

An Alternative Source of Livelihood: Socio-Economic Analysis of Organic Vegetable Growing in Nepal: A Case Study

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Abstract: A study was conducted among 48 respondents in Dadhikot VDC; ward No 7, Gamcha village in Bhaktapur District, Nepal to evaluate the effects of organic vegetable farming done by farmers. Socio-economic condition of farmers involved in organic farming had been analysed based on market value and cost of production of winter vegetables. Descriptive and analytical research design were used which involves questionnaire and interview method. Trend of Land holding of organic vegetable farmers had shown increase of 52.085%. Age groups of 20-24 and 50 above were found to be productive groups involved in farming. A total of 66.66% of respondents were having 0.5-1.0 ropani land. Organic vegetable production had increased the total production to 60.42% and is expected to increase more. Percentage of farmers having income per month increase to 37.5% of R 5000 whereas those with income of Rs. 3000-3500 were 31.25%. Income from vegetables was utilized in various aspects like food, land purchase, house construction, health and sanitation, social function and education. Among the various sources of income, vegetable production constituted to 79.17% of total share. Cost of production with regard to seed, fertilizer, agricultural tools and human resources was mostly less than Rs. 500. Accessibility to market was 100 % for them which made them more convenient to sell their purchase. Produce was being marketed to cooperatives who used to purchase their produce throughout the year.

Keywords: Organic vegetable farming, Organic vegetable grower,

1. Introduction

Nepal is a small country having area of 1, 47,181 sq. km. About 67% of the total land is hills and 15 % is mountains (CBS, 1991). Most of the farmers in these zones are below self sufficiency for food supplies generally, and for vegetable commodities in particular. It is generally observed that the dependency on external inputs for vegetable production in the hills, high hills and mountain is negligible with domination of indigenous vegetables include a range of wild and local ecotype (Budhathoki *et al.* 1992).

The majority of high hill farmers in Nepal are small holders in terms of land holding are resource poor and have limited income generating opportunities. They are dependent upon their own internal inputs and resources for farming (Chamber *et al.* 1989).

The excessive use of chemical pesticides for the management of insect pests has become a matter of public concern in Nepal. The problem arising from overuse and misuse of pesticides in vegetable include development of pest resistant pesticides, environmental contamination, increased health hazards to applicator and consumers, and rising production costs. Chances of women and children being exposed to chemical are high. Though production was higher but various pesticides hamper in the quality as well as quantity. The older generation farmers were unhappy with the modern trend. However they said that they have no alternative to old systems and values are being over taken by modern methods (Pandey, 1992). With the modernization use of pesticide application becomes rapid in Nepal in 2020 B.C (Jaisii, 2000). The young group of farmer get attracted with it and started adopting it (Sharma, 2059).

Organic farming is essentially traditional farming based on knowledge and techniques gathered over thousands of years of agriculture prior to the chemical farming revolution (Bumb, B.L and Baanante, C.A, 1996) Vegetable farming is the traditional farming system practiced by farmers in rural village. Although the production is less in large areas but because of higher selling price has compensate with it. In that cost of production is less than of conventional system because the cost of fertilizer is not required. Farmers use cow dung, chicken manure, compost, application of wood ash, cattle urine for top dressing and incorporation of credible parts of vegetable into the soil as organic manure produced in an around by them self. Farmers situated in the hills not only produce vegetables for domestic consumption, but also for sale in the market for cash income. By which they educate their children, increase their land.

Cultivation through organic farming is a production system which avoids or largely excludes the use of synthetically compounded fertilizers, pesticides, growth regulators and livestock feed additives to the maximum extent feasible. So an ecofriendly pest management method is required for which organic materials were used. Farmers are now back to organic methods as it not only improves the health but also maintain the sustainability of soil. Traditional farming practices and methods which have been developed by farmers over many generations comprise the body of knowledge that we called IK (Paneru *et al.*1993).

