



ISSN NO. 2320-5407

Journal homepage: <http://www.journalijar.com>
Journal DOI: [10.21474/IJAR01](https://doi.org/10.21474/IJAR01)

INTERNATIONAL JOURNAL
OF ADVANCED RESEARCH

RESEARCH ARTICLE

Satisfaction Level of Market Information System among Coffee Producers in Nepal.

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Manuscript Info**Manuscript History:**

Received: 14 April 2016
Final Accepted: 19 May 2016
Published Online: June 2016

Key words:

Producer; Market Information,
Satisfaction, Irrigation

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Abstract

This paper is based on study among coffee producers which are associated with coffee production cooperatives in Lalitpur and Kavre districts of Nepal. Coffee is one of the major export crop however, export volume is declining in past five years. In the same situation the consumption of coffee is increasing in Nepalese market. This study was performed with 180 coffee producers and sample was taken randomly. The result showed that majority of the producers have access of market information system as per need. The study revealed that cooperative play an important role in sharing market information of coffee. The respondents were found satisfied with available price information and satisfaction index found to be 0.18 at scale of -1 to +1. Similarly, they are also satisfied with the source of market information (Satisfaction Index= 0.22). Coffee producers generally demanded retail price information. Lack of irrigation facilities and havoc of coffee rust were identified as major problems. Similarly, study found that there is need of irrigation facilities and also regular package of training for higher production of coffee.

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Introduction:-

Coffee is crop of great economic importance for millions of farmers in more than 50 countries. It is the second largest commodity in world trade after petroleum with an annual trading volume of US\$ 40 billion. Brazil is the largest producer of coffee and America is the largest consumer (Dhakal, 2005). Coffee industry of the world has many distinct features and production is mainly concentrated in about 50 underdeveloped countries, while consumption is mostly by the developed countries like USA, Japan, and EU nations (Gautam et al., 2008).

In Nepal, coffee is one of the important cash generative crops in the mid hill regions (Gautam and Dhakal, 1994). Historically, it is believed that a saint named Hira Giri in Anpachaur, Gulmi district introduced coffee for the first time in Nepal from Myanmar in 1944 (Chaudhary et al., 2008). Currently, coffee is cultivated in around 40 districts and basically it has been producing commercially in about 20-22 hill districts especially of Mid, Western and Eastern Development Regions (MoAD, 2014). In Nepal, coffee is predominately grown by resource poor and small scale farmers under marginal upland condition (Shrestha et al., 2008). Besides, using the unproductive fallow land, cultivation of coffee further conserves soil erosion and provide 20-25% extra income from companion intercropping under tree species (Chaudhary et al., 2008). Coffee has an enormous potential to provide farmers a good employment and income generation opportunities especially of mid-hills region where there is a huge amount of land and suitable climatic condition for growing the coffee successfully. However, there is important role of market information system in marketing of coffee and to fetch higher prices among the coffee producers. In this regards this study was carried out to identify availability of market information system to the coffee producers and also to know the satisfaction level of market information among coffee producers.

Materials and methods:-

This study was done with 180 respondents that were coffee producer from Kavre and Lalitpur district of Nepal. All the samples were taken randomly from available six cooperatives that are associated with coffee production. Semi-structure questionnaire was applied to generate data and data were entered into MS Excel. SPSS software was used for analysis of frequency and chi square test was applied to test the hypothesis. Similarly, satisfaction index was calculated based on -1 to +1 scale of preferences with five point scale of satisfaction indicating +1 as satisfaction, 0 neutral and -1 indicating dissatisfaction. Ranking of preferences also done based on percentage of priority by the respondents. Land measurement was done using local unit ropani (1 hectare= 19.965 ropani).

Result and discussion:-

Respondent characteristics:-

Out of 180 respondents, majority of respondents (89.44%) were Male. Only 10.55 per cent were female. The ratio of male to female were higher in Kavre district than in Lalitpur district of Nepal.

