An analysis of socio-personal characteristics of apple growers and their attitude towards apple cultivation in district Shopian of J&K

Abstract: The present study was conducted in district Shopian of Jammu and Kashmir in 2014 with sample size of 180 respondents. The district Shopian was purposively selected, because of the potential for the development of horticulture, mainly because 90% of the district was under apple cultivation. The data were collected from three different altitudes viz- low, medium and high altitudes. Different socio-personal characteristics viz- age, experience, education, family education, family type, family size, innovative proneness were studied from different altitudes. Attitude of the apple growers was also studied and it has been revealed that most of the apple growers from all three altitudes were having neutral attitude towards apple cultivation.

Keywords: Altitude, apple cultivation, attitude, socio-personal characteristics.

Introduction:

Agricultural as well as horticultural sector is considered as one of the effective factor in economic development of India. Achieving food and nutritional security is possible only by making use of new technologies in farm land. Today in most parts of the world, due to limited land and water resources, increase in production and quality food is hardly possible unless need-based effective techniques in production system are adopted by the farmers.In the state of Jammu and Kashmir, Kashmir valley is endowed with congenial agro-climatic conditions for a wide range of horticultural crops. The growth in area and production of horticultural crops like peach, pear, plum, and apple, is quite impressive. Jammu and Kashmir is rightly known as an apple state of India, contributing 4,200million to the state GDP (Anonymous, 2013).

Apple is one of the most widely cultivated tree fruits. The apple is the fourth widely produced fruit in the world after banana, orange and grapes. India is ranked as the sixth largest world's apple producing country and second largest country in area (Deodhar _et al._ _2006_).As far as apple production is considered, it accounts for 51% of total area of 2.72 lakh hectares under all temperate fruits grown in this state. The annual apple production in the state is 13.73

lakh metric tonnes (Anonymous, 2009). Average yield of apple cultivars per unit area of state is highest in the country ranging between 10-12 tonnes/ha, still the yield is poor as compared to 20-30 tonnes/ha grown in horticulturally advanced countries of the world. Climate and other agro-ecological factors of Kashmir are ideally suited to the cultivation of many varieties. However, it has been found that the socio-economic characters of the farmers greatly affect the farming community and hence production and productivity.

A study conducted by Raut (2006) in Nagpur district of Maharashtra indicated that more than half of the orange growers (53.33%) were middle aged, followed by old (30.00%) and young age (16.67%) group. It indicates that most of the orange growers were of middle and old aged and less number of young people are involved in orange cultivation, same results were found in this study (table-1). Kiran (2003) in a study on technological gap and constraints in adoption of recommended practices of mango growers reported that nearly half (49.00%)of the respondents had medium experience in mango cultivation while remaining 26.00% and 25.00% of the respondents had low and high experience in the mango cultivation respectively, as the study indicates that less number of respondents have high level of experience, which indicates that most of the growers follow traditional system rather than recommended system.Ramannaet al. (2000) is of the opinion that 70.00% of the farmers had medium level extension agency contact and 30.00% of the farmers had high level extension agency contact, it is evident from the study that most of the farmers are not up-to-date about recommended cultivation practices. Lakshmisha (2000) in his study on impact of cashew demonstrators on knowledge, adoption and yield levels of farmers in Dakshina district revealed that 50% of the cashew growers had medium social participation, 35% of the cashew growers had high social participation and only 15% of cashew growers had low social participation. Babanna (2002) in his study on arecanut growers in Shimoga district reported that 32.5% of the arecanut growers had high social participation followed by 40% of the growers having medium level and only 27.5 per cent of the growers had low social participation level.Bhople and Borkar (2002) in their study on farmer attitude and adoption for bio-fertilizers observed that the majority of the farmers (84.00%) belonged to moderate level of knowledge about different kinds of bio-fertilizers and their associated practices, about one tenth of them were adequately equipped with the knowledge about bio-fertilizers and appeared in high knowledge category.Vedamurthy (2002a) in his study on the management of areca

