Socio-Economic Profile of Fruit Crop Growers of Karnataka and their Relationship with Entrepreneurial Behaviour

ABSTRACT

The study was conducted in Vijayapura district of Karnataka during 2020 to study the socio-economic profile of fruit crop growers and their relationship with entrepreneurial behaviour. Forty each grape, lime and pomegranate growers were selected by use of simple random sampling technique. Thus, making a total sample size of 120. The findings revealed that more than two fifth (42.50 %) of the fruit crop growers belonged to middle age group, one fourth of them had middle school education, nearly half (48.33 %) were practicing crop production as main occupation, more than two fifth (43.33 %) of them were found to have medium sized family, more than one third (37.50 %) of them had medium experience in fruit crop cultivation, nearly half (49.17 %) of the fruit crop growers were small farmers, 35.00 per cent of them were found under medium income category. More than two fifth (43.33 %) of them were found to have medium level of social participation, 40.83 per cent of them had medium level of mass media exposure, extension participation and deferred gratification, 45.00 per cent of them had medium level of value orientation, two fifth (40.00 %) had medium level of self-reliance and more than one third (35.00 %) of them belonged to medium level of cosmopoliteness.

Keywords: *Fruits, grape, lime, pomegranate, profile characteristics, entrepreneurial behaviour*

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1. INTRODUCTION

Horticulture is an essential component in the economy of our country. Cultivation of horticultural crops has led to the improved economic condition of farmers because of higher returns from many perennial fruit crops, vegetables, seasonal flower crops and marketing of produce throughout the year. Raising horticultural crops has been recognized as an ideal option to improve the livelihood security, attaining food security, enhancing employment generation and also to get additional income through value addition for the farming community. Horticulture crops, particularly fruit and vegetable crops are comparatively resilient to changes in weather conditions and are mostly taken up by small and marginal farmers to augment their income. This sector also enables the countrywide population to enjoy a diverse and balanced diet for a healthy living and has thus gained prominence over the last few years contributing a growing share in the total output of agriculture and allied sectors.

The scenario of horticulture crops in India has become very encouraging. The percentage share of horticulture output in agriculture has increased up to 33%. Under the purview of agriculture and allied activities, the share of outlay for horticulture which was 3.9 % during the IX five-year plan, was increased to 4.6 % during the XII five-year plan. India's presence in the global horticulture market has also been

growing at a rapid rate. In India, fruit and vegetable production has outpaced food grain production. Total horticulture production in the year 2022-23 is estimated to be 351.92 million tonnes (PIB, 2023).

Horticulture plays a crucial role in the lives of the farming community of Karnataka as well. Karnataka is a prominent player in the fruit sector by occupying the sixth position in the production of fruit crops in India with a 7.4 per cent share. The total area under fruit crop cultivation in Karnataka is at 4.31 lakh hectares with a production of 7.1 million MT. The major fruit crops grown in the state include mango, grape, pomegranate, banana, papaya, watermelon and citrus fruits (Horticulture statistics division, 2018).

Vijayapura district occupies a special place as a major fruit producing district of Karnataka. Though facing the constraints of water scarcity and dry land throughout the year, farmers have still diversified their farm with raising fruit crops such as grape, lime, pomegranate, banana and papaya. Fruit crops occupy 24.4 thousand hectares of area with production up to 4.43 lakh tonnes in Vijayapura district (District statistical officer, 2018). Fruit crops grown in the district such as grape, lime, pomegranate, banana, sapota, mango and papaya are the major source of livelihood.

Entrepreneurship is the capacity of a person to introduce innovative techniques in business operations. It has been accepted globally as an effective tool for widening the entrepreneurial base for those who have poor financial resources or managerial background. Entrepreneurship paves the way for multidimensional development in several ways, *viz*., bearing the risks, assembling and harnessing various inputs, innovating the techniques of production to reduce the cost and increase its quality and quantity, expanding the horizons of the market, and coordinating and managing the manufacturing unit at various levels. The need for agricultural development combined with the problems of poverty and unemployment has brought the concept of rural entrepreneurship to the fore. The future progress of the farming community in the country depends on the entrepreneurial behaviour of farmers.

Rural development is positively linked to entrepreneurship. Entrepreneurship is seen as the tool to hasten the rural development process by both individuals and developmental institutions. Fruit crops are an excellent prospect for entrepreneurship for farmers as they give higher yield per unit area, higher returns per unit area, ensure efficient utilization of resources on the farm and have various post-harvest, processing and value addition opportunities. A farmer who is willing to take risks and manage the farm well, then they can reap the entrepreneurial benefits and that will pave the way for the farming community's overall growth. Entrepreneurship in fruit crops can be seen as a forefront of the new age development in the agriculture sector. Keeping these in mind, this study was necessary. The profile of fruit crop growers gives a snapshot of the prevailing socio- economic conditions of the farmers which would help extension agencies to concentrate their efforts in the right direction for overall improvement of horticulture in the study area.

