SOCIO-ECONOMIC IMPACT OF SERICULTURE IN SANKHU VDC OF KAVRE DISTRICT

A Thesis

Submitted to the Central Department of Economics

Tribhuvan University

In Partial Fulfillment of the Requirements for

The Degree of Arts in Economics

By Arjun Basnet

Roll No. 108/065

Central Department of Economics

Tribhuvan University

Kirtipur, Kathmandu

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Date: 2070/02/21

RECOMMEDATION

This is to certify that the thesis entitled "Socio-Economic Impact of Sericulture in Sankhu VDC of Kavre District" has been submitted by Arjun Basnet under my supervision and guidance in partial fulfillment of the requirements for the degree of Masters of Arts in Economics. I forward this thesis with recommendation for approval.

……

Prof. Dr. Sohan Kumar Karna

Supervisor

4th June, 2013

Date: 2070/02/29

APPROVAL SHEET

We certify that this thesis entitled **"Socio-Economic Impact of Sericulture in Sankhu VDC of Kavre District"** submitted by Arjun Basnet to the Central Department of Economics, Faculty of Humanities and Social Sciences, Tribhuvan Univrsity, in partial fulfillment of the requirements for the Degree of Master of Arts in Economics has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of said degree.

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Date: 12th June 2013

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LIST OF ABBREVIATIONS AND ACRONYMS

APROSC	: Agriculture Project Service Centre
B.C.	: Before Christ
B.S.	: Bikram Sambat
C.	: Centigrade
CBS	: Central Bureau of Statistics
FAO	: Food and Agriculture Organization
ha.	: Hectare
GoN	: Government of Nepal
INGO	: International Non- Government Organization
kg.	: Kilogram
k.m.	: Kilometer
NGO	: Non-government Organization
SDP	: Sericulture Development Program
Sq.	: Square
UNDP	: United Nation Development Program
VDC	: Village Development Committee
SAN	: Sericulture Association of Nepal.
Hhs	: Households
LWS	: Lutheran World Service
JICA	: Japan International Co-operation Agency
KOICA	: Korean International Co-operation Agency
DOA	: Department of Agriculture
HMG/N	: His Majesty's Government of Nepal
SOARS	: Society for Action and Research for Sustainable Development
SRDP	: Sericulture for Rural Development Program

CHAPTER-I

INTRODUCTION

1. 1 General Background of Sericulture

Sericulture or silk production has a long and colorful history unknown to most of people. For countries, the most of people have known very little about silk and who made it.

Roman historian wrote in his natural history in 70 BC. Silk was obtained by removing down from the leaves with the help of water. For more than two thousand years the Chinese kept the secret of sericulture altogether to themselves. It was the most zealously guarded secret in history.

Chinese legend gives the title goddess of silk of lady hsi- ling-shit wife of the mystical yellow emperor who was said to have ruled china in about 3000 BC. She is credited with introduction of silkworm rearing and invention of loom.

In Nepal, for the first time, in 1911 AD. Rana Prime Minister Chandra Shamsher introduced mulberry Sericulture and was experimented in Birganj by using Multivolatine Indian silkworm race with the help of a sericulture technician from India. Second time in 1940, another Rana Prime Minister Judha Shamsher organized exhibition on silkworm rearing and reeling with the help of Indian sericulture technician in Kathmandu.

In 1950, mulberry saplings were planted in Godawari and one person went to Banglore, India to obtain sericulture training and was discontinued. In 1953-54, cottage industry department initiated sericulture within the compound of department. At that time silkworm seed was imported from India. Due to the irregular supply of silkworm seed infection of diseases and insects pests, lack of budget and lack of management this enterprises was not successful.

A pre-feasibility study was made in the year 1967-68 followed by general feasibility studies carried out by Japanese experts in the year 1969 and experts of republic of

Korean in 1973. These studies showed that Nepal has potential for sericulture development, especially the high yielding international quality of bivolatine cocoons

and raw silk. In 1918, two Korean and Indian FAO experts studied the agro-climatic condition of Nepal. The existing mulberry varieties, silkworm egg supply, reeling facilities and other infrastructure. They suggested suitable technologies infrastructure for applied research and multiplication of silkworm breeds reeling machinery technical manpower and training.

Since 1984 the Lutheran world service, an INGO, has been propagating sericulture as part of woman empowerment development and literary program in the east era and hill district of Ilam. From 1992-93 problem has been identified and SAN (Silk Association of Nepal) has sought assistance for program from UNDP. In 1998 UNDP has launched sericulture for rural development program through cluster- pocket area approach with 4 clusters in 7 districts viz palpa, syangja, Dhading, Citwan, kavre, Kathmandu and ilam. Likewise, DANIDA is supporting to JMC-Nepal and the project goal is poverty reduction. They are working in Makwanpur and Tanahu districts. Besides this initiative many other INGOs are involved for social and economic empowerment of women poverty reduction, sustainable, viable livelihood opportunity control and degradation and environment care through sericulture farming.

Statement of the Problem

In spite of having favoryable agro-climatic for superior bivoltine mulberry Sericulture and suitable socio economic settings the prsogress of sericulture development in Kavre District has been rather slow. Some research questions need to be answered for socio-economic impact of sericulture in the study area. They are:-

-What is the current status of cocoon production in Kavre District, Nepal?

-What is the Socio-economic impact on employment and income generating through sericulture in Kavre distirict?

- To what extent, sericulture is generating income and employment in the study area and what are the social and economic impacts observed so far?

- What are the views of farmers on sericulture?

- What are the linkage effects of sericulture on animal husbandry?

The present study resolves around the problems.

Objectives of the Studies

The general objective of the study is to analyze socio-economic impact of sericulture in Sankhu VDC of Kavre District, Nepal.

The specific objectives of the study are as follows:

1. To study the current status of sericulture development in Kavre District of Nepal
2. To examine the change in socio-economic status of people in Sankhu VDC of Kavre District.

Importance of the Study

Nepal is recognized as an ideally agriculture oriented country. Most of people of Nepal live in rural area. And their livelihood depends on the traditional agro-farming. Agriculture of Nepal is only limited in subsistence farming. More than 60% of Nepalese people are depending on agriculture. Large proportion of gross domestic product is from agriculture and its contribution is on an average 32 %(MOF 067/068).It covers huge proportion of disguised unemployment people in Nepal and same situation prevails in Kavre mid hill District.

The present study aims to analyse the socio-economic impacts of sericulture in kavre district. The salient significance of the study is that kavre is being relatively small and close to Kathmandu and it is very rich in climatic condition. This study will provide basic information and general guideline to the interested farmers and policy makers and concerned authorities. This research is very important for the development of sericulture in Nepal.

Limitations of the Study

Due to the limited time and budget the study is limited on within the boundary of Sankhu VDC of Kavre District. Relevant data of income, employment and production of different crops are memory recalled facts of respondents. Households engaged in sericulture data are based on field observation. Similarly, secondary data are taken from VDC profile, Sankhu. More emphasis is given to field survey data. These are the major limitations of the study. However, cross-checking and editing methods were used to avoid such minor limitations.

Although, sericulture is a broad subject, this study focuses particularly on socio-economic impacts of farmer's level. So post-cocoon production activities and other activities relating of sericulture are not counted here. This study de-limits its scope within two aspects of sericulture namely: mulberry cultivation and silkworm rearing.

Organization of the Study

The purpose of this study is to review the present condition and past trend of cocoon production and its effect on socio-economic condition. This study further assesses projection for the sericulture development in Sankhu VDC. This Study is divided into eight substantive chapters.

The first chapter focuses on introduction and second review of literature. The third chapter presents research methodology applied in this study. Similarly, introduction of the study area, Sericulture development in the study area, impacts of sericulture in the study area and problems faced by farmers have been discussed in chapter iv, v, vi, and vii. In the last chapter (viii) summary, conclusions and recommendations are presented. The main chapters are supported by detailed statistical calculations, tables and figures.