Table 1. Characteristics of respondents by gender

Gender	Kavre		Lalitpur		Total	
	Number	Percent	Number	Percent	Number	Percent
Male	82	91.11	79	87.77	161	89.44
Female	8	8.89	11	12.22	19	10.55
Total	90	100.00	90	100.00	180	100.00

The total respondents were 180, out of which 159 (88.33%) were *Brahman/Chettri* and only 11.67 percent were *Janajati*. Lalitpur district have relatively more number of indigenous people engage in coffee production than Kavre district.

Table 2. Classification of respondents based on caste system

Caste	Kavre		Lalitpur		Total	
	Number	Percent	Number	Percent	Number	Percent
Janajati	5	5.56	16	17.78	21	11.67
Brahman/Chettri	85	94.44	74	82.22	159	88.33
Total	90	100.00	90	100.00	180	100.00

Majority of the households heads were found having agriculture as major occupation. The result showed that 87.78 per cent of respondents were engaged in agriculture while 7.28 per cent were found to be service as major occupation. More number of respondents from Kavre district were involve in agriculture than Lalitpur district.

Table 3. Major occupation of household head by districts

Occupation	Kavre		Lalitpur		Total	
	No.	Percent	No.	Percent	No.	Percent
Agriculture	82	91.11	76	84.44	158	87.78
Service	4	4.44	9	10.00	13	7.22
Business	2	2.22	3	3.33	5	2.78
Daily wages		0.00	2	2.22	2	1.11
Others	2	2.22	0	0.00	2	1.11
Total	90	100	90	100	180	100

The education status was categorized into two category educated and uneducated. Nearly one fourth of the respondents were educated in both districts. Out of 180 respondents, 139 respondents were educated and 41 were uneducated (Table 4). The number of respondent in Lalitpur district was more educated (72) than in Kavre district (67).

Table 4. Education status of respondents

Education Status	Kavre		Lalitpur		Total	
	Number	Percent	Number	Percent	Number	Percent
Educated	67	74.44	72	80.00	139	77.22
Uneducated	23	25.55	18	20.00	41	22.78
Total	90	100.00	90	100.00	180	100.00

The total average land holding size was 15.50 ropani considering both districts. In Lalitpur district, there was found to have higher (16.18 ropani) land holding comparison to Kavre (14.83 ropani). Maximum of land holding was reported in Kavre district with 41 ropani considering *khet and bari* land. Among them major portion of land was un-irrigated.

Table 5. Average size of landholding by respondents

Type of Land (Ropani)	Kavre			Lalitpur			Total		
	Min	Max	Mean	Min	Max	Mean	Min	Max	Mean
Khet	0	25.00	5.77	0	15.00	2.84	0	25.00	4.39
Bari	2	30	9.37	2	46	13.78	2	46	11.57
Total	3	41	14.83	3	46	16.18	3	46	15.50
Irrigated	0	28	4.87	0	15	3.49	0	28	4.30
Un-irrigated	0	30	9.62	0	40	11.88	0	40	10.71

Production status of Coffee among producers

The study showed that farmers were planted with coffee in average of 4.47 ropani of land in Kavre district and 4.37 ropani in Lalitpur district. Similarly, the production of coffee by individuals household is on an average of 170.20 kg for Kavre district and 283.2 kg for Lalitpur district. Most of the coffee produced was found to sale and very negligible amount was stored for home consumption (Table 6). The average rate for sale of cherry was 103.87 in Kavre district, 116.46 in Lalitpur district and NRs.110.13 per kg for all the respondents.

Table 6. Average Area, Production and sale of coffee by the respondents

District	Area (Ropani)	Production (Kg)	Sale (Kg)	Rate of sale (NRs*/Kg)
Kavre	4.47	170.2	169.93	103.87
Lalitpur	4.37	283.2	282.72	116.46
Total	4.42	227.7	223.09	110.13

*US\$1= NRs. 107 (May 29, 2016)

Marketing system at Producers' Level

Market price information plays an important role on the producers' decision about the production and marketing of coffee. Market and price are the prime factors of coffee production. If producer get information about market price in desired form, they perform their activities effectively and efficiently leading to proper allocation of resources through increased competition in the market. In this regards, the availability of the market price information is most crucial. The result showed that about almost all of the respondent producers' get information about the market price, which is present in Table 7.

