

ASSOCIATION BETWEEN PROFILE OF PAPAYA GROWERS AND ADOPTION OF RECOMMENDED TECHNOLOGY OF PAPAYA

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ABSTRACT

Fruit production plays an important role in generating employment, income and meeting household's nutritional security. It provides several times more calories and cash income than cereal per unit of land. The present study was conducted by multi stage random technique and 120 papaya growers were selected from twelve villages belongs to Palanpur and Vadgam taluka of Banaskantha district, Gujarat state. The study conducted through the personal interviews and data collected was analysed by using the suitable statistical method. The result found that more than half of the papaya growers were from middle age group, having middle to high school level of education, had membership in one or more than one organization, possessed medium to big size of land holding, belongs to medium annual income group, had utilized medium to low level of information sources. It was observed that two third of the papaya growers were found with medium market orientation, while two third of papaya growers followed Groundnut-Potato-Bajra as cropping pattern, whereas, great majority of farmers adopted horticultural crops + field crops + animal husbandry as farming system. The results of correlation analysis indicated that variables viz., education, social participation, land holding, annual income, extension participation, sources of information, market orientation and knowledge level were positively and significantly associated with extent of adoption recommended papaya cultivation technology.

Keywords : diversification, cropping pattern, sampling, papaya growers

INTRODUCTION

Fruit production plays an important role in generating employment, income and meeting household's nutritional security. It provides several times more calories and cash income than cereal per unit of land. Fruits and vegetables typically constitute an essential part of daily diet in India and are in great demand round the year. The commercial value of fruits and vegetables in terms of direct consumption, processing as well as trade has risen substantially in recent year. Fruits and vegetable crops play important role in economic growth particularly hilly area of the country. Their economic importance has also increased and high labour intensity in the production of most fruits and vegetables production also makes them important from the employment angle as well. To bring more area under horticultural crops has often been suggested for agricultural diversification, increased employment and income. The fruits and vegetable industry shall be expanded that producers must be assured of better marketing facilities and reasonable price for their produce.

India has favourable climate and soil for growing horticultural crops inclusive Vegetables, fruits, ornamental plants, medicinal plants, aromatic plants and spices etc. India is the largest producer, consumer and exporter of spices and spices based products in the worlds. Thus, India is on the brink of golden revolution in horticulture, where map of the world has placed the country in a place of pride, which is visualised from the popularity and demands of different fruits and vegetables including papaya. It is grown on the 114.97 thousand ha land in the country, while in Gujarat it is cultivated on 19.13 thousand ha of land and producing about 4912.67 thousand M.T per annum.

OBJECTIVES

- (a) To study the profile of papaya growers
- (b) To find out the association between profile of papaya growers and adoption of recommended technology of papaya

METHODOLOGY

The study was confined to *ex-post facto* research design as the independent variables already operated in the study area. The present study was carried out in Banaskantha district of Gujarat state. The Banaskantha district comprises of 14 taluka of which two talukas *viz.*, Palanpur and Vadgam having more area and production of papaya compared to other talukas of the district were purposively selected for the study. Six villages from each selected taluka were randomly selected for the study. Using random sampling technique, equal number of respondents *i.e.*, ten from each village were selected. Thus, total 120 respondents were selected.

Profile of papaya growers were measured with the helps of structured schedule, scales, indices and teacher made test developed by extension personnel and researcher himself

with consultation of experts. To find out association between independent variables and dependent variable with help of correlation coefficient.

RESULTS AND DISCUSSION

Profile of papaya growers

The relevant literature pointed out that some personal, social, economical, communicational and situational attributes of the farmers would have considerable contribution to stimulate their adoption behaviour. In the present study, such attributes *viz.*, age, education, social participation, source of information, land holding, annual income, extension participation, cropping pattern, market orientation and farming system were selected. The results of the same are presented in Table.1

n=120

Table: 1. Profile of papaya growers

Sr. No	Attributes of papaya growers		Frequency	Percent
1	Age	Young age (Up to 30 years)	16	13.33
		Middle age (Between 31 to 50 years)	66	55.00
		Old age (Above 50 years)	38	31.67
2	Education	Illiterate	10	08.34
		Functionally literate	02	01.66
		Primary school	20	16.66
		Middle school	38	31.67
		High school	26	21.67
		College/Post graduation	24	20.00
3	Social Participation	No participation	04	03.34
		Membership in one organization	36	30.00
		Membership in more than one organization	65	54.16
		Membership with office bearer	15	12.50
4	Land holding	Marginal (upto 1.00 ha)	04	03.34
		Small (1.01 to 2.00 ha)	12	10.00
		Medium (2.01 to 4.00 ha)	58	48.33
		Big (above 4.00 ha)	46	38.33
5	Annual income	Low annual income (up to ₹1,30,176/-)	23	19.17
		Medium annual income (₹ 1,30,177 to ₹ 3,79,356/-)	70	58.33
		High annual income (above ₹ 3,79,356 /)	27	22.50
		Mean=2,54,766 S.D.=1,24,590		
6	Extension participation	Low participation (below 3.41 score)	29	24.16
		Medium participation(3.42 to 5.77 score)	60	50.00
		High participation (above 5.77 score)	31	25.84
		Mean = 4.59 S.D. = 1.18		
7	Sources of information	Low utilization (upto 8.44 score)	18	15.00
		Medium utilization (8.45 to 12.41 score)	90	75.00
		High utilization (above 12.41 score)	12	10.00
		Mean = 10.42 S.D. = 1.98		