The main focus of this study is about the socio economic condition of the organic vegetable involved in cultivating vegetable farming as their alternative sources of livelihood. Its market value and finally to identify the cost of production of winter vegetables.

2. Objectives

- To study about the socio-economic condition of organic vegetable farmers and its impact on organic vegetable farming.
- To identify the cost of production of winter seasonal vegetables.
- To explore the market value of organic vegetables.
- To study about the involvement of farmers in organic vegetable farming.

3. Review of Literature

Poudel, 2004 has written review on an American called Judith Chase had introduced organic farming through cooperative called Agriculture Appropriate Alternatives (AAA) in Bhaktapur district. It all began in leased land where Judith Chase organic farming had shown the effective way to reduce the use of pesticides and chemical fertilizers Chase was the first person in Kathmandu to visualise the alternative methods for agriculture development keeping in mind the safety and environment-friendly farming. Despite her two decade efforts, the organic farming is yet to be commercialised in Nepal.

Vision, 2004 organization was involved in studying about efforts to expand household composting practices mostly taken the form of public awareness campaigns and compost bin subsidies. A few NGOs have encouraged household composting through institutional workshops and promotional material on vermicomposting and EM composting.

HMG/MOACC, 2003 study revealed that traditional composting practices still exist in the valley. According to a recent government report, at least 91% of farm households surveyed still use at least some organic compost to fertilize fields.

Buddhathoki, 1999 had started growing tomatoes found significant profit and other farmers get encouraged from him started cultivating vegetables. He gets diversified to other vegetables. Initially he had used chemical pesticides but shifted to organic farming because of spurious chemical fertilizers causing decline in poverty and taste of organically grown vegetables are much better along with increase selling price.

AAA Bulletin, 1996 indicated that some of women farmers in Dadhikot village earn higher income by growing different types vegetables using organic manures. They had achieved training from AAA, NGO which advocates for practice in organic production along with supply of bone meal and mustard cake to farmers.

Lohani, 2060 B.S identified that chemical fertilizer had destroyed the quality of soil, decrease productivity, excessive insects and diseases, huge costs including effect on human health and environment. Thus the promotion of organic farming is necessary which will lead to increase human health, producer and consumer getting benefit by leading to environment protection.

4. Material and Method

The experimental materials for the present study consist of 48 respondents who had been involved in doing organic vegetable farming. This research was carried out in Dadhikot VDC, Gamcha Village, Bhaktapur District in Nepal during the period of one year. The primary data was collected by method of interview schedule and observation. Secondary data was collected from VDC, NARC, ICIMOD, Central library, Kirtipur, WIN ROCK International office and various web search, magazine, pamphlet and booklets.

There were 1343 households in the Dadhikot VDC. The study site was Gamcha village, Ward No. 7 where were 140 households. Among them 48 household fully involved in organic farming were chosen for the research purpose. The universe was taken as a sample for study purpose. Socio economic condition, market price, cost of production by involving in organic vegetable farming of farmers were obtained by interview.

A. Social Status and Organic Vegetable Farmer

Table 1: Composition of family members in different age in vegetable farming group

Age group	Male	Female	Population	
			Total	Percentage
0-4	6	4	10	4.52
5-9	7	8	15	6.79
10-14	7	8	15	6.79
15-19	21	11	32	14.48
20-24	17	17	34	15.38
25-29	11	9	20	9.05
30-34	5	6	11	4.98
35-39	7	12	19	8.60
40-44	14	9	23	10.41
45-49	4	4	8	3.62
50 above	13	21	34	15.38
Total	112	109	221	100.00

