of information. The scores assigned to various frequencies of uses were regularly (3 score), frequently (2 score), once in a week (1 score) and not at all (0 score).

Innovativeness: The procedure developed by Singh (1977) was used with slight modification to measure the innovativeness of the beneficiaries. The scale consisted of five statements with 5, 4, 3, 2, and 1 scores. The respondents were asked to indicate the statement that better described them; it became the individual respondents score. Based on the score respondents were grouped into low, medium and high innovativeness groups by mean and standard deviation.

Scientific orientation: It was measured with the help of scale developed by Supe (1969).

Risk orientation: The risk orientation is described as the degree to which an individual is oriented towards the risk, uncertainty and courage to face the risk in farming. Farmer's willingness to take risk was measured by the means of scale developed by Supe (1969).

Achievement motivation: Operationally it is the degree of disposition to achieve something excellent. achievement motivation of the mango growers was worked out by using the scale developed by Singh (1974) with slight modifications.

Economic motivation: The economic motivation is defined as an occupational success in terms of profit maximization and the relative value of respondent's places on economic ends. Economic motivation of the respondents was measured with the help of economic motivation scale worked out by Supe (1969) with slight modifications.

Coefficient of Correlation (r)

To find out the relationship between dependent and independent variables, the Pearson's product moment method of computing correlation coefficient, which provides generally accepted means for measuring the relationship was used (Chandel, 1975). Following formula was used to calculate the correlation coefficient (Garret, 1967).

$$r = \frac{SP(XY)}{\sqrt{SS(x)SS(y)}}$$

Where,

r = Co-efficient of correlation

X and Y = Two variables under study

SP(XY) = Sum of product of the deviations on x and y from their means

SS(x) = Sum of squares of deviations due to 'x' variable

SS(y) = Sum of squares of deviations due to 'y' variable

RESULTS AND DISCUSSION

Table 1: Socio-personal profile of the mango growers (n = 120)

Sr. No	Personal characteristic	Category		Frequency	Percentage
1	**Age**	Young age (up to 35 years)		22	18.33
		Middle age (36 to 50 years)		62	51.67
		Old age (above 50 years)		36	30.00
2	**Education**	College/post-graduation		10	08.33
		Higher school (11th& 12th standard)		22	18.33
		Middle school (9th to 10th standard)		50	41.67
		Primary school (1st to 8th standard)		24	20.00
		Functionally literate		08	06.67
		Illiterate		06	05.00
3	**Farming Experience**	Less (< Mean – S. D.)	(below 22.21)	19	15.83
		Medium (Mean ± S. D.)	(22.21 to 73.71 year)	72	60.00
		High (> Mean + S. D.)	(above 73.71year)	29	24.17
		Mean = 47.96 **S.D.** = 25.75			
4	**Social participation**	Low (< Mean – S. D.)	(below 1.00 score)	20	16.67
		Medium (Mean ± S. D.)	(1.00 to 7.26 score)	85	70.83
		High (> Mean + S. D.)	(above 7.26 score)	15	12.50
		Mean =4.13 **S.D.** = 3.13			

