

ANALYSIS OF PROBLEMS FACED BY APPLE INDUSTRY IN J & K**¹Mohammad Iqbal Rather, ²Dr. Ishtiyaq Hussain Qureshi***¹Research Scholar ,Mewar University**²Assistant Professor, University of Kashmir*

This paper is related to the statistical analysis of the data. After completion of full-fledged survey with finalized questionnaire, data was arranged in an orderly fashion in a summary of spread sheet, by counting the frequency of responses of each question. The hypotheses have been formulated and tested using SPSS software and the results have been arrived at. The total analysis was carried out by using SPSS 20 software package.

• DEMOGRAPHICAL PROFILE OF RESPONDENTS

The respondents of the study are classified into three categories. They are, area of respondents, Gender of respondents and Age of respondents. In the area of respondents, apple growers are differentiated by the area in which they depend. So, people from rural, urban, semi-urban and valley involve themselves in Apple cultivation. On the gender basis, it is divided into male and female respondents. In the Age of respondents table, it is divided between 20 years to 50 years.

SOCIAL STATUS AND LITERACY LEVEL OF THE RESPONDENTS

After doing the survey, participants can be categorized based on their social status. BY doing this, one can easily examine the mostly engaged society in the apple farming. Most apple growers have just finished their school. Therefore, based on their education level such as illiterate, school level, college level, and professional can be included. The classification performed based on apple grower's education and social status is presented in Table 5.2.

Table 5.2 Social status and Literacy level of the participants

Particulars	category	Participants	Percent
Social Status	General Category (GC)	62	17.71
	Backward Classes (BC)	210	60
	Most Backward Classes (MBC)	45	12.85
	Scheduled Castes (SC)	33	9.42
	Scheduled Tribes (ST)		
Literacy Level	Illiterate	11	3.14
	School Level	171	48.85
	College Level	95	27.14
	Professional	60	17.14
	Others	15	4.28

From table 5.2, it is clear that based on social status, majority of the participants (62.31 %) are from BC, 18.39 % are from GC, 10.38 % are from MBC and rest 8.90 % from SC and ST category. According to literacy of participants, about 48.33 % participants have completed their school education and were responsible for apple production. 25.67 % participants have completed their college, 18.12 % were professionals, 3.32 % participants are illiterate and rest 4.53 % of the participants are others.

From this survey it was clear that the participants based on social status, the majority 62.31 percentage participants are from BC. The participants based on their literacy level, the majority 48.33 % participants finished their school education.

• OCCUPATION AND LAND CATEGORY DETAILS

Most of the people involved in Apple production are people who make it possible as their main income source, and the rest were consider it as their secondary income. Thus, most of the population uses their land for agriculture, while the remaining people grow apples on rentedland. During this survey, we have also collected information related to the total number of family members of the respondent. Below table illustrates the participant's occupation, family members and the land category (lease or their own).

Table 5.3 Participants' occupation, family size, and land type

Particulars	Category	Participants	%age
Occupation	Main	250	71.42
	allied	100	28.57
Family size	<5	62	17.71
	5-7	194	55.42
	>7	94	26.85
Land Category	Owned	235	67.14
	Leased	115	32.54

From the Table above it is observed that 71.42 % of participants have apple production as their main occupation while rest 28.57 having apple production as secondary income source. Depending upon the size of the family, family having members 5-7 were engaged 55.42 % compared to rest of the family size such as <5 and >7. According to land category, owned land participants are more compared to leased land.

• APPLE CULTIVATION DETAILS

It is a well-known fact that with the increase in number of trees per acre, it will immediately increases productivity per hectare. But when using pesticides and the like, it is useful to take preventive measures on the trees. Mainly three kinds of irrigation equipments are used that are: drip irrigation, well irrigation and canal irrigation. Involvement in various irrigation facilities, use of pesticides, and calculation of trees per acre are displayed in

the following table.

Table 5.4 No. of Trees per acre, Preventive Measures and Irrigation measures

Particulars	Category	Participants	Percent
Number of Trees per acre	90-120	60	17.14
	125-160	175	50
	>160	115	32.85
Defensive measure	Pesticide	350	100
	Others	-	0
Irrigation facility	Drip	120	34
	Well	50	14.28
	Canal	180	51.42

From the Table 5.4, it is clear that 50 % of the participants have 125-160 trees per acre, while 32.85 % have grown more than 160 trees per acre and rest 17.14 % of participants have grown 90-120 trees per acre. All participants have used pesticide for trees protection and hence increase their apple production. Mainly three irrigation schemes are used by Kashmir valley apple growers. Among three irrigation scheme, canal scheme is used by 51.42 % of participants, while 14.28 participants used well scheme and rest 34 % participants used drip irrigation scheme.