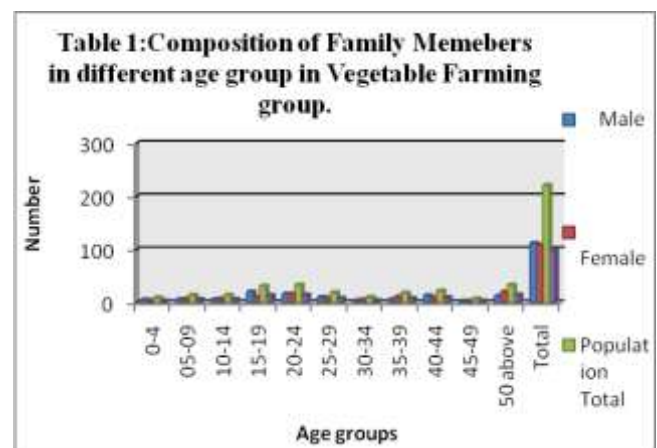
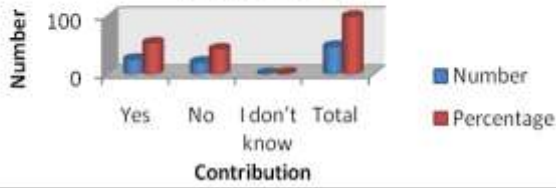


Table 2: Contribution of Vegetable Farming in Education

Description	Number	Percentage
Yes	26	54.17
No	21	43.75
Idon't know	1	2.08
Total	48	100

Table 2: Contribution of Vegetable Farming in Education



2.5-3	4	8.34
3.5-4	-	0
4.5-5	-	0
>5	1	2.08
Total	48	100

Table 5: Land Holding Size of Vegetable Farming

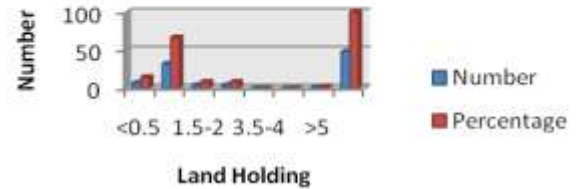


Table 3: Adoption Process of Respondent

Description	Number	Percentage
Learning by hearing	3	4.46
Learning by doing	11	22.94
Learning by seeing	1	2.08
Learning by consultant	34	70.85
Total	48	100

Table 6: Income in Vegetable Farming

Income(Rs)	Winter Season	Percentage
500-1000	-	-
1000-1500	-	-
1500-2000	-	-
2000-2500	5	10.42
2500-3000	2	4.17
3000-3500	15	31.25
3500-4000	1	2.08
4000-4500	5	10.41
4500-5000	2	4.17
5000 above	18	37.5
Total	48	100

Table 3: Adoption Process of Respondent

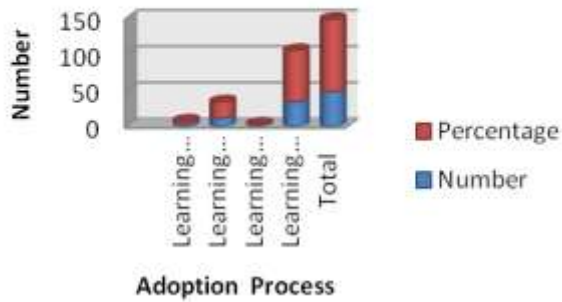


Table 4: Effect of Family Size in Vegetable Farming.