2. METHODOLOGY

The study was conducted in 2019-20 in Vijayapura district of Karnataka state. This district is one of the leading producers of fruit crops in Karnataka. Hence, Vijayapura district was purposively selected for the study. Out of five taluks in the district, Vijayapura and Indi taluks were selected based on having maximum area highest production and productivity of fruit crops. Two villages from each of these two taluks having the highest area under fruit crop cultivation were selected for the study. Bijjaragi

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and Nagathan from Vijayapura district and Atharga and Tamba from Indi district were selected on the same principle of having highest area under fruit crop cultivation. Then, from each village, 10 grape growers, 10 lime growers and 10 pomegranate growers were selected randomly. Thus, the total respondents constituted for the study were 120.

The independent variables considered for the investigation were age, education, occupation, family size, experience in fruit crop cultivation, land holding, annual income, social participation, mass media exposure, extension participation, value orientation, self-reliance, cosmopoliteness and deferred gratification. Keeping in view the review of literature, these independent variables were said to have an effect on the entrepreneurial behaviour. The scale developed by Shirur (2015) with suitable modifications was used to study the dependent variable, entrepreneurial behaviour. Personal interview method was used to collect data and appropriate statistical tools such as frequency, per cent, correlation test and chi-square test were applied to analyse the data.

3. RESULTS AND DISCUSSION

3.1 Personal characteristics of fruit crop growers

It is apparent from Table 1 that, as high as 42.50 per cent of the respondents belonged to middle aged category followed by old (30.83 %) and young (26.67 %) age categories, respectively. The possible reason for the majority of respondents belonging to middle age is that the middle-aged fruit crop growers were optimistic and ready to take up any innovative practices to earn profit. Further, they are enthusiastic, have more physical vigour and possess higher work efficiency than older and younger fruit crop growers. The results are in conformity with the results of Chavan et al. (2013), Sumana (2017) and Doddamani et al. (2018).

One fourth (25.00 %) of the respondents were educated up to middle school level. This was observed due to the respondents' poor family condition and lack of higher education facilities at villages. The reason behind respondent being illiterate could be their lack of interest, need of family labour at farm, lack of encouragement from family members and poor economic status to pursue education. Similar trend was observed by Nagesh et al. (2011) and Sofegar (2017).

Nearly half (48.33 %) of the respondents practiced only crop production. The probable reason for having crop production as their only source of income might be that fruit production gives higher returns and management of fruit and other field crops is itself a tiresome activity with majority farmers belonging to medium family size. The results are in line with the studies of Nagesh (2006), Naveen Kumar (2012) and Wanole et al. (2017).

A larger number (43.33 %) of the respondents had medium sized family. With optimum family size, one can take calculated risk on development activities in the farm and there is scope for better management of farm by division of work among family members. Hence, medium family size is ideal for the growth of farm. The results are in line with the studies of Nagesh et al. (2011), Naveen Kumar (2012) and Wanole et al. (2018).

It can be inferred from Table 1 that, 37.50 per cent of the respondents had medium level of experience in fruit cultivation. Most of the farmers have taken up fruit cultivation long back, hence, majority belong to medium level of farming experience. The farmer gains more experience and is

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perceptive towards new technologies to be adopted every passing year. The findings of the study are in conformity with the findings of Kamaraddi (2011), Naveen Kumar (2012) and Doddamani et al. (2018).

Nearly half (49.17 %) of the respondents were small farmers. The reason for possession of small and marginal land holding by larger number of farmers could be due to fragmentation of land because of separation of families. The findings are in conformation with the study of Sumana (2017).

35.00 per cent of the respondents belonged to medium level of annual income. The probable reason for varied income categories of the respondents might be due to the size of the land holding and practice of subsidiary occupations by the respondents. And also, grape cultivation yields better income than lime and pomegranate cultivation due to higher productivity and raisin preparation by growers. The findings are in conformation with the studies of Kumar et al. (2009), Shreekant and Jahagirdar (2017) and Sofegar (2017).

43.34 per cent of the respondents had medium level of social participation. Social participation helps the respondents to establish contact with the support system, which can promote entrepreneurship through reinforcing behaviour. Majority of the respondents belonged to medium level of social participation. Similar trend was reported by Kamaraddi (2011) and Ekhande (2016).