gardens and marketing pattern preferred by the arecanut farmers of Shimoga district in Karnataka reported that equal per cent (28.66%) of the arecanut growers are large and small arecanut farmers, 24% of the respondents are medium land holding farmers and 18.66% of the farmers are marginal land holders. Govinda and Narayana (2006) inferred that considerable percentage of Thompson Seedless grape growers (46.00%) belonged to medium innovative proneness category, while, a little more than 50.00 per cent of Bangalore Blue grape growers (52.00%) belonged to high innovative proneness category. Saleem*et al.* (2010) reported that the actual yield of fruit produced at the farmers' fields is considerably less than that of potential fruit yield. One of the major factors causing this huge yield gap was the lack of knowledge, skill and attitude of fruit growers regarding the modern production technology. This deficiency on the part of the fruit growers can be overcome by comprehensive training and extension programmes for farmers concerning modern fruit production techniques. Ejolle*et al.* (2010) stated training needs of farmers as skill, knowledge and attitude an individual requires in order to overcome the problems as well as to avoid creating problem situation. It is clear that training of the farmers is an essential resource, which will direct knowledge and skill towards crop production.

Research Methodology:

The present study was conducted in 2014 in the state of Jammu and Kashmir comprising extreme sector of Himalaya's and occupies a central geographical location in the Asian continent. A multistage sampling procedure was adopted for the selection of districts, tehsils, villages and sample respondents. Kashmir valley consists of 10 districts namely Anantnag, Kulgam, Pulwama, Shopian, Srinagar, Bandipora, Baramulla, Budgam, Ganderbal and Kupwara. District Shopian was purposively selected because of the potential for the development of horticulture, mainly because 90% of the district cultivated land surface was under apple plantation and prevailing agro climatic situations were very good for cultivation of horticultural crops especially fruit crops and apple, in particular. The study was conducted in three altitudes viz. high altitude, mid altitude and low altitude in the form of strata, which were purposively selected. Each strata consisted of three villages which were randomly selected. Accordingly a sample size of twenty farmers from each village was selected randomly, thus making a sample size of sixty respondents from each strata. A sample size of 180 respondents from all the three strata was included in the study based on the total

respondents engaged with apple cultivation.The mean and standard deviation of all therespondent's were computed for classifying them in different categories. The socio-personal characters were measured by using different scales:

1. **Age**

It refers to the chronological age of the respondent at the time of investigation. The age of the respondents was recorded as mentioned by them in completed years. It was measured by direct questioning of the respondents.

2. **Education**

It refers to the qualifications of the respondent which have been acquired through formal schooling. It was measured using socio-economic scale (SES) developed by Trevedi (1963) and the scoring pattern followed by him to measure the education was used.

3. **Family education**

It is operationally defined for the present study as the formal education received by the members of the respondent's family (above 6 years of age). It was measured by the scale developed by Singh and Narwal, (1974).

The scores of individual family members were added up, to obtain the total educational score of the family and the same divided by the number of family members in order to arrive at family education scores (FES), which is shown as under:

$$FES = \frac{\text{Total Education Score of Family}}{\text{No. of family members above 6 yrs of age}}$$

4. **Family type**

It refers to the type of family farmers belongs to nuclear, joint or extended.

5. **Family Size**

Refers to the total number of family members of the farmer:

6. **Land Holding**

It refers to the number of acres of land used for cultivation by the respondents at the time of interview. The socio-economic scale (SES) rural scale developed by Trevedi (1963) was used to measure the size of holdings.

7. **Social Participation**

Social Participation refers to collective activities that individuals may be involved in, as part of their everyday lives.The socio-economic scale (SES) developed by Trevedi (1963) was used to measure the social participation.

8.   Media Exposure.

This variable is operationalized as the exposure of an individual respondent to different mass media channels such as Newspaper, Farm magazine, Radio, Television and his degree of utilization with them. The procedure suggested by Singh (1983) was followed for measuring media exposure of the respondents.