CHAPTER- II

LITERATURE REVIEW

A review of relevant literature is necessary such as mulberry cultivation, silkworm rearing and socio-economic impacts for the study of socio-economic impacts of sericulture.

Conceptual Review

Kafle (1981) explains in the book that Sericulture is a relatively new agro-based rural industry in Nepal. It involves the pre-cocoon activities of mulberry cultivation and silkworm rearing and post cocoon activities of processing and making silk fabrics. Mulberry, the specific food plant of the silkworm could also be cultivated on the slopes and unproductive marginal lands. The agro climatic and socio-economic conditions in Nepal are favourable for the development of sericulture. Similarly, it is a new cash crop in this area. In the initial stage of development, it is providing opportunities for gainful employment which is regarded as an effective means for raising the bulk of farmers economic status. Requirement of small investment easy to handle involvement of all age and type of people as labourers. Utilization of execess labour force at cheap wage rate and regular employment opportunities are major merits of sericulture. Sericulture has three major components. They are: mulberry cultivation (agriculture nature), silkworm rearing (animal keeping nature) and cocoon processing (industries nature). Mulberry has an important role in environment protection too.

Dr Lim J.S. (1975) drafted a five year plan for sericulture development in Nepal and on the basis of a national project called IEP was launched. Similarly, a station was established in 1975-76 at khopasi in Kavre district. Some experts from the Republic of Korea assisted this station in its establishment and technical training for its further development. Thus the khopasi station was developed as a nucleus for sericulture development in Nepal.

Empirical Review

FAO (1980) had studied about china sericulture. It has given the brief description of sericulture and silk processing organization, silk egg breeding, sericulture practices and techniques in china. They also study raw silk reeling and processing. This study tour about sericulture development in the People's Republic of China was organized under auspicious of food and agriculture organization and financed by the United Nations Development Program.

Wu Pang-Chuan and Chen-Da-Chuang (1988) in their book had included Silkworm and its necessary environment. They had given the method of silkworm rearing and reeling. Silkworm rearing is an applied science based on the theory of anatomical physiology of the silkworm and silkworm diseases. There are two patterns of silkworms rearing with different purpose silkworms rearing for the egg production and silkworms rearing for silk production. For sericulture mulberry cultivation and silkworms rearing are most important. Successfully rearing of silkworm, life cycle of silkworm should be recognized. Silkworm is a metamorphic insect undergoing four stages of growth and development eggs, larvae, pupa and moth to complete a generation. The environmental and metrological conditions affect the sericulture. Most appropriate temperature is 20c to 30c. The environmental factors are temperature, humidity, light, air, feed and pathogens. Temperature has most important role in life cycle of silkworms and other factors are secondary. If the mulberry garden is too close to a tobacco field the mulberry leaves become polluted with the nicotine produced by the tobacco plants. If silkworm larva consumes the polluted leaves they get poison. The tobacco field should be set up at least 100 meters away from the mulberry garden and in the opposite direction of wind. Mulberry affected by the smoke emitted from various factories also frequently damage the silkworm larvae. Therefore the setting up of mulberry garden should be very carefully planted. When fruit producing plants are closed to the mulberry garden's obviously various agricultural chemicals will be sprayed in these fields and the pesticides often kill the silkworm larvae.

Aruga, H. (1994) also suggests in his books that disinfecting is carried out after completing the rearing and before the next brushing. The disinfections are mainly carried out for the rearing room and rearing implements. If diseased or dead

silkworms are found excreta and bodies may have bacteria, virus, fungi and other pathogens and if these contaminated the rearing room, rearing implements or clothes, they will cause disease in the larvae in the next rearing.

Ulla and Narasmahanna (1987) in their hand book revealed the types of silkworm and its host plant. Mulberry silkworm bombyx mori whose host plant is mulberry or morus Alba. Both authors have tried to give mulberry cultivation, disease and pests of mulberry plant. They also give method of cheap production of mulberry leaves for farmer. According to them "Sericulture is an agro-industry the end production of which is silk." Silk is a protein fiber produced by the silkworm for spinning a cocoon. The purpose of the cocoon is to provide a protective reeling to the delicate silkworm during the most critical period of its life pupal stage two kinds of protein are enclosed in silk fibers, fibroin protein that constituted the core of fibers and serian protein a waxy substance which encases the fibroin.

Sharma K.C. and Kafle G.P. (1981) in his booklet Sericulture industry have three major activities namely cultivation of mulberry, rearing of silkworm and reeling of cocoon. Mulberry can be grown in wide range of climate conditions varying temperature and tropical soil and mulberry has to maintain the plants for sustained maximum productivity of quality leaves. It is a deep-rooted perennial plant. The condition of soil should be capable of supplying sufficient air, water and nutrients. Topography of land is flattered and fertile. There is a great pressure on land for agriculture and horticulture crops in mulberry garden. The writers also emphasis on planting of mulberry in timely. Mulberry being a perennial plant once planted, it remains in the field for 15 to 20 years. It is desirable to replace the old mulberry plants as productively of leaf declines.

Khopasi (1985) The Sericulture Development Program has studied about the role and importance of sericulture in future concluding the sericulture matches well with the geographical, climate and socio settings of Nepal. Realing these features it is decided to take up sericulture development with wider prospective which can play an effective role for rural development by providing more employment and solving the problem of poverty and also reduction of gender imbalance and environment conservation. The report has pointed out the farmer involved in traditional cash crop growers are eagerly looking the sericulture as an alternative cash crop and every year farmers adopting

sericulture are increasing. There are some existing problems: lack of reliable internal sources of silkworm eggs supply, relevant institutional network, qualified manpower etc. are constraints to development of sericulture.

MOA (2047 B.S.) in the report has studied about potentiality of sericulture development in Nepal in 58 districts of hills and Terai as environmental advantages to the sericulture activities. It has further stated that there was record of silk production until 1978. Khopasi is the oldest and old fashioned and inefficient reeling machine. The report has pointed out seed production as a very classical to sericulture industry. For the succession of the programme it is entirely depend on extensive training and services along with credit facility. Research on different aspects of sericulture is essentials to know the right techniques. Meanwhile the market feasibility plays an important role to inspire the farmers.

Katwal S. (1992) on her dissertation has examined the production process, economic viability and problems on its development and measures to resolve them. She has concluded that from second year onward production can be possible. So farmers will have been at a loss in the first year of sericulture farming. Similarly, she concludes that in any kind of crops, the input-output ratio in sericulture is more than other crops. But farmers are not in position to get silkworm in time. Consequently, the productivity of silkworm is low.

Katuwal (1993) in his dissertation has found out positive correlation between input and output. He has further concluded that the production of cocoon is increasing whereas productivity remains constant. Regarding the income of sericulture it has been found relatively higher than non-sericulture, although the management system is a very poor. The higher the family size and the separate rearing house, the better production observed. He has pointed out lack of capital, Irrigation, Labour, Knowledge, tools, inadequacy at mulberry plant and uncertainty of market as the major problems.

MOA (1999) in the paper reveals that various technologies relating to sericulture were recorded to be successful up to 88% particularly in Kabhre, Syangja, Palpa, Dhankuta and Ilam districts. However, 71 percent of farmers were successfully motivated towards sericulture in those districts. Farmers were able to get Rs. 2100 as an extra

income from sericulture compared to those farmers who only involved in cereal crop production.

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NARC (2002), in the paper revealed that leaves of different varieties of mulberry have significant influence on the growth and development of silkworms and cocoon production. Being mulberry leaves the sole food materials of silkworms, the growth and development of silkworms are based on the nutrient availability in the mulberry leaves. So, silkworm larvae cannot fulfill its requirements of food nutrients from other sources if there is shortage of any nutrients in mulberry leaves. Food nutrition is basically concerned with presence of chemical substances in a given foodstuff which are being responsible to set in motion and maintain a long series of metabolites for growth, development and other vital functions of silkworm. In general, there is practice of feeding tender leaves of mulberry to the first and second instar larvae, while coarse leaves are fed to the fourth and fifth instars. The tender leaves are rich in all the chemical components except minerals.