Little more than two fifth (40.83 %) of the respondents had medium level of mass media exposure. This is due to frequent use of mass media channels like cell phone, television, radio, newspaper, etc., to get information on market prices, weather and success stories. The results are in conformity with the findings of Kumar et al. (2009) and Sumana (2017).

40.83 per cent of the respondents had medium level of extension participation. The pertinent reason is due to their awareness and active participation in extension activities like demonstration, krishi mela, field days, conventions and visit to successful farmers to gather information on innovative farm technologies and adopt those in their farm. The results are in accordance with the findings of Nagesh et al. (2011) and Doddamani et al. (2018).

It can be found out from Table 1 that, 45.00 per cent of the respondents had medium level of value orientation. The reason could be that farmers still have a strong belief in the old practices, folkways and norms of the society. The findings are in line with Naveen Kumar (2012).

Forty per cent of the respondents had medium level of self-reliance. The reasons could be that a large number of farmers are in debt on loan taken from cooperatives and money lenders. Farmers rely on factors such as remunerative price and seasonal rains to repay the loans. This makes them less self-reliant on themselves. The results are in accordance with the findings of Rajendra Prasad (2016).

More than one third (35.00 %) of the respondents had medium level of cosmopoliteness. Grape growers when compared to lime and pomegranate growers had higher cosmopoliteness due to their higher social participation, better economic conditions and contact with extension officials, leading to their active participation in extension activities like farm visit, exhibitions, krishimela, demonstrations etc. The findings are in line with Doddamani et al. (2018) and Wanole et al. (2018).

40.83 per cent of the respondents had medium level of deferred gratification followed by high (31.67 %) and low (27.50 %) levels. The possible reason could be that, most of the respondents believe that future uncertainties can be managed and thus, they are prepared by going for economic savings in cooperative banks. The findings are in proportion with Rajendra Prasad (2016).

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Table 1: Personal, socio-economic and psychological characteristics of fruit crop growers

Sl. No.	Characteristics	Category	Grape growers (n_1=40)		Lime growers (n_2=40)		Pomegranate growers (n_3=40)		Total (n=120)		Mean	SD
			f	%	f	%	f	%	f	%		
1	**Age**	Young	13	32.50	09	22.50	10	25.00	32	26.67	-	-
		Middle	16	40.00	16	40.00	19	47.50	51	42.50		
		Old	11	27.50	15	37.50	11	27.50	37	30.83		
2	**Education**	Illiterate	02	05.00	5	12.50	3	7.50	10	8.33	-	-
		Primary school	06	15.00	7	17.50	8	20.00	21	17.50		
		Middle school	10	25.00	13	32.50	7	17.50	30	25.00		
		High school	10	25.00	7	17.50	11	27.50	28	23.34		
		PUC	05	12.50	5	12.50	8	20.00	18	15.00		
		Graduate	04	10.00	3	7.50	2	5.00	9	7.50		
		Post Graduate and above	03	7.50	0	0.00	1	2.50	4	3.33		
3	**Occupation**	Crop production	18	45.00	21	52.50	19	47.50	58	48.33	-	-
		Crop production + subsidiary	12	30.00	10	25.00	13	32.50	35	29.17		
		Crop production+ subsidiary+ other	10	25.00	09	22.50	08	20.00	27	22.50		
4	**Family size**	Small	08	20.00	06	15.00	06	15.00	20	16.67	-	-
		Medium	15	37.50	19	47.50	18	45.00	52	43.33		
		Large	17	42.50	15	37.50	16	40.00	48	40.00		
5	**Experience in fruit cultivation**	Low	13	32.50	11	27.50	09	22.50	33	27.50	8.37	4.12
		Medium	11	27.50	15	37.50	19	47.50	45	37.50		
		High	16	40.00	14	35.00	12	30.00	42	35.00		
6	**Land holding**	Marginal farmers	07	17.50	09	22.50	07	17.50	23	19.17		
		Small farmers	19	47.50	20	50.00	20	50.00	59	49.17		
		Big farmers	14	35.00	11	27.50	13	32.50	38	31.67		
7	**Annual Income**	Low	07	17.50	17	42.50	13	32.50	37	30.83	545000	226630.41
		Medium	15	37.50	11	27.50	16	40.00	42	35.00		
		High	18	45.00	12	30.00	11	27.50	41	34.17		
8	**Social participation**	Low (<1.6)	10	25.00	09	22.50	09	22.50	28	23.33	2.03	0.85
		Medium (1.6-2.45)	15	37.50	20	50.00	17	42.50	52	43.34		
		High (>2.45)	15	37.50	11	27.50	14	35.00	40	33.33		
9	**Mass media exposure**	Low (<5.22)	9	22.50	11	27.50	9	22.50	29	24.17	6.11	1.77
		Medium (5.22-6.99)	15	37.50	17	42.50	17	42.50	49	40.83		
		High (>6.99)	16	40.00	12	30.00	14	35.00	42	35.00		
10	**Extension participation**	Low (<7.15)	11	27.50	13	32.50	12	30.00	36	30.00	8.03	1.75
		Medium (7.15-8.90)	14	35.00	18	45.00	17	42.50	49	40.83		
		High (>8.90)	15	37.50	09	22.50	11	27.50	35	29.17		
11		Low (<13.32)	11	27.50	13	32.50	12	30.00	36	30.00		2.11