Sr. No	Personal characteristic	Category		Frequency	Percentage
5	**Land holding**	Marginal (up to 1.00 ha)		12	10.00
		Small (1.01-2.00 ha)		21	17.50
		Semi medium (2.01-4.00 ha)		16	13.33
		Medium (4.01-10.00 ha)		49	40.84
		Large (>10.01 ha)		22	18.33
6	**Annual income**	Very high (₹4,15,001 to ₹ 5,00,000)		10	08.33
		High (₹ 3,30,001 to ₹ 4,15,000)		36	30.00
		Medium (₹ 2,45,001 to ₹ 3,30,000)		45	37.50
		Low (₹ 1,60,001 to ₹ 2,45,000)		20	16.67
		Very low (₹ 75,000 to ₹ 1,60,000)		09	07.50
7	**Yield index**	Low (< Mean – S. D.)	(Up to 41.70)	27	22.50
		Medium (Mean ± S. D.)	(41.70 to 79.98)	69	57.50
		High (> Mean + S. D.)	(Above 79.98)	24	20.00
		Mean = 60.84 **S.D.** = 19.14			
8	**Extension contact**	Very low (below 3.6 score)		10	08.33
		Low (3.6 to 7.2 score)		25	20.83
		Medium (7.3 to 10.8 score)		65	54.17
		High (10.9 to 14.4 score)		17	14.17
		Very high (14.5 to 18 score)		03	02.50
9	**Mass media exposure**	Low (< Mean – S. D.)	(Up to 8.19)	23	19.17
		Medium (Mean ± S. D.)	(8.19 to 21.25)	75	60.83
		High (> Mean + S. D.)	(Above 21.25)	24	20.00
		Mean = 14.72 **S.D.** = 6.53			
10	**Innovativeness**	Low (< Mean – S. D.)	(Up to 2.50)	15	12.50
		Medium (Mean ± S. D.)	(2.50 to 4.74)	77	64.17
		High (> Mean + S. D.)	(Above 4.74)	28	23.33
		Mean = 3.62 **S.D.** = 1.12			
11	**Scientific orientation**	Low (< Mean – S. D.)	(Up to 13.39)	19	15.83
		Medium (Mean ± S. D.)	(13.39 to 22.99)	68	56.67
		High (> Mean + S. D.)	(Above 22.99)	33	27.50
		Mean = 18.19 **S.D.** = 4.80			
12	**Risk orientation**	Low (< Mean – S. D.)	(Up to 12.84)	18	15.00
		Medium (Mean ± S. D.)	(12.84 to 20.00)	70	58.33
		High (> Mean + S. D.)	(Above 20.00)	32	26.67
		Mean = 16.42 **S.D.** = 3.58			
13	**Achievement motivation**	Very low (6.00 to 11.80 score)		08	06.67
		Low (11.81 to 16.60 score)		26	21.67
		Medium (16.61 to 20.40 score)		59	49.16
		High (20.41 to 26.20 score)		14	11.67
		Very high (26.21 to 30.00 score)		13	10.83
14	**Economic motivation**	Very low (6 to 10.80 score)		10	08.33
		Low (10.81 to 15.60 score)		27	22.50
		Medium (15.61 to 20.40 score)		63	52.50
		High (20.41 to 25.20 score)		15	12.50
		Very high (25.21 to 30.00 score)		05	04.17

The data presented in the Table 1 indicated that 51.67 per cent of the mango growers belonged to middle age group, followed by old age (30.00 per cent) and young age (18.33 per cent) group, respectively. This finding was similar with Bhabhor *et al.* (2019) and Tankodara (2019). 41.67 per cent of mango growers were educated up to middle school or secondary school level, followed by slightly more than one-fifth 20.00 per cent of them were having education up to primary school level, 18.33 per cent educated up to higher secondary level and 06.67 per cent were functionally literate. Further, it was noted that only 08.33 per cent had college level education and 05.00 per cent of the respondents were illiterate. This finding was in concurrence with the findings of Lohare (2017) and Tankodara (2019). 60.00 per cent of the respondents had medium farm experience; whereas 24.17 per cent and 15.83 per cent of the respondents had high and low farm experience, respectively. This finding was in line with finding of Raviya (2017).

Majority (70.83 per cent) of the respondents had medium social participation; whereas 16.67 per cent and 12.50 per cent of the respondents had low and high social participation, respectively. This finding was similar with the findings of Saradhara (2018) and Tankodara (2019). 40.84 per cent of the respondents were having medium size of land holding, followed by large size of landholding (18.33 per cent) and small size of landholding group (17.50 per cent). Only 13.33 per cent and 10.00 per cent of respondents have semi medium and marginal of landholding, respectively. This finding was in conformity with the findings of Raviya (2017) and Tankodara (2019). Near about two-fifths (37.50 per cent) of the respondents had medium level of annual income (₹ 2,45,001 to ₹ 3,30,000) followed by 30.00 per cent had high level of annual income (₹ 3,30,001 to ₹ 4,15,000) and 16.67 had low annual income (₹ 1,60,001 to ₹ 2,45,000). It can also be depicted that 08.33 per cent of respondents had very high annual income (₹ 4,15,001 to ₹ 5,00,000) and only 07.50 had very low annual income (₹ 75,000 to ₹ 1,60,000). This finding was in conformity with the findings of Lohare (2017) and Tankodara (2019). 57.50 per cent of the mango growers had medium mango yield index, whereas 22.50 per cent and 20.00 per cent of respondents had low and high mango yield index respectively. Similar findings were reported by Raviya (2017) and Datta (2018).