Chandika Pradhan (2006) has studied on his dissertation that cocoon production in Nepal was started in 2035 B.S. However, systematic data are available only since 043/44. The production trend shows that cocoon production is increasing over the time as it was 17.5 ton in 043/44 whereas it has increased to 28.53 ton in 052/53. The rate of production varies in different years. He has also found that different parameters i.e. family plant, food grain production and education are related to cocoon production.

Bhupati dhakal (2009) concluded that organized work is more effective than individual work, when farmers are organized with specific purpose NGO and INGO are interested to support their program and they provided economical and technical assistance for them. Each group is making fund for them for that they have got

knowledge how to save their income and how to mobilize it. From this fund rural cooperative concept goes forward. Seri-farmers have been planting mulberry and practicing intercrop in the gap of mulberry garden. In study area, 80% Seri-farmers have been practicing intercrops. So they can earn additional income from intercrops. Mulberry plants are planted into slope land so all the farmers have realized that soil erosion and landslide are controlled by mulberry plant due to its deep roots. When perfect technical manpower gives the training to farmers, they can take technology so that they can farm Seri-culture in future for self dependency. In Nepali society male dominates females. Females cannot participate in social and industrial work. But in this program female are working. They take part in groups and the groups they are leaders. From this women have enough opportunities to develop their ability.

Shrestha H. (2011) in her dissertation has examined the economic prospects and potentials of sericulture in Nepalese context. She has concluded that sericulture has potentiality of generating additional employment and income. Similarly, introduction of sericulture will also help government in its efforts to check migration, prevent soils from further eroding and more vitality it plays a role in stopping the creation of landless class in Terai and minimizing the chances of more deforestation. She further concluded that the transfer of Khopasi experience to elsewhere in Nepalese hills and mid hills is technically and economically viable.

All the earlier national and international findings of sericulture literature show that how farmers can cultivate the plant of mulberry and rearing of silkworms and reeling cocoon but there is gap of findings of research of both national and international literature to how the farmers utilize the economic benefit from sericulture to upgrade their socio-economic status in their family members. This current research has tried to explore the qualitative relation between income from sericulture and increment in socio-economic factors in the study area.

CHAPTER- III

RESEARCH METHODOLOGY

Selection of the Study Area

Kavre district of Bagmati zone lies in the Central Development Region. It lies in mid-hill region covering an area of 1396 sq. km. geographically; it lies between the $27^0$20' to $27^0$35' north latitude and $85^0$59' east longitude ranging from 1007 meters to 3028 meters elevation.

Ramechhap and Sindhuli districts are in the east, Bhaktapur and Lalitpur districts are in the west, Sindhupalchok is in the north and Sindhuli and Makawanpur districts are in the south direction of the district.

The present study has confined in Sankhu VDC of Kavre district,

Research Design

The research design applied in present study descriptive as well as exploratory in nature. The study is mainly based on certain vital issues of agricultural development viz: socio-economic impact on farmers and profitability of sericulture in hills area. How different socio-economic factors influences the decision making process of farmers regarding sericulture in a micro place. The trend study shows the increment in socio-economic indicator to predict the future impacts of sericulture.

Nature and Sources of Data

The study has based on both primary and secondary data. The primary data has been collected from Seri-farmer during fieldwork. Whereas secondary data has been collected from published and unpublished documents, literary articles and books. Others necessary data have been collected local VDC profiles, SOARS office and SRDP office.

The collective data which can classify in the statistical form are quantitative data and which classify on their specific properties are qualitative data.

Universe of Sample Size

Except ward no. 3, 4, 5 & 8, all ward no. are involved in Sericulture in Sankhu VDC. There are 5 wards of sericulture practicing where 24 Hhs number under universe sample and all the 24 Hhs are taken under study. In ward no. 1, 4 households are engaged in sericulture, in ward no. 2 five households in sericulture, in ward no.6 six households in sericulture, in 7 five households and in ward no. 9, 4 households are practicing the sericulture.

Procedures

The reliability of universe depends mainly on universe size. Universe study size was determined as total population of sericulture household in Sankhu VDC of Kavres District. In the study area, there was small size of population engaged in sericulture so it was rational to include the all households under the study.

Procedure of Primary Data Collection

Household Survey

The researcher has prepared many types of questions and asked sample Hhs. It gives information like individual description of Seri-farmer, socio-economic condition, Land distribution, Seri-farming land, total product and income. It also gives attitude of people about Seri-farming. It gives qualitative data. The Hhs survey questions have been listed in appendix no. 1.

Interview

The researcher has applied the informal interview to key informant. It gives qualitative data, which help to analyze socio-economic impact of sericulture.

Observation of Field

Writer himself observed the cocoon production process, Mulberry cultivation, Leaf collection, and Feeding and Cleaning activities in the study area thoroughly to collect quantitative and qualitative facts. This observation was done to make clear about impact of Seri-income on improving the social and economic status.

Data Analysis and Presentation

The data collected through various techniques have put together processed and analyzed manually. According to the nature of data, they are further classifying into separate section. Quantitative data analysed statistical tool like percentage, pie chart and bar-diagram etc. and qualitative data analyzed by ordering and ranking as well as descriptive manner.

CHAPTER-IV

INTRODUCTION OF THE STUDY AREA

Geographical Introduction

Kavre district of Bagmati zone lies in the central development region of Nepal. Bagmati zone has eight districts where kavre district lies in out of Kathmandu valley and it has covered mid-hill region an area of 1404sq. km. geographically, it lies between the $27^0$20' to $27^0$35' north latitude and $85^0$24' to $85^0$59' east longitude ranging from1007 meters to 3028 meters elevation. Ramechhap and Sindhuli districts are in the east, Bhaktapur and Lalitpur districts are in the west, Sindhupalchok is in the north and Sindhuli and Makawanpur districts are in the south direction of the district.

87 VDCs and 3 Municipality are In this district, multi-caste of people are living but majority of castes of people are Tamang, Bahun, Chhetri, Newar, pahari, Biswakarma, Sarki, damai, Danuwar, Majhi, Hayu and Gurung are living. Here, majority of people are involved in agriculture and animal husbandry. Especially, urban oriented villages of this district, people produce milk, vegetables and they sell in Kathmandu. Main markets of this district are Panaouti, Banepa, Dhulikhel and Kathmandu.

On the side of transportation road, Araniko highway and BP highway are passed by this district. Out of 87 VDcs, in 82 VDcs roads are linked in winter season. In the literacy rate of this district, 56% of total population is literate and 39% of women are literate in total population of district. Likewise, 96 secondary level schools, 94 lower secondary school and 451 primary level schools are running and one kathamandu university has been established in this district.

Further more of this district, 3 big hospitals with modern facilities is providing the health services to the people, 4 primary health centers, 10 health posts and 80 sub-health posts are providing the health services.

The present study has confined in the VDC named Sankhu which covers 6.95 s.q.km. Sankhu lies about 39 k.m. south-east from Kathmandu. And it also lies at the mid-

western part of district. Sankhu is one of the VDC of 87 of the Kavre. In Sankhu, mainly, Tamang, Newar, Bahun and Chhetri have the majority in the community. Rests of the castes are minor in the numbers. Sankhupati is east side and 6 k.m. far from Panouti Municipality. Syampati and Phoolbari are east, Panouti and Batase are in west, Patlekhet in north and Balthali in south of this V.D.C. In this VDC, majority of people are adopting the Buddism, Hinduism and Christian religion. Here, religious and castes harmony are found.

Main occupation of people of this VDC is traditional farming. Major crops are Paddy, Maize, Potato and Orange etc. Farmers are not being able to adopt the commercial and scientific farming as because of inadequacy of irrigation. Major income sources of this area are laboring, agriculture farming and services in government and private sectors. According to village profile (2066/67), most of youths of this area are going to abroad for the employment.

Climate

South-east monsoon is predominant and common in this district. There are two types of climate i.e. the warm temperate climate and the cool temperate climate. The warm temperate climate is found in valley region where summer is not too hot and winter is cool. The cool temperate climate is found in hilly region where winter season is cool.