9.   Innovative Proneness

It refers to the behaviour pattern of an individual who has interest and desire to seek changes in farming techniques and ready to introduce such changes into his operations when practical and feasible. The innovative proneness was measured by using the self-rating scale developed by Moulik and Rao (1965). The scale consisted of three items and each item has three parts with varying degree of innovative proneness. The responses were checked by simply reading of the statements on whether least like or most like, particular statement of change proneness. The most like statements were awarded a score of 2 and the least like as 1. In this way, most like scores were multiplied by their corresponding scale values and least like statements by their corresponding scale values. Innovative proneness for each individual was calculated by using the formula:

$$Innovative\ proneness = \frac{Sum\ of\ ratios\ of\ most\ like\ statements}{Sum\ of\ ratios\ of\ least\ like\ statements}$$

10.   Extension Contact

It refers to the frequency of contact of a respondent with any personnel of the various extension agencies to get information. It was measured by the procedure suggested by Singh (1983).

11.   Experience in Horticulture

It refers to the number of years the respondent is engaged in apple cultivation at the time of investigation. The experience in apple cultivation of the respondents was recorded as mentioned by them in completed years. It was measured by direct questioning to the respondents.

12.   Attitude Towards apple Cultivation

Degree of positive and negative effect of respondent associated with apple cultivation. Attitude is a person's perspective towards a specified target and way of saying and doing things. It is a tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour. Attitude of farmers was measured on three point continuum.

Result and discussion:

The data presented in the table 1 reveals that in low altitude, 35% of the apple growers were middle aged in the age group of 29-56 years, followed by 33.44%, who were old (above 56 years) and 31.66% of the apple growers were young, who belonged to the age group of 18 to 28 years. It indicates that in the lower altitude, majority of the apple growers (35%) were middle aged, in the age group of 29-56 years. While in mid altitude, 41.66% of apple growers were middle aged , in the age group of 29-56, followed by young (30%) belonging to the age group of 18-28 years and 28.44% of the old aged apple growers (above 56 years). It indicates that in the mid altitude, majority of the apple growers (41.66%) were middle aged in the age group of 29-56. In case of high altitude, the data reveals that 50% of the apple growers were middle aged in the age group of 29-56 years, followed by 26.6%, who were oldaged above 56 years and 23.44% of the apple growers were young in the age group of 18 to 28 years. So it is evident that majority of the apple growers (50%) were middle aged in the age group of 29-56 years.It also reveals that in low altitude, the majority 43.44% of the apple growers were having low experience upto 10 years regarding apple cultivation, followed by 31.6% , who had high experience greater than 31 years and 25% of the apple growers were having medium experience in the range of 11-30 years. It indicates that in the low altitude, the majority of the apple growers (43.44%) were having low experience regarding apple cultivation. While in case of mid altitude 40% of the apple growers were having low experience upto 10 years of apple cultivation, followed by 3%, who had medium level of experience in the range of 11-30 years and 25% of the apple growers, were having high experience more than 31 years. It indicates that in the mid altitude, majority of the apple growers (40%) were having low experience regarding apple cultivation. In high altitude 43.33% of the apple growers were having low experience upto 10 years regarding apple cultivation, followed by 38.34%, who had medium experience in the range of 11-30 years and 18.33 per cent of the apple growers

were having high experience more than 31 years in apple cultivation. It indicates that in all the three altitudes, the majority of the apple growers were having low experience regarding apple cultivation.The data presented also reveals that in low altitude the majority of the apple growers 21.66% were illiterate, followed by 16.66% of apple growers, who had their education up to matric and graduate, 15%of apple growers, had their education up to twelfth, 13.33% of apple growers, had their education up to primary, 10% of the apple growers, had their education up to middle, and 6.66% of the apple growers were above graduate. In mid altitude majority of the apple growers 31.66% were illiterate, followed by 16.66% of the apple growers, had their education up to middle, 13.33% of apple growers, had their education up to twelfth and graduate 11.66% of apple growers, had their education up to primary and matric, and 1.66% of the apple growers were above graduate. In case of high altitude majority of the apple growers 40% were illiterate, followed by 20% of the apple growers, who had their education up to middle, 16.66% of apple growers, had their education up to matric, 15% of apple growers, had their education up to twelfth, 08.33% of apple growers, who had their education up to primary, however none of the apple growers was graduate.