More than half (54.17 per cent) of the mango growers had medium level of extension contact, followed by 20.83 per cent, 14.17 per cent and 08.33 per cent had low, high and very low level of extension contact, respectively. This finding was in conformity with the findings of Badhe (2012) and Tankodara (2019). 60.83 per cent had medium level of mass media exposure followed by high mass media exposure (20.00 per cent) and low mass media exposure (19.17 per cent). This finding was line with the findings Bhabhor *et al.* (2019) and Tankodara (2019). 64.17 per cent of the respondents were found from medium innovativeness, followed by 23.33 per cent and 12.50 per cent of them had high and low innovativeness, respectively. This finding was similar with the findings Raviya (2017) and Saradhara (2018). 56.67 per cent had medium level of scientific orientation, followed by 27.50 per cent and 15.83 per cent had high and low level of scientific orientation, respectively. This finding was in conformity with the findings Lohare (2017) and Tankodara (2019). 58.33 per cent of the respondents had medium risk orientation, followed by 26.67 and 15.00 per cent of the respondents having high and low risk orientation, respectively. This finding was in conformity with the findings of Jagatpal *et al.* (2017), Saradhara (2018) and Tankodara (2019).

Slightly less than half 49.16 per cent of the respondents had medium achievement motivation, followed by 21.67 and 11.67 per cent of the respondents had low and high achievement motivation, respectively. This finding was in conformity with the findings of Khodifad (2010) and Lad *et al.* (2013). 52.50 per cent of the mango growers had medium degree of economic motivation, followed by low, high and very low degree of economic motivation with 22.50 per cent, 12.50 per cent and 8.33 per cent respectively. This finding was in line with the findings Ram (2015) and Jagatpal *et al.* (2017).

Table 2: Association between selected characteristics of mango growers with their perception regarding mango rejuvenation technology (n = 120)

Sr. No.	Name of the independent variables	'r' value
X_1	Age	0.0872^{NS}
X_2	Education	0.2182*
X_3	Farm Experience	0.1877*
X_4	Social participation	0.2137*
X_5	Size of land holding	0.0778^{NS}
X_6	Annual income	0.2167*
X_7	Yield index	0.1875*
X_8	Extension contact	0.2591**
X_9	Mass media exposure	0.2249*
X_{10}	Innovativeness	0.2258*
X_{11}	Scientific orientation	0.2017*
X_{12}	Risk orientation	0.2182*
X_{13}	Achievement motivation	0.2204*
X_{14}	Economic motivation	0.1974*

* = Significant at 5% level, ** = Significant at 1 % level, NS = Non significant

The table 2 shows that the characteristics of the respondent i.e. extension contact and had positive and highly significant relationship with the perception of respondents about mango rejuvenation technology.

The characteristics of the respondents like education, farm experience, social participation, annual income, yield index, mass media exposure, innovativeness, scientific orientation, risk orientation, achievement motivation and economic motivation were positively and significantly associated with the perception of respondents about mango rejuvenation technology.

There was non-significant relationship between the perception of respondents about mango rejuvenation technology with their age and size of land holding.

As regards to association between selected characteristics of the respondents and their level of perception, it was observed that age had positive and non-significant, association with level of perception according to Badhe (2012); education had positive and significant association with level of perception according to Gorfad (2012); farm experience had positive and significant association with level of perception according to Badhe (2012) and Chand (2012); social participation had positive and significant association with level of perception according to Badhe (2012) and Gorfad (2012); size of land holding had non-significant association with level of perception according to Badhe (2012); annual income had positive and significant association with level of perception according to by Gorfad (2012); yield index had positive and highly significant association with level of perception according to Gorfad (2012); extension contact had positive and highly significant association with extent of perception according Farouque and Takeya (2007) and Badhe (2012); mass media exposure had positive and significant association with level of perception according Chand (2012); innovativeness had positive and significant association with level of perception according Chand (2012); scientific orientation had positive and significant association with level of perception according to Badhe (2012); risk orientation had positive and significant association with level of perception according to Chand (2012) and Gorfad (2012); achievement motivation had positive and significant association with level of perception according to Raksha (2014); economic motivation had positive and significant association with level of perception according to Chand (2012).

CONCLUSION

The analysis indicates that a majority of the farmers in the study were middle-aged, had a moderate level of education, possessed average farming experience, engaged in medium levels of social participation, had medium-sized land holdings, earned a moderate annual income, achieved average yield index results, had moderate contact with agricultural extension services, had moderate exposure to mass media, demonstrated a moderate level of innovativeness and scientific orientation, and displayed average levels of risk orientation, achievement motivation, and economic motivation. Notably, there was a positive and highly significant relationship between extension contact and the respondents' perception. These findings could be valuable for administrators and field workers seeking to comprehend the current state of mango cultivation and design and implement programs that benefit mango growers.

CONFLICT OF INTEREST

This is to declare that there is "No conflict of interest" among researcher.

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Received : February 2023 : Accepted : April 2023