The average annual maximum temperature of the district is 33.0^0c and minimum temperature is 4^0c. The coldest month is December and hottest month is june. The average annual rainfall in the district is 1289.7ml. Between May to September it is possible due to the south-east monsoon.

Socio-economic condition

Population Distribution and Density

According to 2001 census, the total population of the district is 385,218 with population density of 232.3 persons per sq. km. Out of the total population of the district, the Sankhu VDC consists 4,337 persons which comes 1.12% of the total population. The population density of Sankhu is 648.28 people per sq. km.

The population distribution of Sankhu can be shown by the following table No. 4.1.

Table No. 4.1.

Population distribution of Sankhu by Gender

Gender	Population	Percentage	House owner	Percentage
Male	2165	49.92%	652	84.90%
Female	2172	50.08%	116	15.10%
Total	4337	100.0%	768	100.0%

Source: village profile, 066/067

The total population of Sankhu is 4337 whereas, 2165 male and 2172 female. Numbers of female are slightly higher than male by 7. 85 percent households represented by male and only 25pecent of household represented by female indicate the patriarchal family system in this VDC.

Literacy

Education plays vital role in nation building. Literate refers to the ability of reading and writing with understanding. Education is also important for the development and diffusion of modern ideas and technology.

According to 2001, CBS census, 56 percent of people of Kavre district are literates of which 61% male and 39% are female indicate that a serious imbalance between men and women in the education.

The following table no. 4.2 shows the rate of literate and illiterate people of VDC Sankhu.

Table no. 4.2

Literacy Status of Sankhu

VDC	Total	Literate			Illiterate		
		Both Sexes	Male	Female	Both sexes	Male	Female
Sankhu	4337	1317(30.36 %)	706(53.60 %)	611(46.39 %)	3020(69.63 %)	526(17. 2%)	2500(82.7 %)

Source: VDC Profile, 066/67

The table no. 2. Shows that 30.36% people are literate in the Sankhu. Out of the total literate, 53. 30% male and 46.39% female are literate in Sankhu VDC. Whereas 69.63% of the total population of Sankhu VDC is illiterate, 17.2% male, 82.7% female. The literacy rate of the Sankhu VDC is two times lower than the average national literacy figure.

Education status of this VDC

In this VDC, number of PHD holders two, Master completion 23, Graduation pass 103, +2 or PCL pass 264 and SLC pass 466 has been recorded at the date of preparation of the VDC profile. In the ratio of total population, there is good number of completed higher education. Those statistics are shown following table.

Table No. 4.3

Distribution of Higher Education in Male and Female in Sankhu

	Male	Female	Total
SLC Level	256	210	466
PCL or +2 Level	155	109	264
Bachelor Level	57	46	103
Master Level	18	5	23
PHD	1	1	2
Total	487	371	858

Source: Village Profile, 066/67

Caste and Religion

In this VDC, 28.45% of Tamang out of total population is recorded, which is the majority compared to other caste. Similarly, Newar, Bahun, Chhetri are living in this village. In the number, having 10 castes of people are dwelling permanently. It is shown by following table 4.4.

Table No. 4.4

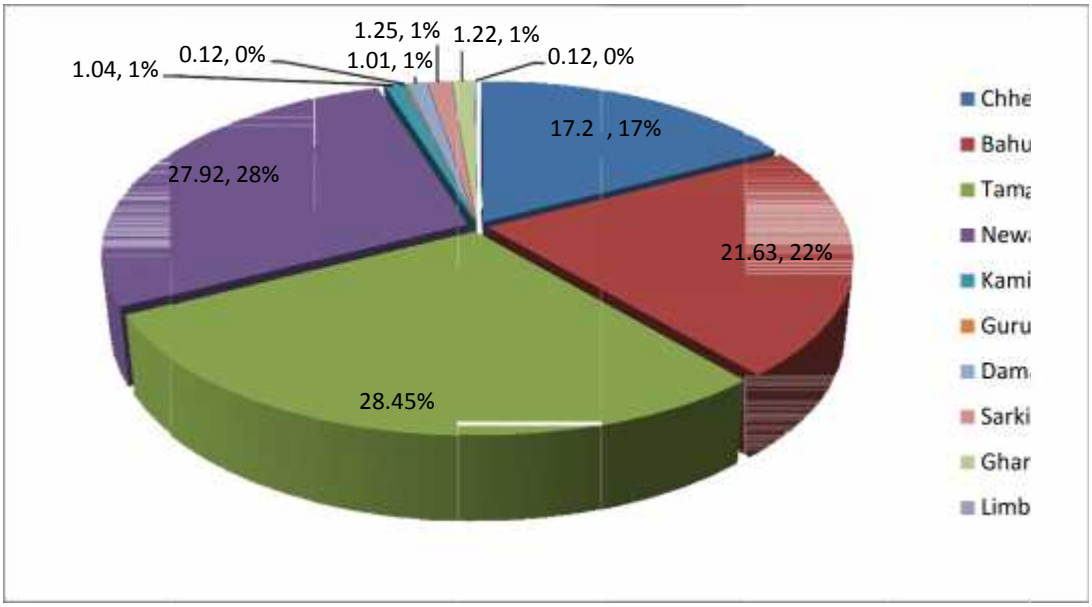
Distribution of Population by caste in Sankhu

Caste	Male		Female		Total	
	No.	%	No.	%	No.	%
Chhetri	361	8.32%	387	8.92%	748	17.25%
Bahun	465	10%	473	10.91%	938	21.63%
Tamang	617	14.23%	617	14.23%	1234	28.45%
Newar	622	14.34%	589	13.58%	1211	27.92%
Kami	21	0.48%	24	0.55%	45	1.04%
Gurung	2	0.055	3	0.55%	5	0.12%
Damai	26	0.60%	18	0.42%	44	1.01%
Limbu	3	0.07%	2	0.05%	5	0.12%
Sarki	24	0.55%	30	0.69%	54	1.25%
Gharti	24	0.55%	29	0.67%	53	1.22%
Total	2165	49.92%	2172	50.08%	4337	100.0%

Source: Village Profile, 066/67

Figure No. 4.1

Population Distribution by Caste/Ethnic in Sankhu VDC



Source: village profile, 066/67

Nepal is multi-linguistic and multi-religious country. So, in this VDC, too, different religion people are adopting. Most of the people of this Sankhu VDC are in the Hindu, the percentage of Hindu is 70.53%, and likewise, 29% people are adopting the Buddism and 0.30% in Christian. This has been presented in the table below.

Table No. 4.5

Distribution of Population by Religion in Sankhu

Religion	Male		Female		Total	
	Number	%	Number	%	Number	%
Hindu	1523	35.12%	1536	35.42%	3059	70.53%
Buddhism	631	14.55%	628	14.48%	1259	29.03%
Islam	5	0.12%	1	0.02%	6	0.14%
Christian	6	0.14%	7	0.16%	13	0.30%
Total	2165	49.92%	2164	50.08%	4337	100.00%

Source: VDC profile, 066/67

Main Occupation

People of the Sankhu VDC are mainly engaged in agriculture farming, 94.44% of households are involved in it, people involved in others economic works are negligible. They produce mainly paddy, wheat, maize, potato, oil seed etc. On the basis of household numbers, following chart shows the occupation and percentage involved on it.

Table No.4.6

Distribution of Households by Occupation in Sankhu

Occupation	Households	Percentage
Agriculture	756	98.44%
Govt. Services	2	0.26%
Trade	10	1.30%
Industry	0	0.0%
Total	768	100.00%

Source: Village Profile, 066/67

Similarly, in this Sankhu VDC, 63% percent economic active population are involved in agriculture, 10% in trade, 14.52% in services and 11% in wage laboring. This is presented in following table no.4.7.