So it has been observed from the study that maximum respondents in all the three altitudes i.e. 21 in low altitude, 25 in mid altitude and 30 in high altitude out of 60 respondents in each altitude area belonged to middle age group in the range of 29-56 years. Most of the respondents in our study were middle aged; it might be because of the reason that farmers of middle age are enthusiastic having more responsibility and are more efficient than the younger and older ones. Further, apple growers between 29 to 56 years of age group have more physical vigour and also more responsibility towards family than the younger ones. This might be the important reasons to find that majority of the apple growers in the age group of 29 to 56 years were active in cultivation of apple fruits. The results were in line with the research findings reported by Vedamurthy (2002b). Experience upto 10 years of most of the farmers was low in all the three altitudes. The possible reason for this low experience could be as farming experience mainly depends upon age of the farmer. Since a majority of apple growers belonged to middle age category, so majority of respondents had low farming experience. The above results could also be attributed to the relatively higher initial investment and practice of apple cultivation recently under taken by the farmers. As it is a recent and growing enterprise the number of people practising apple cultivation is low. The

above findings are in line with the findings of Raghavendra (2007). Education level of most of the farmers was illiterate in all the three altitudes. The possible reason for this could be the non-realization of the influence of formal education in one's life, illiteracy of the parents might have come in the way of getting them better education to their children. Another contributing reason could be, the rural social environment might not have encouraged parents to provide education to their children. As the rural people have still traditional base they generally do not prefer to send their children to school rather they want them to assist in farm and household activities. The distance of higher study centers from the villages and need for more investment also might have prevented the parents from providing higher education to their children. The above findings get support from the studies conducted by Thippeswamy (2007).

It is evident from the data presented in the table 2 that in low altitude majority of the apple growers 40% were having high level of family education, followed by 31.66% of apple growers, who were having medium level of family education and 28.44% of the apple growers were having low level of family education. Where as in case of mid altitude, majority of the apple growers 41.66% were having medium level of family education, followed by 33.44% of apple growers, who were having low level of family education and 25% of the apple growers were having high level of family education. In high altitude majority 40%of the apple growers were having low level of family education, followed by 36.66% of apple growers, who were having medium level of family education and 23.44% of the apple growers were having high level of family education. It also reveals that in low altitude, the most 61.66% of the apple growers belonged to nuclear family, followed by 28.44% of the apple growers, who belonged to joint family and minimum of 10% of the apple growers belonged to extended family. While as in case of mid altitude, 41.66%of the apple growers belonged to nuclear family, followed by 40% of the apple growers, who belonged to joint family and 11% of the apple growers belonged to extended family. In case of high altitude, 50% of the apple growers belonged to joint family, followed by 26.66% of the apple growers, who belonged to extended family and least 23.44% of the apple growers belonged to nuclear family.It is evident from the data presented in the table 2 that in low altitude, the most 60% of the apple growers were having small family size, upto 5 members, followed by 30%of the apple growers, who were having medium family size of five to ten members and minimum of

10% of the apple growers were having large family size, of more than ten members. In mid altitude, the most 38.44% of the apple growers were having small family size, upto 5 members, followed by 35% of the apple growers, who were having medium family size, of five to ten members and minimum of 26.66% of the apple growers were having large family size, with family members above ten. In contrast to high altitude, the most 63.44% of the apple growers were having medium family size, of 5-10 members, followed by 21.66% of the apple growers, who were having small family size, upto five members, and minimum of 15% of the apple growers were having large family size, of more than ten members.The data presented also indicated that in low altitude, 36.66% of the apple growers were marginal farmers having their land holdings below one hectare, followed by 33.44%of the apple growers, who were in small category, having their land holdings above one hectare but less than two hectares, while as 30% of the apple growers belonged to medium category, having their land holdings above two hectares but less than four hectares. In case of mid altitude, 45% of the apple growers belonged to marginal category having their land holdings below one hectare, followed by 36.66% of the apple growers, who belonged to small category, having their land holdings above one hectare but less than two hectares, while as minimum of 18.44% of the apple growers belonged to medium category, having their land holdings above two hectares but less than four hectares. While as in case of high altitude, 56.66% of the apple growers were of marginal category having their land holdings below one hectare, followed by 28.33% of the apple growers, who belonged to small family, having their land holdings above one hectare but less than two hectares, while a minimum of 15% of the apple growers belonged to medium family, having their land holdings above two hectares but less than four hectares.