Description	Number	Percentage
Yes	35	72.92
No	13	27.08
Total	48	100

Table 6: Income in Vegetable Farming

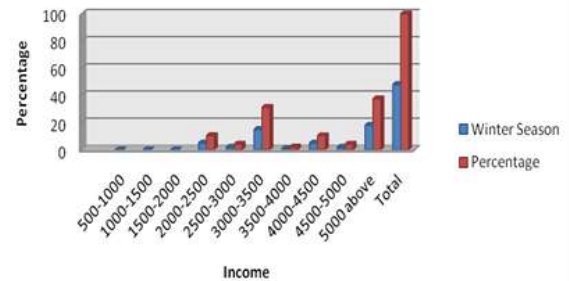


Table 4: Effect of Family Size in Vegetable Farming

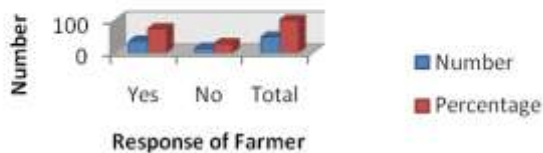


Table 7: Utilization of Vegetable Income

Area of Expenditure	Number	Percentage
Food	10	20.83
Land Purchase	4	8.34
House Construction	4	8.34
Health & Sanitation	3	6.25
Social Function	13	27.08
Education	14	29.16
Total	48	100

B. Economic Status and Organic Vegetable Farming

Table 5: Land Holding Size of Vegetable Farming

Description (Ropani)	Number	Percentage
<0.5	7	14.58
0.5-16	32	66.66
1.5-2	4	8.34

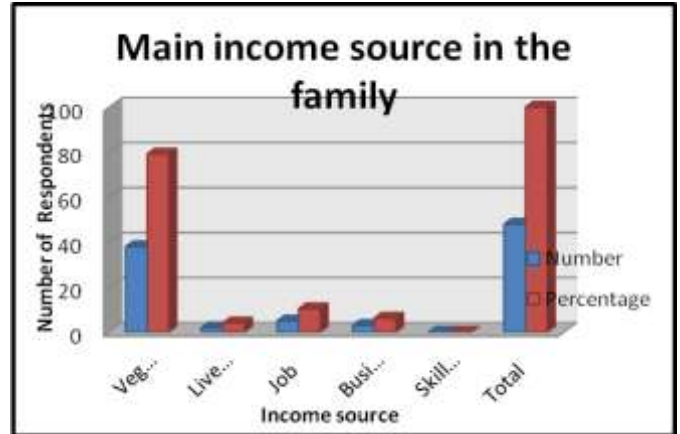
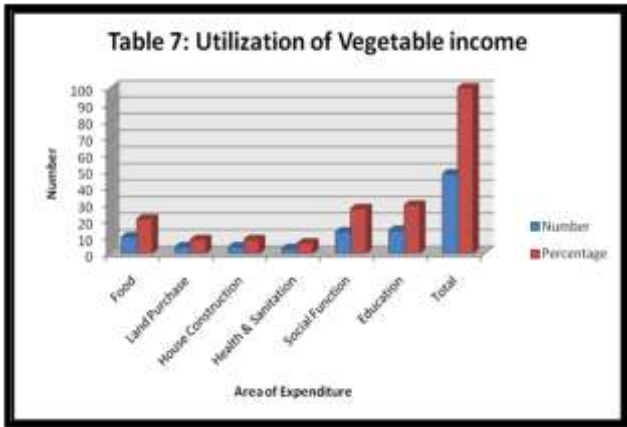


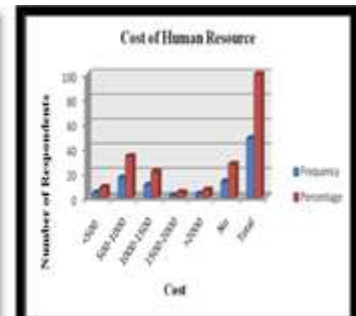
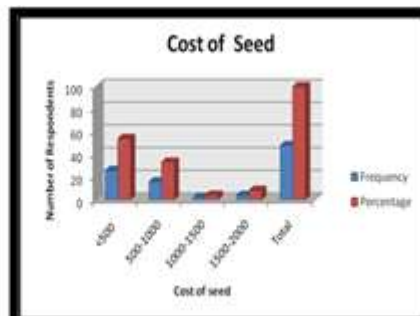
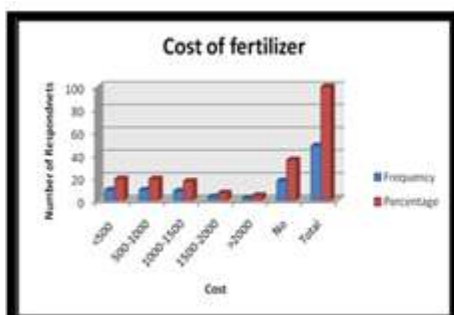
Table 8: Main Income source in the family