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	Value orientation	Medium (13.32-15.43)	18	45.00	18	45.00	18	45.00	54	45.00	14.38	
		High (>15.43)	11	27.50	09	22.50	10	25.00	30	25.00		
12	**Self-reliance**	Low (<1.59)	08	20.00	11	27.50	11	27.50	30	25.00	2.15	1.11
		Medium (1.59-2.71)	15	37.50	17	42.50	16	40.00	48	40.00		
		High (>2.71)	17	42.50	12	30.00	13	32.50	42	35.00		
13	**Cosmopoliteness** **Mean:** 7.83 **SD:** 1.07	Low (<7.29)	09	22.50	15	37.50	13	32.50	37	30.83	7.83	1.07
		Medium (7.29-8.36)	13	32.50	14	35.00	15	37.50	42	35.00		
		High (>8.36)	18	45.00	11	27.50	12	30.00	41	34.17		
14	**Deferred gratification** **Mean:** 11.14 **SD:** 1.73	Low (<10.28)	11	27.50	10	25.00	12	30.00	33	27.50	11.14	1.73
		Medium (10.28-12.00)	14	35.00	20	50.00	15	37.50	49	40.83		
		High (>12.00)	15	37.50	10	25.00	13	32.50	38	31.67		

f - Frequency, %- per cent

3.2 Overall entrepreneurial behaviour of fruit crop growers

With respect to overall entrepreneurial behaviour of the respondents, more than one third (37.50 %) of them fall under medium category followed by high (33.33 %) and low (29.17 %) levels of entrepreneurial behaviour.

Table 2: Overall entrepreneurial behaviour of fruit crop growers

Sl. No.	Category	Frequency (f)	Per cent (%)
1	Low (<153.86)	35	29.17
2	Medium (153.86-162.58)	45	37.50
3	High (>162.58)	40	33.33

Majority of the respondents belonged to medium level of entrepreneurial behaviour category. The probable reason for above trend may be due to a large number of the respondents belonged to medium level of innovativeness, achievement motivation, risk orientation, economic motivation and management orientation. Other factors include the lack of knowledge on improved practices, high cost of inputs and lack of irrigation facilities, lack of conviction and fear of failure to become an entrepreneur. The results are in accordance with that of Kamaraddi (2011), Nagesh et al. (2011), Naveen Kumar (2012), Ekhande (2016), Sofegar (2017) and Shreekant and Jahagirdar (2017) who also noticed that majority of the respondents had medium level of entrepreneurial behaviour followed by high and low levels, respectively.

3.3 Association of personal, socio-economic and psychological characteristics of grape, lime and pomegranate growers with their entrepreneurial behaviour

The variables such as education, occupation, land holding, annual income, experience in fruit cultivation, social participation, self-reliance, cosmopoliteness and deferred gratification were found to have significant association with the entrepreneurial behaviour of grape, lime and pomegranate growers at five per cent level of significance. Whereas, extension participation and mass media exposure were found to be significant at one per cent level of significance with entrepreneurial behaviour of grape, lime

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and pomegranate growers. The remaining variables such as age, family size and value orientation had non-significant association with entrepreneurial behaviour of grape, lime and pomegranate growers.