It is evident from the study that family education level of most of the farmers in low altitude areas were high, medium in mid altitude and low in high altitude areas, the possible reason for this could be due to more exposure to the education facilities, close distance of study institutes to low altitude areas, the other reason could also be that the children and grandchildren of farmers in low and mid altitude areas are educated, thus raising the relative education level of the whole family etc. The families of most of the farmers in low and mid altitude areas were of nuclear type, while as in high altitude areas most of the farmers were of joint type, this might be because in high altitude areas people prefer to live in joint family, it is

obvious that the members of the family of most of the farmers in low and mid altitude areas were upto five and more or above five of farmers in high altitude areas. Most of the farmers in our study were marginal farmers having land holdings of less than one hectare, the reason may be that in Kashmir valley majority of the farmers belong to marginal category. These findings are in line with Vasanthakumar (2000).

The data presented in the table 3 reveal that in low altitude, 81.66% of the apple growers were members of no organization (social as well as cooperative), followed by 18.44% of the apple growers, who were member of one organization only. In case of mid altitude, 86.66% of the apple growers were members of no organization, followed by 13.44% of the apple growers, who were member of one organization. In case of high altitude, maximum of 96.66% of the apple growers were members of no organization, followed by 3.44% of the apple growers, who were member of one organization. It also reveals that in low altitude, 60% of the apple growers were having high level of media exposure, followed by 26.66% of the apple growers, who were having medium level of media exposure, and 13.44% of the apple growers, and were having low level of media exposure.In case of mid altitude, 36.66% of the apple growers were having medium level of media exposure, followed by 33.44% of the apple growers, who were having low level of media exposure, and 30% of the apple growers, and were having high level of media exposure. In case of high altitude, 41.66% of the apple growers were having low level of media exposure, followed by 35% of the apple growers, who were having medium level of media exposure, and 23.44% of the apple growers, and were having high level of media exposure.It is evident from the data presented in the table3 that in low altitude, 38.33% of the apple growers were having medium level of innovation proneness, followed by 33.33% of the apple growers, who were having low level of innovation proneness and 28.44% of the apple growers were having high level of innovation proneness. While in mid altitude, 40% of the apple growers were having low level of innovation proneness, followed by 38.44% of the apple growers, who were having medium level of innovation proneness and 21.66% of the apple growers were having high level of innovation proneness. In case of high altitude, 65% of the apple growers were having low level of innovation proneness, followed by 28.44% of the apple growers, who were having medium level of innovation proneness and 6.66% of the apple growers were having high level of innovation proneness.The data reveals that in low altitude, 60% of the apple growers were

having low extension contact, followed by 25% of the apple growers, who were having high extension contact and 15% of the apple growers were having medium extension contact. Where in case of mid altitude, 68.44% of the apple growers were having low extension contact, followed by 16.66% of the apple growers, who were having medium extension contact and 15% of the apple growers were having high extension contact. In case of high altitude, 75% of the apple growers were having low extension contact, followed by 18.44% of the apple growers, who were having medium extension contact and 6.66% of the apple growers were having high extension contact. It indicates that in all three altitude areas farmers were having low level of extension contact which is indicative of big extension gap (no extension).The data presented in table 3 reveals that in lower altitude 50% of apple growers had neutral attitude towards apple cultivation, followed by 35% of the apple growers, who had favourable attitude towards apple cultivation and 15% had less favourable attitude towards apple cultivation In case of middle altitude 41.66% of apple growers had neutral attitude towards apple cultivation, followed by 30% of the apple growers, who had less favourable attitude towards apple cultivation and 28.44% had favourable attitude towards apple cultivation In case of upper altitude 40% of apple growers had neutral attitude towards apple cultivation, followed by 33.44% of the apple growers, who had less favourable (unfavourable) attitude towards apple cultivation and 26.66% had favourable attitude towards apple cultivation. It indicates that in all three altitudes, the majority of the farmers were having neutral attitude towards apple cultivation.