Table no. 4.7

Involvement of Population in Different Occupation in Sankhu

Occupation	Pop^{n}. 16-45yr			Pop^{n}. Involved in occupation.					
	Male	Female	Total	Male	%	Female	%	Total	%
Agriculture	1125	1155	2280	583	51.82 %	856	74.11 %	1439	63.11 %
Trade				143	12.71 %	82	7.10%	225	9.87%
Services				250	22.22 %	81	7.01%	331	14.52 %
Wage labor				131	11.64 %	117	10.13 %	248	10.88 %
Industry				4	0.36%	1	0.09%	5	0.22%

Source: Village Profile, Sankhu, 066/67

Distribution of Land on the Basis of Households

In this VDC, Sankhu, 13.54% households are landless, the households of landholding size 0-3 ropani are 20.70%. Similarly, more than 65% households have less than 13 ropani land. Financial condition of people in this village is poor. This is presented below by following table no. 4.8.

Table No. 4.8

Distribution of households by Land Size

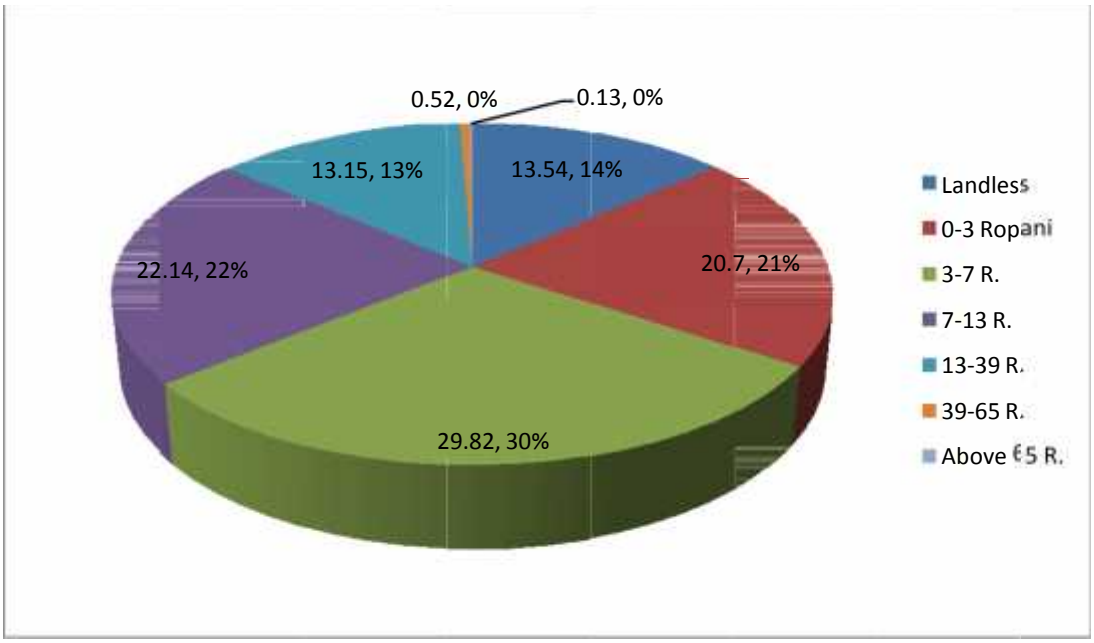
Size of Land	Household	Percentage
	104	13.54%
0-3ropani	159	20.70%
3-7 ropani	229	29.82%
7-13 ropani	170	22.14%
13-39 ropani	101	13.15%
39-65 ropani	4	0.52%
Above 65 ropani	1	0.13%
Total	768	100.00%

Source: Village profile, Sankhu, 066/67

Data tabulated above is presented in the pie-chart below.

Figure No. 4.2

Population Distribution by Land Size



Source: village profile, 066/67

Annual Income and Its Distribution

In this VDC, around 63.8% of households have less than 150,000 Rs. annual incomes. To compare the average family number and income, it shows the people of this VDC, fall under the poverty line. This has been presented in the following table.

Table No.4.9

Distribution of Household by Income size in Sankhu

Income Size	Household Number	Percentage
150,000	490	63.80%
150,000-300,000	163	21.22%
Above 300,000	115	14.97%
Total	768	100.00%

Source: Village profile, Sankhu, 066/067

Economic Condition

Nepal is poor country; Nepal possessed very limited economic resources since ancient time. On account of those limited resources Nepal always remained a poor country. The poor economic resources have negative impacts in the development of the country. Sankhu VDC has limited economic resources. There is no any modern industry, farm and project. The main economic resources are agriculture, animal husbandry, small trade and services etc.

Agriculture

Resources from agriculture are main sources of living for village. Main crops are paddy, maize, wheat, millet e and others. Among the crops, paddy, maize and wheat are harvested in khet likewise, millet and others are harvested in pakho bari. Similarly, around 4% of pakho bari is used for mulberry plantation and reared silkworms as a subsidiary crops. In study area, total land is 10572 Ropani. Table no.4.

Table no. 4.10

Kinds of Land and Distribution in Sankhu

S.N.	Kinds of land	Area(ropani)	Percentage
1.	Public land	2452	22%
2.	Guthi land	140	1.2%
3.	Khet land	1240	40.5%
4.	Pakho Bari- Land	4253	36.35%
	Total	8085	100.00%

Sources: Survey Section, Dhulikhel, 2057

From this table 4.10. Pakho bari and public land is 36% and 22% respectively. Pakho bari land covers hilly region and public land is also named as Guthi land which is scattered in khet and pakho bari, about 27% of landless or land holder people are cropping in this land, meanwhile diversification of crops is increasing on the basis of production cost and benefit. Paddy and wheat are main crop in khet. Most of people plant potato and orange, which is developing as main crops in today. Many people attracted in vegetable and fruit, which are cash crops but lack of irrigation and market, farmers are discouraged on it. Technology of cropping is not modernized. They follow the old technique of ploughing. People have money they can hire the workers from their own VDC or not having the money to hire the labor they applied the parma (turn by turn labour).

These days, in Sankhu, potato and orange are more popular crops than other farming. All of farmers crop the potato two times a year in khet and orange once a year in Bari. In pakho Bari, where potato and paddy and orange are not growing, sericulture is popular. Some of the farmers have pakho Bari cultivated mulberry and reared silkworms. From silkworm rearing they produce cocoon in 25-35 days so they can earn cash easily.

Animal Husbandry

Animal keeping is another economic source of village. About 95% of households in village keep animal (VDC profile, 067). Cow, buffalo, goats, pig, chickens and ducks are common animals. From animal keeping they can produce milk and meat, the

production of meat 36768 kg and production of milk, 148670 litere. They sell in near market Panouti, Banepa and even in Kathmandu to earn money. Nowadays people have attraction in poultry farming from which they produce eggs and meat. Around 1.5% of household have applied poultry farming in form of subsidiary profession.

Cottage Industry

Cottage industry is the most important economic sources for Nepalese people. Industries like cotton clothes, wooden made material and Nepali handicappers are traditional cottage industry. Today in international market woolen made material, handicraft, metal image and papers etc. are popular. In study area about only 0.22% people are engaged in this type of cottage industries. Because of various reasons, such as no credit facility and entrepreneurship, industries cannot have been emerged. So, if it is developed properly, all of those cottage industries will help to increase the people's income.

Business

Business is another economic sources. In Sankhu VDC, daily life consumed goods like chamal, vegetables, oil, soap, tea are available in local market/shops. Total numbers of shops are around165 in the study area (field survey, 2070). And 9.87% of people are involved in it. These are all small kind of shops where daily-consumed good have been found. But about 25% of people (field survey, 2070) go to city for trade and they open large-scale trades. Village level trade is only subsidiary occupation.

Services

The government services have been widened in the modern period of Nepal. Military persons were great need during the unification period and military service become more popular and developed during the time. Similarly the civil services were also widened after the unification of Nepal. Nation has become big and to look after the center and district administration many civil persons were needed. Military services, police forces, government civil service and private service are the main sector of services. In this sector 250 male (22.22%) and female 81 (7.01%), all total 331 (14.52%) people are engaged.

