



A Study on Socio-Economic Status of Mango Growers in Bijnor District of Western Uttar Pradesh

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Mango is a tropical and subtropical fruit crop grown in India over an area of 2258.13 thousand hectares with production of 21822.32 metric tons. The total area under mango cultivation in Uttar Pradesh is 265.62 thousand hectares with 4551.83 metric tons production 2017-18. In Bijnor district of Uttar Pradesh, mango grown 5.91 thousand hectares area with 118.09 metric tons production of mango in the same period. Mango grown in diverse agro climatic conditions faces differential biotic and abiotic stress limiting the production and productivity of mango that influenced the economic condition of mango Growers. The purpose of the present study was to examine the socio-economic status of mango growers in Bijnor district of Western Uttar Pradesh. The result of the analysis shows that 39.09 percent of respondent fall within the age range of 46 to 60 years, general caste (53.64 percent), education level-literate (50.91 percent), family type-joint

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family (69.09 percent), family member-4 to 6 members (67.27), land holding size-above 5 hectare (50.91 percent), irrigation facilities-own (84.55 percent), 58.18 percent of respondents were engaged in farming activities only and 25.00 percent respondent were doing farming with business. 38.18 percent respondent got more than Rs 300000.00 annual income, 36.82 percent respondent have their own pumping set and electric motor and 53.64 respondent has not participated in any technical programme.

Keywords: Socio-economic status; mango growers; respondent.

1. INTRODUCTION

Mango (*Mangifera indica*) is one of the most nutritious and high value fruit crop for the nutritional security. Mango is also known as "king of fruit". It belongs to family Anacardiaceae. Mango is a tropical and subtropical fruit crop grown in India over an area of 2258.13 thousand hectares with production of 21822.32 metric tons. India is the second largest producer of fruit crop after China. A large variety of fruits are grown in India, of which mango, banana, citrus, grapes, pineapple and Apple are the major ones. Apart from these fruits, fruit like papaya, anola, phalsa, jackfruit, ber, pomegranate in tropical and subtropical groups and peach, pear, almond, walnut, apricot and strawberry in the temperate group are also grown in sizeable areas. Although fruit is grown throughout of the country, the major fruit growing state are Maharashtra, Tamil Nadu, Karnataka, Andhra Pradesh, Bihar, Gujarat and Uttar Pradesh. Total area under mango cultivation in Uttar Pradesh is 265.62 thousand hectares with 4551.83 metric tons production in 2017-18. In the Bijnor district of the Uttar Pradesh, mango-grown 5.91 thousand hectares area with 118.09 metric tons production of mango in the same period [1]. Socio-economic condition particularly age, education, income, land holding size and extension contact greatly influenced the knowledge level of the farmers. The farmers should be sufficiently exposed to the technological developments so that they will develop confidence as well as competency and adopt improved practices resulting in area expansion, better production and productivity. Bijnor district has much potential to grow mango farming because district has diverse agro climatic condition so it is essential to find out the socio-economic status of mango growers for planning of policies and extension strategies in the distinct.

2. MATERIALS AND METHODS

This study was conducted in Bijnor district of Western Uttar Pradesh. Bijnor district comprise of 11 blocks. Two villages from each block were

selected randomly on the basis of orchard availability. Thus the total number of 22 villages was selected for the investigation and 10 mango growers were selected from all selected villages. Thus the total sample size was of 220 respondents. The responses of mango growers were collected through comprehensive schedule developed by researcher later the responses were tabulated. The data were analysed and find out the percentage and frequency [2,3].

2.1 Percentage

The frequency of a particular cell was divided by the total number of respondents in that particular category and multiplied by hundred.

$$\begin{aligned} \text{Percentage (\%)} \\ &= \frac{\text{Actual no. of respondent}}{\text{Respondents or Score}} \times 100 \end{aligned}$$

2.2 Mean

It was calculated to the average value of particular score. The formula is given below

$$\text{Mean score} = \frac{\text{Total scores on particular item}}{\text{No of Respondents}}$$

3. RESULTS AND DISCUSSION

3.1 Socio-economic Status of the Mango Growers

3.1.1 Age

Among the socio-economic status characteristics, age is one of the most important character in understanding their view about the particular problems, by a large age indicates extent of maturity in particular individuals. In that sense age becomes more important to examine the response.

Table 1 indicates that majority of the mango growers belonging to the middle age (39.09%)

followed by lower middle age (28.18%); young age (21.82%) and old age (10.91%) mango growers respectively. These same trends were also reported by many researchers [4,5,6,7].

3.1.2 Caste

Table 2 focuses that a maximum number of the mango growers belonging to general caste category. Out of total sample size highest percentage of mango growers (53.64) belonged to general caste category followed by 36.36 and 10.00 percent belongs to other backward caste and scheduled caste and schedule tribes caste categories respectively. The data revealed that the general caste person was having dominance in all type of activities of the village because of being more in number. The lower caste category person did not come together on single platform. This was also observed as one of the main reason due to which the rate of participation of all categories person is lower in training, meeting and development activities [8,9]. Thus, it is concluded that the majority of mango growers (53.64) percent were belong to general caste.