Table 7. Availability of market price information among coffee producer

Market Information	Kavre		Lalitpur		Total	
	Number	Percent	Number	Percent	Number	Percent
Available	73	81.11	83	92.22	156	86.67
Not available	17	18.89	7	7.78	24	13.33
Total	90	100.00	90	100.00	180	100.00

The obtained information was used by producers' on their decision about production and marketing of coffee. But only the availability of the market price information is not important. From the point of its usefulness, it should be reliable, efficient and target group oriented. It should be effective on aiding to the producers' decision on different aspects related to production and marketing. The effectiveness of the market price information is reflected in producers' satisfaction level towards available information. Most of the producers' in the study area were satisfied towards the availability of the market price information. However, the satisfaction level was not associated with the producers' of Kavre and Lalitpur district as shown in Table 8. This may be due to the reason that both categories of farmers may have similar kind of information requirement.

Table 8. Satisfaction level of market price information by coffee producer

Satisfaction level	Districts		Total		Rank
	Kavre	Lalitpur	Number	Percent	
Highly satisfied	17	11	28	15.56	III
Satisfied	33	50	83	46.11	I
Indifferent	4	9	13	7.22	V
Dissatisfied	27	11	38	21.11	II
Highly Dissatisfied	9	9	18	10	IV
Total	90	90	180	100	

Similarly, satisfaction index was calculated to see the satisfaction level of the coffee producers'. The satisfaction index was 0.18. It showed that producers' were satisfied towards the availability of market price information.

Use of marketing information at producers' level

Producers' need marketing information to take various production and marketing decision. The result showed that 61.24 per cent of the producers' were found getting marketing information as per need. Likewise, 35.96 per cent producers' were found getting marketing information occasionally. The frequency distributions of producers' getting marketing information was also found significantly associated with the time interval and category of farmers (Table 9).

Table 9. Frequency distribution of farmers getting marketing information at different time interval by coffee producers

Information frequency	Districts		Total	Rank
	Kavre	Lalitpur		
Daily	5 (5.68)	0 (0)	5 (2.81)	III
As per need	47 (53.41)	62 (68.89)	109 (61.24)	I
Occasionally	36 (40.91)	28	64 (35.96)	II
Total	88	90	178	

Figures in the parenthesis indicate the percentage

*Significant (Chi-square= 8.0428) at 1% and 5% level of significance

Coffee producers' were found using different type of source to receive marketing information. Among the different sources, the most important (46.47) was found cooperatives. The phone was found in the second position in terms of using different type of source to receive marketing information. Similarly, the result showed that friends were found in third position followed by Radio, Newspaper and others (Table 10).

Table 10. Use of different types of sources to receive marketing information by coffee producers

Source	Districts		Total		Rank
	Kavre	Lalitpur	Number	Percent	
Phone	25	29	54	15.88	II
Newspapers	11	10	21	6.18	V
Radio	18	10	28	8.24	IV
Notice board	7	2	9	2.65	VII
Friends	27	16	43	12.65	III
Businessman	16	4	20	5.88	VI
Cooperative	76	82	158	46.47	I
Others	3	4	7	2.06	VIII

*Significant (Chi-square =41.625) at 1% and 5% level of significance

Marketing information required by producers' :-

Marketing information in desired forms is made available to different target group on time to assist them to take appropriate decisions in time. Producers' need marketing information to take the decision on; what crop to plant, what variety to plant, when to plant, how much to plant, how to plant, where to sell, to whom to sell and so on. Different marketing information were first identified by informal group discussion with the coffee producers', and the most important seven marketing information were included in the study. Producers' were allowed to choose among the selected seven marketing information.