Labor

Uneducated people are engaged in labour. Villagers those do not have land and cannot produce adequate food grain. They sell their labor in their own village as agriculture workers or they go to outside of village such as Panoutu, Banepa and Kathmandu. About 13.54% households are landless, (VDC office, 2067). They are also around illiterate. Labour is main income sources for them. They are engaged in construction, agricultural work, carpenter and porters.

Market Management and Communication

In VDC, goods are not found according to villager needs. Local goods, which are recorded by villager, can't be sold in village. So main market is Kathmandu city where they completely depend on. Due to lack of road and transport, they cannot export and import any things easily. Some trader comes from city and they buy paddy, potato and poultry from farmers. But they cannot give satisfactory price of goods for farmer, but they have more profit. Farmer who produced cocoon of silkworm they can carry at khopasi and sell.

Communication is the most important medium for development. For communication, around 80.08% household use telephone and cell phone, 7.03% have computer, 77.34% household have TV set (Village profile, 2067). In VDC, there is one post office. Instead of people depend on radio and television for communication FM radio is more popular like other places of valley. If people want to use-email, Fax, Internet, they come to Panouti, Banepa and Kathmandu city.

Kinds of Houses and Settlements

Among the people of VDC, Brahmin, Chhetri and Newar are live in plain region, while some Newars caste live in slope land but usually Tamang live in slope land and hilly region. All of caste have its own type of settlements. Some places have Brahmin and Chhetri communities are settle down in separated places. But most of the ward of VDC, there are mixture of caste to settle down with harmony. There are old types of houses, which are made up from Mud Bricks. They have jasta pata and Tile in their roof and these houses are 3-4 Tale. These days' people who have enough money built

new model of building. Kinds of houses in the study area, can be presented in following table no. 4.10.1

Table No. 4.10.1

Household Distribution by House Settlements in Sankhu

Types of Houses	No. of House	Percentage
Roof with Khar,	46	5.99%
Tile, jhingti or slate roof	74	9.64%
Roof with jasta pata	615	80.08%
Pakki, RCC building	33	4.30%
Total	768	100.00

Source: village profile, 066/67

In above table, majority of households have houses of having roof of jasta pata which is 80.08% and 615 households out of 768, similarly, pakki building are 33 and roof with khar are 46.

CHPTER-V

SERICUTURE IN THE STUDY AREA

Various studies have shown that sericulture is appropriate for farmers to commercialize the agriculture from the subsistence type of farming. By the intrinsic quality of sericulture it has the possibility of expanding the employment and income level of marginal farmers and it also contributes a lot to conserve the environment. Apart from this, country can earn a lot foreign currency exporting the silk and silk made materials and reduces the deficit trade in agriculture.

Existing job crisis in the world indicates there need to be created more jobs in the local level. So, to operate small cottage industry, to stop youth of migrating to city and to make agriculture farming as social prestigious job sericulture plays vital role. In the past years of Nepal around 2,700 farmers had planted the mulberry (entomology dpt. 067) but at present, this size limited into 1,300 and production of cocoon per year 35 metric ton kg rearing the silkworms by seri-farmers. For the improvement of rural economy, it is necessary to expand the area of sericulture and productivity of it.

Nepal is independent in producing the high quality by- voltine silk worms in the view of supply and demand of it. At present capacity is to produce 10-1500 boxes. It also produces 8-10 lacs mulberry plants from various farms per year. And raw silk and reeled silk production is 1.5 metric ton per year. Productive mulberry area has been expanded into 300 hactre. In khopasi centre there are 35 different tribe of silkworms and 42 kinds of mulberry plants have been conserved as mother sources.

Distribution and Production of Mulberry Plants and Cocoon in the Study Area

In the Kavre district, there are several VDCs where sericulture has been practiced such as Mahadvsthan, Sankhu, Khopasi, Bulawa, Kusadevi, Sunthan, Khanalthok, Dapchha Chyamrang and Choubas. But, in the production and expansion of mulberry cultivation, Resham Kheti Vikas Shakha, Khopasi has declared the pocket area of sericulture in a few VDCs Sankhu, Mahadevsthan, Dapcha Choubas of Kavre district (Resham kheti paket chhetra profile 066/067). The production of cocoon and number of mulberry plant of the paket area are presented in the following table no. 5.1.

Table No. 5.1

Number of mulberry plant and Cocoon Production in Kavre

Pocket Area	Silkworm rearing farmers	Area in hectare	Number of mulberry planted	Production of cocoon in k.g.
Dapcha	27	4	42,000	495
Chyamrang	14	2	20,000	70
Mahadevsthan	16	4	48,000	795
Choubas	2	1	11,000	45
Sankhu	24	4	55,000	625
Total	83	15	176,000	2030

Source: Reshamkheti Vikas Shakha, Khopasi, 067/68

In the above table, shows total mulberry plantation is 15 hectare in kavre district. Total 83 farmers are rearing the silkworms and they have planted 167,000 mulberry plants and total production of cocoon 1535 kg (064/65). In the Dapcha VDC, there are more Seri-farmers in comparison to other VDCs such as Choubas, Sankhu, and Mahadevsthan. In Choubas there are only two farmers are rearing silkworms and produce 45kg cocoon, in Mahadevsthan, there are 16 farmers are rearing silkworms and produce 795kg cocoon, cultivated 48,000 mulberry plants. In the Sankhu only 24 farmers are continuing to rear the silkworm and 55,000 plants of mulberry planted and produces 625kg cocoon onetime rearing year.

In Sankhu VDC, there are 24 households of ward no. 1, 2, 6, 7 and 9 have involved in sericulture. At ward no. 7 some farmers have started mulberry plantation during the year 2064 B.S. The group of sericulture formatted and planted mulberry at 60 ropani of public land of ward no. 2 and 6 with the help of Khopasi centre farm. On the field observation, many non-sericulturists farmers are interested in sericulture, but because of inadequacy of technical knowledge about sericulture and some of the farmers have no land at all, so they are obliged to continue the traditional farming and other alternative works in village. In Sankhu VDC, there is one sericulture group in the ward no.6. While in the field observation, all the 24 samples were taken. And also views of non-sericulturists were taken. In Sankhu number of mulberry plants

distribution to seri-farmers and group of sericulture can be presented on the following table no. 5.2.

Table No. 5.2

Mulberry plants Distribution in Sankhu

Ward No.	Supplied mulberry	Percentage	No. of Survival	Survival percentage
1.	15,000	17.44%	9500	16.37%
2.	17,000	19.86%	12000	20.69%
6.	35,000	40.69%	22000	37.94%
7.	9,000	10.46%	6500	11.21%
9.	1,0000	11.62%	8000	13.79%
Total	86,000	100.00%	58000	67.44%

Source: Khopasi Centre Farm, 065

According to the field observation, in Sankhu VDCs around, 86000 mulberry plants were distributed or cultivated from khopasi centre farm, neighbors and own nursery in different years in the past but only 86% of mulberry plants were survived, in compared to other statistics of mulberry, survival of plants is satisfactory. In ward no 1., 15000 plants were cultivate and survived around 9500, likewise in the ward no. 6, about 35000 mulberry plants cultivated through different sources by farmers but only 22000 plants survived. While asking about the plant damage to the farmers, they would say of insufficient of irrigation, uncontrolled of plant disease and lack of technical knowledge.

Similarly, in sample numbers of male and female are shown in the table no.5.3.

Table No. 5.3

Number of Male and Female in Sample Households

Ward No.	Hhs number	Gender			
		Male	Percentage	Female	Percentage
1	4	3	19.83	1	4.16
2	5	2	8.33	3	12.5
6	6	4	16.66	2	8.33
7	5	3	12.5	2	8.33
9	4	3	12.5	1	4.17
Total	24	15	62.5%	9	37.5%

Source: Field Survey, 2070

Table no. (5.3) shows, in selected sample, from all ward of VDC, 15 are male which are 62.5% and 9 are female which is 37.5%. Gender involvement in sericulture, it shows the greater proportion of male are involving in compared to female which are 62.5% and 37.5% respectively.