Source of Income	Number	Percentage
Vegetable	38	79.17
Livestock	2	4.17
Job	5	10.42
Business	3	6.25
Skill work	-	-
Total	48	100

5. Result and Discussion

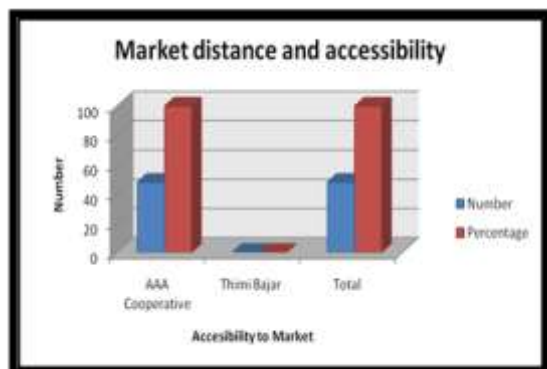
Cost of production of winter seasonal vegetables

Farmers had to purchase agricultural tools and required to repair it twice a year. 87.5% were spending less than Rs 500. Likewise 10% were spending in the range of Rs 500-1000. Seed cost was highest among 26 farmers who spend 54.16% for seed purchase. Cost of fertilizer includes cost of chicken manure, bone meal, til cake and rice bran as 35.41% who do not purchase any fertilizer as they had their own domestic animals besides it 16.67% spend Rs 1000-1500. Human labour is another crucial area where 33.34% spend Rs 500-1000 followed by 20.83% spending Rs 1000-1500 and the least amount less than Rs 500 was done by 8.32%. Among which 27.08% were self reliant and involved themselves in doing cultivation.



Explore the market value of organic vegetables

Market for farmers was AAA; NGO located itself at Dadhikot at a five minute walking distance.



Involvement of farmers in organic vegetable farming

Farmers were fully oriented in doing vegetable farming. Highest share was held by female with 60.42% and that of male was 6.25%. Both of them combination was 33.33%.

Study about the socio-economic condition of organic vegetable farmers and its impact on organic vegetable farming

All age groups family members were involved organic farming. Amongst them highest was among the age group of 20-24 and >50 with 15.38%. Least was in age group of 45-49 with 3.36%. Adoption process of respondent was surveyed and found that learning by doing was highest 70.85% with the least 2.08% as learning by consultant. 72.92% believed that family size effect on vegetable farming while that of 27.08% did not. In land holding occupied by organic vegetable grower, 66.66% occupied 0.5-1 ropani of land on contrary the least one being 2.08% holding >5 ropani.

Income of farmers in the range of Rs >5000 above was 37.5% followed by 31.25% in the range of Rs 3000-3500 and the lowest was 2.08% with income Rs 3500-4000. Farmers utilized their produce income in various aspects as food, land purchase, construction of house, health and sanitation, social function and education. 20.83% farmers spend on food and that of education 29.16%. Lowest was 6.25% on health and sanitation. Vegetable production was the major income of family with 79.17% and that of business and livestock was in least having 6.25% and 4.17%.

6. Conclusion

Organic vegetable farmer farmers had uplifted the socio economic condition of farmers in Dadhikot, Gamcha Village. Seed, fertilizer, human resources and agricultural tools were there for which cost had to bear. Nevertheless, selling price was higher of vegetables grown organically and market being so near had placed extra advantage of producing it. Amongst the family members women were more actively involved as compared to male and it had encouraged women farmer to get an alternative source of livelihood along with male. They had been able to utilize their money in several activities at home and had developed confidence by raising income.

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