So the present data indicates that most of the respondents in all the three altitudes 49 farmers in low, 52 in mid and 58 in high altitude areas out of 60 from each altitude responded as being member of no organization. It indicates that in all the three altitudes maximum numbers of apple growers were not participating in different organizations meant for their upliftment and development in agriculture. In most parts of the Kashmir valley, no organization related to agriculture exists. Consequently most of the respondents in all the three altitudes responded as being member of no organization. These findings are in line with Chandrashekhar (2007). Majority of the farmers in low altitude areas were having high level of media exposure, followed by farmers of mid altitude areas having medium level of media exposure and low level of media exposure of most of the farmers of high altitude areas. This indicates that in low altitude areas electronic media like television, radio and print media such

as newspaper, farm magazine and leaf lets were utilized by a majority of the apple growers. It might be due to more educational level, sound economic status and standard of living of apple growers. Regarding innovation proneness the overall inference can be drawn that majority of farmers 23 (38.33 %) out of 60 were having medium level of innovation proneness in lower altitude, while as majority of them were less prone to innovations in mid and high altitude areas. The medium level of innovation proneness in low altitude areas of apple growers might be due to their higher educational status, better knowledge level, and extension participation as compared to mid and high altitude areas. The finding was in conformity with the findings of Kumar (1998). Low innovation proneness in mid and high altitude areas were due to low educational level, low knowledge level, and less extension participation. The finding was in conformity with the findings of Hiremath (2011). Majority of the farmers in all the three altitude areas were having low level of extension contact which is indicative of big extension gap. The possible reasons could be, conducting such activities by the concerned departments either less frequently or with less popularity. The lack of initiation or interest on the part of the respondents could also be the reason for the present finding. The above findings were in accordance with the findings of study conducted by Angadi (1999).

Attitude of majority of the farmers in all the three altitudes i.e. low, mid and high altitudes were having neutral attitude towards apple cultivation. The possible reason of neutral attitude could be the risk associated with the apple cultivation- damage by pests and diseases, traditional methods of farming adopted by farmers, lack of subsidy packages for agricultural inputs such as fertilizers, insecticides and pesticides, adultered spray chemicals etc. These findings were in accordance with Malek and Uddin (2009).

Table - 1 Distribution of apple growers according to their Socio-economic profile, (N=180).

Personal characteristic	Category	Altitude					
		Low n_1=60		Mid n_2=60		High n_3=60	
		No.	%	No.	%	No.	%
Age	Young(18-28)	19	31.66	18	30	14	23.44
	Middle(29-56)	21	35	25	41.66	30	50
	Old(>56)	20	33.44	17	28.44	16	26.66
	Mean ± S.D	42.49 ± 13.90		44.81 ± 16.08		48.08 ± 15.98	

	Observed range	18-72		22-75		18-90	
Experience	Low (Upto 10 years)	26	43.44	24	40	26	43.44
	Medium (11-30 years)	15	25	21	35	23	38.33
	High(>30)	19	31.66	15	25	11	18.33
	Mean ± S.D	**20.1 ± 10.13**		**21.30 ± 11.07**		**22.68 ± 10.79**	
	Observed range	**07-40**		**05-44**		**04-50**	
Education	Illiterate	13	21.66	19	31.66	24	40
	Primary	08	13.33	07	11.66	05	8.33
	Middle	06	10	10	16.66	12	20
	Matric	10	16.66	07	11.66	10	16.66
	10+2	09	15	08	13.33	09	15
	Graduate	10	16.66	08	13.33	00	00
	Above graduate	04	6.66	01	1.66	00	00

(Mean=Mean of scores of all the respondents)
(S.D= Standard deviation)
(%= Percentage)

Table - 2 Distribution of apple growers according to their Socio-economic profile, (N=180).