Table 11. Marketing information required by the producer

Source	Kavre	Lalitpur	Total	Rank
Retail price of different markets	74	65	141 (23.94)	I
Transacted volume	38	31	71 (12.05)	V
Demand and supply Situation	35	29	66 (11.21)	VI
Whole sale price of different market	36	46	82 (13.92)	III
Consumers preferences	33	36	71 (12.05)	V
Quality of Product	42	40	84 (14.26)	II
Farm gate price	39	33	74 (12.56)	IV

Figures in the parenthesis indicate the percentage.

*Significant (Chi-square =78.938) at 1% and 5% level of significance

The result showed that retail price of different market was the most important marketing information required by coffee producers'. The second important marketing information was quality of the product followed by whole sale price in different market, farm gate price, transacted volume and demand and supply situation. The detailed about marketing information required by producers' is presented in Table 11.

Marketing Problems of Coffee:-

Different problems were first identified by informal group discussions with the coffee producers', and the most important ten problems were included in the study. Producers' were allowed to choose among the selected ten problems during the field survey.

Table 12. Marketing problems of coffee

Problems	District		Total (n=180)	Rank
	Kavre (n=90)	Lalitpur (n=90)		
Inappropriate market price	33	32	65 (36.11)	II
Fluctuation in market price	24	6	30 (16.67)	VII
Market information	36	19	55 (30.56)	V
Transportation Facilities	38	50	88 (48.89)	I
Storage facilities	32	33	65 (36.11)	II
Processing facility	31	25	56 (31.11)	IV
Packaging and grading facilities	32	15	47 (26.11)	VI
Unorganized market	19	10	29 (16.11)	VIII
Market Management Training	29	32	61 (33.89)	III
Payment	6	3	9 (5.00)	IX

Figures in the parenthesis indicate the percentage.

The result showed that problem of transportation was the major problem in the marketing of coffee in the study area. Different problems are presented in the Table 12 by the districts. The second important problem was storage facilities and also inappropriate market price followed by unavailability of market management training and others.

Problems associated with coffee cultivation:-

Majority of the respondents (45.56%) reported that lack of irrigation was major obstacle for coffee production. Coffee disease especially coffee leaf rust was another problems (30.14%). Other problems related with coffee production were drying of plants, lack of manure, lack of seed materials, lack of training respectively

Table 13. Different type of problems associated with coffee production

Problems	District		Total (n=180)
	Kavre (n=90)	Lalitpur (n=90)	
Coffee Disease	53	76	129 (30.14)
Drying of plants	25	14	39 (9.11)
Earthquake	3	0	3 (0.70)
Lack of Irrigation facility	107	88	195 (45.56)
Lack of Manure	8	2	10 (2.33)
Lack of Training	13	8	21 (4.91)

Insect Problem	5	5	10 (2.33)
Lack of seed material	6	2	8 (1.87)
Lack of Market	4	0	4 (0.94)
Problem of shade	3	6	9 (2.10)

Figures in the parenthesis indicate the percentage

The study also suggested different approaches for higher coffee production. Among them management of irrigation facility for coffee plantation was major (34.80%) followed by training on coffee production, disease management and input supply.

Table 15. Suggestions for coffee production in study areas

Suggestions	District		Total (n=180)
	Kavre (n=90)	Lalitpur (n=90)	
Training facility	41	29	70 (30.84)
Coffee Management	9	6	15 (6.61)
Disease Management	8	19	27 (11.89)
Supports from different organization	2	0	2 (0.88)
Irrigation facility	45	34	79 (34.80)
Input supply	14	6	20 (8.81)
Marketing facilities	4	2	6 (2.64)
Transportation facility	2	6	8 (3.52)
Total	125	102	

Figures in the parenthesis indicate the percentage

Conclusion:-

Majority of the coffee producers were small holders and more than eighty per cent of the producers have access of market information system for coffee marketing. Almost all producers are associated with cooperative. Thus cooperative was found to be major source to disseminate price information likewise some producers were found to relay on friends for price information. The respondents were found satisfied with available price information and satisfaction index found to be 0.18 scale of -1 to +1.

The study also showed that lack of irrigation facilities was major problem for coffee production followed by coffee disease and drying of plant.

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