Sr. No	Attributes of papaya growers		Frequency	Percent
8	Market orientation	Low (up to 20.01 score)	23	19.17
		Medium (20.02 to 24.31 score)	81	67.50
		High (Above 24.31 Score)	16	13.33
		Mean=22.16 S.D.=2.15		
9	Cropping pattern	Groundnut – Potato – <i>Bajra</i>	78	65.00
		Castor – Castor – <i>Bajra</i>	38	31.67
		Cluster bean – Wheat - Groundnut	52	43.33
		Sorghum (F) – Fennel – <i>Bajra</i>	23	19.17
		Groundnut – Potato – Water melon	62	51.67
		Cluster bean – Mustard - Groundnut	28	23.33
10	Farming system	Only Horticulture crops	01	0.83
		Field crops + Horticulture crops	10	8.34
		Horticulture crops + Animal Husbandry	04	3.33
		Horticultural crops + Field crops + Animal Husbandry	105	87.50
11	Knowledge	Low level of knowledge (up to 32.67 Score)	19	15.83
		Medium level of knowledge (32.68 Score to 38.85 Score)	81	67.50
		High level of knowledge (Above 38.85 Score)	20	16.67
		Mean = 35.76 S.D. = 3.09		

The data presented in Table.1 indicated that majority (55.00 per cent) of the papaya growers were found in middle age group, having middle to high school level of education (53.34 per cent), had membership in one or more than one organization (84.16 per cent), possessed medium to big size of land holding (86.66 per cent) and were found with medium annual income (58.33 per cent), had medium extension participation (50.00 per cent), had medium utilization of information sources (75.00 per cent), were found to have medium market orientation (67.50 per cent), had followed Groundnut-Potato-*Bajra* cropping pattern (65.00 per cent), adopted horticultural crops + field crops + animal husbandry farming system (87.50 per cent), had medium level of knowledge (67.50 per cent) followed by 16.67 per cent and 15.83 per cent papaya growers with low and high level of knowledge.

Association between selected profile of the papaya growers and their extent of adoption

Some farmers adopt new agricultural technology more quickly than others because of the difference in various factors that brings changes in the pattern of adoption process. Thus, in nutshell, it can be stated that the adoption of recommended papaya cultivation technology differs when papaya growers differ in their personal, socio-economic, communicational, psychological and situational attributes.

This was ascertained and tested by calculating

Pearson’s correlation coefficient (r). The results in this respect are presented in Table 2.

Table 2 : Association between selected profile of the papaya growers and their extent of adoption

Sr. No.	Independent variables	Correlation coefficient (r value)
A Personal Attributes		
X ₁	Age	-0.372**
X ₂	Education	0.814**
B Socio-Economic Attributes		
X ₁	Social participation	0.202*
X ₂	Land holding	0.227*
X ₃	Annual income	0.217*
C Communication Attributes		
X ₂	Extension participation	0.286**
X ₂	Sources of information	0.233*
D Psychological Attribute		
X ₂	Knowledge level	0.956**
X ₂	Market orientation	0.366**
E Situational Attributes		
X ₂	Cropping pattern	0.086 ^{NS}
X ₂	Farming system	0.002 ^{NS}

** = Significant at 1 per cent

* = Significant at 5 per cent

NS = Non significant

The results of correlation analysis indicated that out of the eleven independent variables, eight variables viz., education ('r' = 0.814**), social participation ('r' = 0.202*), land holding ('r' = 0.227*), annual income ('r' = 0.217*), extension participation ('r' = 0.286*), sources of information ('r' = 0.233*), market orientation ('r' = 0.366*) and knowledge level ('r' = 0.956**) were positively and significantly associated with extent of adoption of recommended cultivation technology of papaya by the papaya growers; whereas, age ('r' = -0.372**) had negative and highly significant association with recommended cultivation technology by the papaya growers. Only, cropping pattern ('r' = 0.086^{NS}) and farming system ('r' = 0.002^{NS}) had non-significant association with adoption of recommended technology of papaya by the papaya growers.

The result are in line with results of Rathod (2009), Chanu *et.al* (2014) Desai (2012), Sharma (2008), Singh *et.al* (2010), Dhandhukia (2009), Rabari (2006) Badhe (2009), Mane (2013), Parmar (2006), Patel (2014), Vinaya *et al.*, (2013), Gohil *et al.*, (2016) and Jadhav (2009)

CONCLUSION

The results of profile of the respondents indicated that majority of the papaya growers were found in middle age group, having middle to high school level of education, had membership in one or more than one organization, possessed medium to big size of land holding, were found with medium annual income, had medium extension participation, had medium to low level of utilization of information sources, were found to have medium market orientation, had followed Groundnut-Potato-Bajra cropping pattern, adopted horticultural crops + field crops + animal husbandry farming system and had medium level of knowledge .

The results of correlation analysis indicated that out of the eleven independent variables, eight variables viz., education, social participation, land holding, annual income, extension participation, sources of information, market orientation knowledge level were positively and significantly associated with extent of adoption of recommended cultivation technology of papaya by the papaya growers; whereas, age had negative and highly significant association with recommended cultivation technology by the papaya growers. Only, cropping pattern and farmingsystem had non-significant association with adoption of recommended technology of papaya by the papaya growers.

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