• CATEGORY WISE DETAILS OF PRODUCTION OF APPLE

Apple is the most important cash crop of the hill states of India. So, apple cultivation is the highly profitable economic activity in the state of Jammu and Kashmir. Apple production plays an important role in improving the standard of living, per capita income and employment generation. The various varieties provide different amount of production per year. The names of the varieties are Golden, delicious, Kallu, Maharaja and American. So, the Table 5.11 that calculating the production per annum is given below Table 5.5 Production/ Year (Tones)

Particulars	Less than 10 Ton	10-20	20-30	More than 30
Delicious	30	40	55	225
Kalu	47	93	166	44
American	42	54	63	191
Golden	17	34	83	216
Maharaji	111	132	74	33

The Table 5.11 shows that the per annum production of apple growers. In the Delicious variety, out of 320 respondents, the majority 213 respondents produce more than 30 tons of apples, 59 respondents produce 20 to 30 tons of apples, 23 respondents produce 10 to 20 tons of apples and 25 respondents produce less than 10 tons of apples. In the kallu variety, out of 320 respondents, the majority 161 respondents produce 20-30 tons of apples, 82 respondents produce 10-20 tons of apples 44 respondents produce less than 10 tons of apples and the rest 33 respondents produce more than 30 tons of apples. In the American variety, out of 320 respondents, the majority 182 respondents produce more than 30 tons of apples and 58 respondents produce 20-30 tons of apples, 41 respondents produce 10-20 tons of apples and rest 39 respondents produce less than 10 tons of apples. In the Golden variety, out of 320 respondents, the majority 204 respondents produce more than 30 tons of apple, 68 respondents produce 20-30 tons of apples. 33 respondents produce 10-20 tons of apples and the rest 15 respondents produce less than 10 tons of apples.

• PARTICIPANTS EXPERIENCE AS APPLE GROWERS AND IRRIGATION FACILITY METHOD

The following table 5.15 explains the experience of apple growers in this Apple cultivation business. More people have 10 to 20 years of experience. Some of them have below 5 years of experience. The second table explains the method of irrigation practice by the cultivators. The three types of irrigation are drip irrigation, well irrigation and canal irrigation. Most of the people are using canal irrigation in their orchards.

Table 5.6 Growers' Experience and method of irrigation facility

Particulars	Category	Participants	%
Experience in Apple industry	<5 year (Yr)	50	14.28
	5-10	66	18.85
	10-15	104	29.71
	15-20	47	13.42
	>20	83	23.71
Irrigation method	Drip	120	34
	Well	50	14.28
	Canal	180	51.42

It is clear from the Table 5.15 that the majority 41.8 percentage respondents are having 10-20 years of experience, 26.56 percentage respondents are having more than twenty years of experience, 17.50 percentage respondents are having 5-10 years of experience and the left 14.06 percentage respondents are having less than 5 years of experience. In canal irrigation facility the majority 56.11 percentage respondents are using canal irrigation, 29.44 percentage respondents are using Drip irrigation and the left 14.44 percentage respondents are using well irrigation. In this study, it is stated that the majority 41.88 percentage respondents are having 10-20 years of experience and the majority 56.11 percentage respondents are having canal irrigation facility.

• PROBLEMS FACED BY APPLE GROWERS IN JAMMU & KASHMIR

The problems faced by apple growers led to shortage in production and marketing of apples. Serious problems faced by the cultivators are snowfall, lack of transport facilities, financial crisis, military disturbances, frequent change of weather conditions, shortage of labour, lack of storage facilities and also high wages. On the basis of the problems faced by the cultivators, it is ranked in the Table 5.17 below.

Table 5.7 Problem faced by J&K Apple Growers

Particulars	Mean value	Rank
Snow fall	2.25	4
Transportation shortage	5.24	1
Financial shortage	4.35	2
Labour shortage	1.47	5
Lack of storage	3.12	3

Table 5.7 listed the problems faced by J & K apple growers. From the survey it was clear that transportation is the main hindrance medium in the growth of apple production. Lack of financial is the second highest means of problem. Lack of storage is the third one major problem faced by J & K apple growers. Snow fall and shortage of labour are the third and fourth highest problem faced by J & K apple growers.

• SATISFACTION LEVEL AND HARVESTING DETAILS

There are different opinions about the income of apple growers. Some are very happy with their income and some with their salary. Most people thought that this was fair and the money they earned unexpectedly was enough to make a living. Some farmers are still dissatisfied with their benefits, while others are very dissatisfied with their salaries. Table 5.8 shows the income earned from apple cultivation and harvesting as follows:

Table 5.8 Income earned by cultivation and harvesting

Particulars	Category	participants	%
Cultivation	Highly satisfied	68	19.42
	Satisfied	87	24.857
	Fair	135	38.57
	Dissatisfied	40	11.42
	Highly dissatisfied	20	5.71
Harvesting	September	89	25.42
	October	157	44.85
	November	104	29.71

From the above Table 5.8, it is clear that 38.57 % of participants have fairish income incultivation. On the other hand, during the month of October majority of participants about 44.85 % of participants were harvested their crop. 29.71 % participants were harvest their crop in the month of November and remaining 25.42 % of participants were harvest in the month of September.

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