3.1.3 Education

It is well known fact that education is one of the most important characteristics that might affect the person's attitudes and the way of looking and understanding any particular phenomena. In a way, the response of an individual is likely to be determined by his educational status and therefore it becomes imperative to know the educational background of the mango growers. Hence the variable 'Educational level' was investigated by the researcher and the data pertaining to education is presented in a given in Table 3.

Table 3 revealed that 50.91 percent majority of the mango growers was literate as against illiterate person (7.27 percent). Further, the educational standard of literate mango grove in descending order was found as 10.91 percent, 9.09 percent, 6.36 percent, 5.45 percent, 3.64 percent, 2.73 percent were of High school, Intermediate, Junior High school, Primary school, Can read and write, Graduate and Postgraduate and about respectively [9,10].

3.1.4 Family type

The type of family in which a person live and gets socialized has immense important in deciding his or her values, beliefs and behavior patterns which are likely to affects his or her attitudes

towards a particular problem. Hence, the family type plays its own role in giving the response of an individual and therefore it was thought important to understand the family type of the mango growers.

Table 4 indicate that 69.09 percent mango growers were associated with joint family system while 30.91 percent mango growers were belonged to single family system hence the joint family system was dominated in the study area [5,10].

3.1.5 Family size

Family size is also an important factor that influences the dominancy in the society. These influencers are shown in the Table 5.

It is evident from the Table 5 that the highest percentage (67.27) of the Mango growers was belongs to the family who had 4 to 6 member in their family. 27.73 percent mango grower's family belongs to that family who had three members and 5.00 percent mango growers family belongs to that family who had more than 7 family members. It may be concluded that still there is dominancy of joint family system with 4 to 6 member in the study area. Similarly to reported that the most of mango growers were lived in joint family system and had 4 to 6 family members.

3.1.6 Size of land holding

Size of land holding is also more important factor in socio- economic status of the farmer's family. Land holding in the study areas of mango growers is given in Table 6.

Table 6 indicates that the maximum mango growers (50.91) percent were found in the land holding category of large mango growers (above 5.0 ha.) followed by 29.55 percent mango growers have medium land holding categories (2 to 5 ha.), 14.09 percent mango growers have small land holding category (1 to 2 ha.) and 5.45 percent marginal mangrove mango growers who had less than 1 hectare land. Some researcher also found the same trend that large land holding families grows mango [3,9,10].

3.1.7 Irrigation facility

It is clear from the Table 7 that the 84.55% farmers have their owned irrigation sources (diesel engine and tube well). Along with the

10.00 percent mango growers use to hire irrigation sources like government and private tube well. Only 5.45 percent mango growers use to natural irrigation sources like canal, river and lakes. The result showed that the most of the

mango growers were not dependent on natural sources and they did not hired government or private tube well. It showed that the strong economic condition of the mango growers of the study area.

Table 1. Distribution of mango growers according to their age

SN	Categories (Years)	Mango growers	
		Frequency	Percentage
1	Young (15-30)	48	21.82
2	Lower middle (31-45)	62	28.18
3	Middle (46-60)	86	39.09
4	Old age (>61)	24	10.91
	Total	220	100

Table 2. Distribution of mango growers according to their caste

SN	Categories	Mango growers	
		Frequency	Percentage
1	General caste	118	53.64
2	Other backward caste	80	36.36
3	Scheduled caste/ Scheduled Tribes	22	10.00
	Total	220	100

Table 3. Distribution of mango growers according to their education

SN	Categories	Mango growers	
		Frequency	Percentage
1	Illiterate	16	7.27
2	Literate	112	50.91
(a)	Can read and write	8	3.64
(b)	Primary School	12	5.45
(c)	Junior High School	14	6.36
(d)	High School	24	10.91
(e)	Intermediate	20	9.09
(f)	Graduate	8	3.64
(g)	Post Graduate	6	2.73
	Total	220	100

Table 4. Distribution of mango growers according to their family type

SN	Categories	Mango Growers	
		Frequency	Percentage
1	Single Family	68	30.91
2	Joint Family	152	69.09
	Total	220	100

Table 5. Distribution of mango growers according to their family size

SN	Categories	Mango Growers	
		Frequency	Percentage
1	Up to 3 member	61	27.73
2	4 to 6 member	148	67.27
3	7 and above	11	5.00
	Total	220	100

3.1.8 Mango growers occupation

Person's occupations have a bearing on his or her personality and so also the ways of looking at the problem before him. The quality of life is also determined by an individual's occupations and the income he derives from it. Occupation of an individual also socialized him or her in a particular fashion which in turn reflects his or her pattern of behaviors and his or her extent understanding of particular phenomena. In other worlds the person response to a problem is possible determined by the type of occupations who is engaged in and hence venerable occupations was investigated by the researcher and data pertaining to occupation is presented in given in Table 8.