Table 3: Association of personal, socio-economic and psychological characteristics of fruit crop growers with their entrepreneurial behaviour

Sl. No.	Independent variables	Grape growers (n_1=40)		Lime growers (n_2=40)		Pomegranate growers (n_3=40)	
		χ^2 value	C	χ^2 value	C	χ^2 value	C
1	Age	06.86 NS	0.38	05.32 NS	0.34	07.41 NS	0.40
2	Education	12.86*	0.48	12.62*	0.46	12.51*	0.44
3	Family size	06.86 NS	0.38	07.11 NS	0.39	08.49 NS	0.42
4	Occupation	11.43*	0.47	09.79*	0.44	09.72*	0.44
5	Land holding	12.17*	0.48	10.83*	0.46	11.59*	0.47
6	Experience in fruit crop cultivation	12.87*	0.49	11.92*	0.48	10.14*	0.45
7	Annual income	09.65*	0.44	12.31*	0.49	10.76*	0.46
8	Mass media exposure	22.94**	0.60	20.13**	0.58	19.86**	0.58
9	Extension participation	23.18**	0.61	24.17**	0.61	22.21**	0.60
10	Social participation	11.39*	0.47	12.62*	0.49	11.65*	0.47
11	Value orientation	5.58NS	0.35	4.08*	0.29	5.85*	0.32
12	Self-reliance	11.31*	0.47	12.38*	0.49	10.51*	0.46
13	Cosmopoliteness	09.85*	0.44	11.85*	0.48	12.77*	0.49
14	Deferred gratification	11.73*	0.48	10.85*	0.46	13.11*	0.50

NS- Non Significant, *- Significant at 5 per cent level, **- Significant at 1 per cent level, χ^2 – Chi square, C- Contingency coefficient

Education of the grape, lime and pomegranate growers was found to be significantly associated with their entrepreneurial behaviour. The probable reason might be the literate respondents have the ability to gather, interpret, critically evaluate and use information in an appropriate manner. Education helps an individual in proper planning, precise decision making and managing the production, post-harvest and marketing activities. The results are in conformity with the results of Sofegar (2017) and Sumana (2017). Land holding had positive and significant association with entrepreneurial behaviour. The probable reason might be because of the fact that larger size of the land holding creates an economic base for the respondents to adopt, practice innovative technologies for deriving maximum benefit and also improves their risk bearing ability. Similar results were identified by Ekhande (2016) and Wanole et al. (2018).

Occupation and experience in fruit cultivation were found to be significantly associated with entrepreneurial behaviour. The probable reason could be that, the respondents who were involved in fruit cultivation as major occupation for many years, would have got higher yield, income and recognition than others. They will be having good management orientation, ability to coordinate farm activities which

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they got through experience. The findings were supported by Wanole et al. (2018). Annual income was found to have significant association with their entrepreneurial behaviour. The fruit growers having higher annual income have higher risk bearing ability and good management orientation. Similar results were identified by Naveen Kumar (2012) and Sumana (2017).

Both social participation and cosmopoliteness were found to have positive and significant association with entrepreneurial behaviour of the grape, lime and pomegranate growers. Higher cosmopoliteness and social participation of the fruit growers ensures a lot of scope for the exchange of thoughts, feelings and facts with the outside society which enhances their mental horizon. The results are in conformity with the results of Sumana (2017) and Wanole et al. (2018). Self-reliance and deferred gratification were also significantly associated with the entrepreneurial behaviour of grape, lime and pomegranate growers. Self-reliance helps to take better decisions in the farm and increases the responsibility of grower. Deferred gratification helps the growers to save for future uncertainties which helps in better management of farm and increases risk bearing ability of grower. The observations are in conformity with the observations of Rajendra Prasad (2016).

Mass media exposure of grape, lime and pomegranate growers was observed to be significantly associated with their entrepreneurial behaviour at one percent level. The possible reason could be that, mass media play an important role in creating awareness about innovative practices. Growers with higher mass media exposure are able to get acquainted with knowledge of improved technologies and marketing aspects which help them for proper planning and decision making in taking up of farm operations. The observations are in conformity with the observations of Sofegar (2017) and Sumana (2017). The study also indicated that extension participation was significantly associated with the entrepreneurial behaviour of grape, lime and pomegranate growers at one percent level. Because, greater participation in extension activities helps the fruit growers to gather information from different sources. Extension activities conducted in the area directly influence the awareness and knowledge among the fruit growers about improved practices and be the earliest to adopt new technologies than others in the community. The results are in consonance with that of Naveen Kumar (2012) and Sumana (2017).

4. CONCLUSION

Fruit crops can be used for various post-harvest and processing activities, which are huge entrepreneurial opportunities. Studying the socio-economic conditions of fruit crop growers is indeed crucial for effective policy design and successful implementation of governmental developmental programs in the horticultural sector. The study identified that variables such as education, land holding, annual income, occupation, experience in fruit crop cultivation, self-reliance, cosmopoliteness, deferred gratification, extension participation and mass media exposure had a significant association with the entrepreneurial behaviour of fruit crop growers. Hence, the government and other concerned agencies should strive to manipulate these variables to their advantage for improvement in entrepreneurial behaviour of fruit crop growers.

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