Gender Basis Distribution of Population

Male and female are two wheels of one cart for society. But Nepalese female are dominated by male. The majority of women cannot take part in outside work of their home. Usually they pass the time doing domestic work, cooking, cleaning clothes, rearing and caring children and disabled elders, in these works there is no monetized value. In the study area, women also with different age participated in sericulture which shows in the following table no.5.4.

Table No. 5.4

Population of Sample Hhs by Age and Sex

S.N.	Age	Gender				Total	Percentage
		Male	Percentage	Female	Percentage		
1.	0-5	6	3.79	7	4.43	13	8.22
2.	6-13	23	14.56	25	15.82	48	30.37
3.	14-60	41	25.95	47	29.74	88	55.69
4.	Above 61	4	2.53	5	3.16	9	5.69
	Total	74	46.84	84	53.16	158	100.00

Source: Field Survey, 2070

The above table no. (15), number of male are 74 which is 46.84% percent and female are 84, which is 53.16% percent in the sample population. In male population 0-5 and 6-13 age groups have 3.79% and 14.56%. Similarly14-60 and above 61 age group have 41and 4 which are 25.95% and 2.53% population respectively. Among female sample population, 4.43% and 15.82% of age group 0-5 and 5-13, likewise, 29.74% and 3.16% population of age group 14-60 and above-61 respectively. Table shows proportionate number of female population is more than male. And table also shows that economically active age group 14-60, population of female is more than male. It has revealed that Women have more contribution in total production of cocoon than male.

Caste composition of sample Households

Different caste and ethnic communities have settled in Sankhu VDCs, mainly they are Tamang, Newar, Bahun, Chhetri, Kami, Gurung, Damai, Limbu and Sarki but in sample households only 4 caste are seen. These are shown in the following table. 5.5.

Table No. 5.5

Composition of Household by Caste

S.N.	Caste/ ethnic	Hhs	Population				Total	Percentage
			Male	%	Female	%		
1.	Tamang	9	33	20.88	41	25.95	74	46.84
2.	Newar	5	17	10.76	14	8.86	31	19.62
3.	Chhetri	7	18	11.39	19	12.02	37	23.45
4.	Bahun	3	6	3.79	10	6.32	16	10.12
	Total	24	74	46.84	84	53.16	158	100.00

Source: Field Survey, 2070

Above table no. (5.5) reveals tendencies of caste and ethnic involved in sericulture in sample households. Maximum and minimum of households are Tamang and Bahun which are 46.84 and 10.12 respectively. Among these, in Tamang, 20.88% male and 25.95% is female, in Bahun, 3.79% male and 6.32% female, similarly, in Newar 10.76% male and 8.86% female and in Chhetri 11.39% male and 12.02% female. From above table shows that number of Tamang is higher than other caste it indicates that basically Tamang communities are attracted to sericulture as because of they have no sufficient of land(khet) to cultivate paddy. On the field observation, Tamangs would have pakho Bari than to have khet. So it is also easy to cultivate the mulberry and rear the silkworm as subsidiary income.

Education Status on Sample Households

Education has vital role for producing productive manpower. Most of people of the study area are attracted to education; it also shows sericulture has positive impact on education. People of the study area are sending their children in private boarding school than public school. People would say we send good schools to upgrade their children's educational status and also said we didn't get opportunity to go schools as

because of poverty and lack of schools. The following table no. (5.6) shows the educational status of family in sample Households.

Table No. 5.6

Educational Status of Sample Hhs.

S.N.	Education status	Male	%	Female	%	Total	Total percentage
1.	Illiterate	7	4.43	15	9.49	22	13.92%
2.	Literate	10	6.33	9	5.69	19	12.03%
3.	Primary level (1-5)	16	10.13	18	11.39	34	21.52%
4.	Lower secondary(6-8)	18	11.39	21	13.29	39	24.68%
5.	Secondary(9-10) or SLC pass	15	9.49	16	10.13	31	19.62%
6.	PCL(+2)	6	3.79	5	3.16	11	6.96%
7.	Bachelor level	2	1.27	0	0	2	1.27%
8.	Master level	0	0	0	0	0	0
	Total	74	46.84%	84	53.16%	158	100.00

Source: Field Survey, 2070

In the above table no. (5.6) People who can read and write 12.03% where male 6.33% and female 5.69% similarly people who illiterate cannot read and write are 13.92% where 4.43% male and 9.49% female. In higher education, there is less proportionate than primary and lower secondary level, in primary level 21.52%, lower secondary level 24.68% and in secondary level, 19.62%.

Production of Cocoon of Sample Hhs. in Sankhu

Sericulture activities in sample households are directed by towards both man and women from landless and marginal land holders. In the initiation of sericulture in kavre district there was more attraction on farmers. Even if demonstration, farmers reared some silkworms for the trial, but commercially very few farmers continued the sericulture, in Sankhu only 24 households are rearing the silkworms. In the field observation, it was found that most of seri-farmers had been rearing silk worms 3 times successfully per year. It was also fount that who were marginal landholders and received training of sericulture and were keeping up rearing silkworms and who were

not received of training and comparatively much landholder left the rearing silkworms.

In the study area 24 households were reported to have planted around 85000 mulberry plants and which on an average survived 55000, and produced around 625 kg. Cocoon in year. And average production of cocoon per household is 26 kg at one rearing. It is clear that farm size of sericulture is very small and small farms are less economical in working and conducting to greater efficiency than the large-sized farmers. The production of cocoon in the sample household can be shown in following table no. 5.7.

Table No. 5.7

Production of cocoon in Sample Hhs. In 2012 A.D.

Ward No.	Hhs number	Production of cocoon in kg	Total %	Gender					
				Male	Cocoon production in kg	%	Female	Cocoon production in kg	%
1	4	106	16.96	3	76	12.16	1	30	4.8
2	5	112	17.92	2	41	6.56	3	71	11.36
6	6	173	27.68	4	109	17.44	2	64	10.24
7	5	136	21.76	3	85	13.6	2	51	8.16
9	4	98	15.68	3	76	12.16	1	22	3.52
Total	24	625	100.0	15	387	61.92%	9	238	38.08%

Source: Field Survey, 2070

From this table no. (5.7) total cocoon production of sample Hhs. Is 625kg at one time rearing of silkworm. At ward no.6 the production volume is higher than other ward no. because in ward no. 6, there is 6 households are rearing silkworms. The 27.68% of cocoon production contains which is higher than ward no.7, 1 and 9 where production

proportionate are 21.76%, 17.92% and 15.68% respectively. Proportionate contribution of cocoon of female has less than contribution done by male. But on the field observation, labor involvement of women is higher than male. Above in the table, 61.92% of total production of cocoon is contributed by male and 38.08% by female.

All the Seri-farmers sell their fresh as well as dry cocoons in khopasi center. The price of cocoons depends on the quality of cocoon. Cocoons are separated into five different grades to their shell ratio. The shell ratio is a measure of the useable silk from cocoon as a percentage of the total weight of the cocoon. The Khopasi center is purchasing the fresh cocoon at the following rate from farmers, which shows the table no. (19)

Table No. 5.8

The price Rate of Different Grades of Cocoon

Grade	Shell Ratio	Price per kg in Rs.
A	21	150
B	19-21	135
C	16-18	120
Under grade	<16	90
Damage	-	45

Source: Khopasi Center, 2070

The price rate of dry cocoon is double at fresh cocoon. But the price rate is found same during the year 2048 to now. The khopasi center has been selling it after reeling process specially the silk buyers Come from Bengal and Kathmandu.

Income from Sericulture in the Sample Hhs. Sankhu

Since there are various aspects of sources of income in sericulture. It is difficult task to calculate the income generation from sericulture. It indicates income from cocoons, income from saplings and linkage income with farming activities.

Table No. 5.9

Income Sources of Seri-farmers from Sericulture

Items	Production	Income Rs.
Cocoon K.g.	1875	25,3125
Saplings No.	125743	31,435
	Total	284,560

Source: Khopasi Center, 2069

Total income generated through sericulture during 069 B.S. in Sankhu was Rs. 284560 including income from cocoons and saplings income. Other income are not taken here. There were 125743 saplings in 069 which are were sold at the rate of 25 paisa each and generated Rs. 31.435. Likewise 1875 kg cocoon were produced which generated Rs. 25,3125 in the same year. Per household income from sericulture was Rs.11,856 in the same year.