It is clear from the about table that the mango growers was the main occupation 72.27 percent followed by service 12.73 percent, business 6.82 percent, agro-based enterprises 5.45 percent and caste based occupations 2.73 percent, respectively. In case of subsidiary occupations, the maximum 58.18 percent of the mango growers belong to agriculture mango family category followed by business mango family 25.00 percent, agro based enterprises 14.55 percent and caste based occupations 2.27 percent, respectively and anyone was responses were given by mango growers as a agriculture labour and service. Similar finding were also reported by who reported that the main occupation of mango growers was mango farming, with subsidiary occupations including sugar cane and dairy farming and rendering of other services [8,9,10,11].

3.1.9 Annual income

Income of a person plays important role in shaping the economic conditions of an individual which in turn is likely to have a bearing on the response about the problem posted to him. The researcher, therefore in this study attempted to investigate the income as variable and the data

related to income of the mango growers is presented in Table 9.

The annual income of the mango Growers were showed in Table 9 that 38.18 percent Mango Growers fall in the income group of rupees above 3,00,000/ followed by 25.91 percent farmers whose income is between rupees 200000 to 300000 lac, 18.64 percent farmers whose income is between 100000 to 200000 and 17.27 percent mango Growers whose income is upto100000, respectively. The above finding of the table showed that about 38.18 percent of mango growers fall in the income group of rupees above 300000/ lac.

3.1.10 Farm power

Farm power machinery is also a character which indicates the socio-economic status of the mango growers. Farm machinery status of the mango growers is given in Table 10.

The Table 10 indicates that the 40.00 percent mango growers were found having their tractor with all required implements followed by 36.82 percent,15.91 percent and 7.27 percent there are pumping set/electric motors, jhhota buggi and power sprayer, respectively. The results showed that the mango growers were good in their materials possession and it is a good to know that the mango growers were improving themselves as it is good for the cultivation of mango and improve the production technologies.

3.1.11 Social participation

Social participation of a person in various events and gathering shows his degree of involvement in his social and cultural life. This is likely to have an impact on this views and attitudes about the particular problem. Keeping this in mind variable social participations was considered for the investigation and data of the same is presented in a cursory glance over the data depicted in the Table 11.

Table 6. Distribution of mango growers according to their size of land holding

SN	Categories	Mango growers	
		Frequency	Percentage
1	Marginal (<1 ha)	12	5.45
2	Small (1-2 ha)	31	14.09
3	Medium (2-5 ha)	65	29.55
4	Large (>5 ha)	112	50.91
	Total	220	100

Table 7. Distribution of mango growers according to their irrigation facility

SN	Categories	Mango growers	
		Frequency	Percentage
1	Own (Diesel Engine, Tube well)	186	84.55
2	Hired (Govt. Tube well & Private Tube well)	22	10.00
3	Natural (Canal, River, Lake)	12	5.45
	Total	220	100

Table 8. Distribution of mango growers according to their occupation

SN	Categories	Mango growers			
		Main occupation		Subsidiary occupation	
		Frequency	Percentage	Frequency	Percentage
1	Agriculture Labour	00	00	00	00
2	Caste based occupation	6	2.73	5	2.27
3	Service	28	12.73	00	00
4	Agriculture (Mango Farming & Agricultu	159	72.27	128	58.18
5	Business	15	6.82	55	25.00
6	Agro-based Enterprises	12	5.45	32	14.55
	Total	220	100	220	100

Table 9. Distribution of mango growers according to their annual income

SN	Categories	Mango growers	
		Frequency	Percentage
1	Up to Rs.1,00,000	38	17.27
2	Rs. 1,00,001 to 2,00,000	41	18.64
3	Rs. 2,00,001 to 3,00,000	57	25.91
4	Above Rs. 3,00,001	84	38.18
	Total	220	100

Table 10. Distribution of mango growers according to their farm power

SN	Categories	Mango growers	
		Frequency	Percentage
1	Jhhota buggi	35	15.91
2	Tractor with all required impalements	88	40.00
3	Pumping set/ Eclectic Motors	81	36.82
4	Power sprayer	16	7.27
	Total	220	100

Table 11. Distribution of mango growers according to their social participation

SN	Categories	Mango growers	
		Frequency	Percentage
1	No participation	118	53.64
2	Participation in one organization	71	32.27
3	Participation in two organization	24	10.91
4	Participation in more than two organization	7	3.18
	Total	220	100

The Table 11 indicates that out of 220 mango growers, 53.64 percent mango growers showed no participation in any organization followed by 32.27 percent mango growers who were participated in one organization, 10.91 percent

mango growers who were participated in two organizations and remaining 3.18 percent mango growers who were participated in more than two organization, respectively and no one was found as office bearer member of any organization.

4. CONCLUSION

Based on the finding of this study, it could be concluded that mango production in the study area is profitable but there are many constraints like advantage of other agricultural crops over the mango because sugarcane is dominant crop in Western Uttar Pradesh and it is hardy crop and give more return per unit area in any situations. The farm specific techniques and training are not upto the mark so this can encourage farmers to remain in the mango farming that means none of the farmers achieved their maximum efficiency level to grow mango. Bijnor distinct has much potential to grow mango farming because Bijnor has diverse agro climate. There result can call for policies aimed at encouraging new mango growers especially the youths who are agile and stronger to grow mango and the experienced ones to remain in mango farming.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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