Personal characteristic	Category	Altitude					
		Low n_1=60		**Mid** n_2=60		**High** n_3=60	
		No.	**%**	**No.**	**%**	**No.**	**%**
Family education	Low	17	28.44	20	33.44	24	40
	Medium	19	31.66	25	41.66	22	36.66
	High	24	40	15	25	14	23.44
	Mean ± S.D	**2.52± 1.02**		**2.25 ± 0.87**		**1.95±0.94**	
	Observed range	**0.42-5.28**		**0.4-3.62**		**0.2-3.85**	
Family type	Nuclear	37	61.66	25	41.66	14	23.44
	Joint	17	28.44	24	40	30	50
	Extended	06	10	11	18.44	16	26.66
Family size	Small (Upto 5 members)	36	60	23	38.44	13	21.66
	Medium (5-10 members)	18	30	21	35	38	63.44
	Large (More than 10 Members)	06	10	16	26.66	09	15
Land holding	Marginal (Less than 1 ha)	22	36.66	27	45	34	56.66
	Small (1-2 ha)	20	33.44	22	36.66	17	28.33
	Medium (2-4 ha)	18	30	11	18.44	09	15

(Mean=Mean of scores of all the respondents)
(S.D= Standard deviation)
(%= Percentage)

Table - 3 Distribution of apple growers according to their Socio-economic profile, (N=180).

Personal characteristics	Category	Altitude					
		Low n_1=60		Mid n_2=60		High n_3=60	
		No.	%	No.	%	No.	%
Social Participation	Member of no organization	49	81.66	52	86.66	58	96.66
	Member of one organization	11	18.44	08	13.44	02	3.44
	Member of more than one organization	00	00	00	00	00	00
	Organization office bearer	00	00	00	00	00	00
	Wide Public Leader	00	00	00	00	00	00
Media exposure	Low	8	13.44	20	33.44	25	41.66
	Medium	16	26.66	22	36.66	21	35
	High	36	60.00	18	30	14	23.44
	Mean ± S.D	8.36±3.04		6.91±3.62		6.13±3.04	
	Observed range	01-12		0-12		0-12	
Innovative Proneness	Low	20	33.33	24	40	39	65
	Medium	23	38.33	23	38.44	17	28.44
	High	17	28.44	13	21.66	04	6.66
	Mean ± S.D	8.06±4.76		7.48±4.27		4.56±4.01	
	Observed range	0.4-16		0.6-16		0.4-16	
Extension contact	Low	36	60.00	41	68.44	45	75
	Medium	09	15.00	10	16.66	11	18.44
	High	15	25.00	09	15.00	04	6.66
	Mean ± S.D	7.11±5.08		6.41±5.51		5.15±4.86	
	Observed range	0-16		0-16		0-16	
Attitude	Favorable	21	35	17	28.33	16	26.66
	Neutral	30	50	25	41.66	24	40
	Less favorable	09	15	18	30	20	33.44
	Mean±S.D	39.85±21.76		39.41±19.55		38.36±17.36	

(Mean=Mean of scores of all the respondents)
(S.D= Standard deviation)
(%= Percentage)

Conclusion:

Apple production is considered the principle fruit crop of Jammu and Kashmirwhich also provides supplementary source of income, as some of the farmers are associated with different establishments such as Government employees, business men etc. It is the backbone of the district economy and state as well. As most of the apple growers are middle aged with

low experience in apple cultivation and low educational background, so most of them are willing to take up improved practices if properly guided according to the improved packages of practices. The main purpose of this study, therefore, was to analyse the various socio-personal variables like age, experience, education level, family education status, family type, family size, land holding and socio-psychological variables like social participation, media exposure, innovation proneness and attitude of farmers towards apple cultivation. It was seen thatthe majority of the apple growers were having neutral, followed by favourable and less favourable (unfavourable) attitude towards apple cultivation. The neutral attitude of the apple growers was because of the fact that there is huge extension gap (no extension) that results in low returns from apple cultivation.

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