Average Annual Income From Sample Households

Share of sericulture in household income is really encouraging. It has been one of the leading sources of income in the study area. Different sources of household income of Seri culturists were computed using the data counting table no. 5.10.

Table No. 5.10

Average Annual Income of Sample Household (Rs.)

One sample Households	Sources of Income						Total
	Cereal crops	Cash crops	Services	Cocoon	Animal husbandry	Business	
Income	35,756	7,536	12,536	11,856	10,455	9,566	87,705
Percentage	40.76	8.59	14.29	13.51	11.92	10.90	100.00
	Annual Expenditure Distribution						
Items	Food	Clothes	Health	Education	Agricultural works	Others	Total
Expenditure	41,532	9,077	5,903	19,575	2,470	1,500	80,057
Percentage	51.87	11.33	7.37	24.45	3.08	1.87	100.00

Source: Field Survey, 2070

From the table no. 5.10 total sample households are 24 and average annual income and expenditure of one household has been presented. Annual income from cereal crops, cash crops, services, cocoon, livestock, and business are 35,756, 7536, 12,536, 11856, 10455 and 9566 respectively. And their respective proportionate are 40.76%, 8.56%, and 14.29%, 13.51%, 11.92% and 10.90%. Here, income from cereal crops is 40.76% which is three times higher than sericulture that is 13.51%. But, obviously it shows that income from sericulture is relatively higher than other such as cash crops, livestock and business, they are 8.59%, 11.92% and 10.90%. it also indicates that farmers who adopts the sericulture as subsidiary crops becomes profit oriented farmer.

On the other side, to see the outlook of average annual expenditure of one household, around 51.87% of total income spent on food, which is double than 24.45% expenses on education, similarly, expenses on clothes, health agricultural works and others are 11.33%, 7.37, 3.08% and 1.87% respectively. From above table shows expenses on education is higher than other items apart from food. It also reveals that increment of education expenses is due to sericulture activity (field study).

Annual Average income of one household – Annual average expenditure of household

Annual Income = 87,705

Annual Expenditure = 80,057

Surplus Income = 7,648

Therefore average surplus income per household Rs. 7648 per year.

Seri-farmers Views on Changing Income

Since, farmers are original managers of farm and crops; opinion on economic profitability leads them on decision regarding crop selection to raise the income. Thus, farmers on whether incomes after the introduction of sericulture increasing, decreasing or constant were observed (table no. 22).

Table No. 5.10.1

Seri-farmers views on Income of Sericulture

Views on Income	Sample Hhs.	Percentage
Increasing	14	58.33
Decreasing	2	8.33
Constant	3	12.5
Do not know	5	20.83
Total	24	100.00%

Source: Field Survey, 2070

Majority of the farmers (58.33%) reported that income has increased after sericulture introduction. About 8.33% percent sample household claimed that income after sericulture is in decreasing trend, similarly, 12.5% farmers told their income remained constant and 20.83% sampled seri-farmers claimed that they are unable to say whether income after sericulture is increasing or decreasing. This shows the lack of management knowledge among sericulturists. If these farmers were given crop management skills and record keeping skills through extension program then prospect of sericulture would be better.

The farmers who claimed that the income from sericulture was decreasing trend, were found not to be actively involved in sericulture. Thus they found less income from sericulture. However those farmers, who claimed that the income after sericulture was increasing, were found to be actively involved in sericulture following the recommendation made by Sericulture Development center, Khopasi and their own experience.

Apart from those farmers who were selected and taken for 'rearing training' firstly are more skilled than the farmers who were selected lately for the same extension program. Thus more skilled farmers observed increased increasing trend of income from sericulture whereas less skilled i.e.: lately skilled observed decreasing trend of income.

General Features of Economic Activities of Sample Households

There exist a very close and mutual relationship between society and economy. Even if there exists a mutual depending between these two economic stand as a main determination force for fixing the status of a society. Different people of sample Hhs rely on various occupations for their survival. People of sample Hhs are engaged in many kinds of occupation like agriculture, labour, service etc.

The table no. (5.10.2) shows the main occupation of sample Hhs.

Table. No. 5.10.2

Main Occupation of Sample Hhs

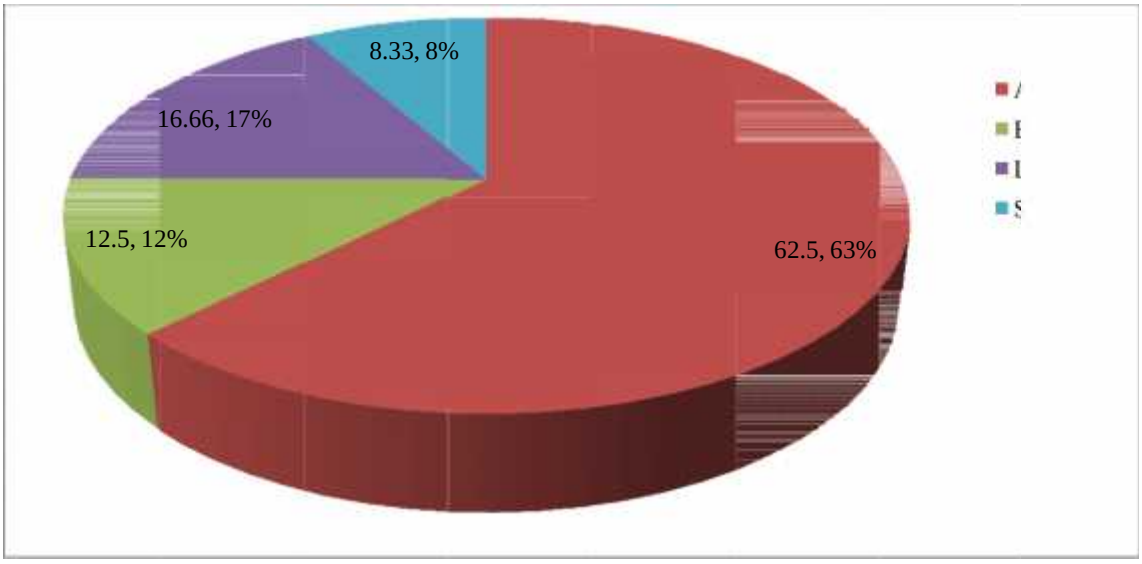
S.N.	Occupation	Households	Percentage
1.	Agriculture	15	62.5
2.	Business	3	12.5
3.	Labour	4	16.66
4	Services	2	8.33
	Total	24	100.0%

Source: Field Survey, 2070

Following figures of above table is presented in pie-chart,

Figure No. 5.1

Population Distribution by Main Occupation



Source: Field Survey, 2070

In table no. (5.10.2), Agriculture is main occupation of 62.5% of Households and labour is second main occupation which is 16.66% of households are involved. Similarly, business and services are 12.5% and 8.33% of household's involvement respectively.

Agriculture

Agriculture is the main occupation for 62.5% of sample households and shows following distribution of land of sample households.

Table No. 5.10.3

Land size Distribution in Sample Hhs.

S. N.	Area of Land (ropani)	Households	Percentage
1.	Landless	2	8.33
2.	1-3	5	20.83
3.	4-7	13	54.16
4.	8-over	4	16.66
	Total	24	100.0%

Source: Field Survey, 2070

From above table no. (5.10.3), 54.16% of households owned 4-7 ropani land size and 8.33% are landless, 20.83% have 1-3 ropani and 16.66% have owned more than 8 ropani land size.

Business

12.5% or 3 households are doing business, they are small business like grocery shops available of dal, chamal, salt, soap etc, and they are running their business in small size of capital. For the collection of capital, they borrowed from cooperative institute at 18% rate of interest.

Labour

16.66% of households are doing labour for the main occupation. They are landless and marginalized landholders. They are doing sericulture in public land and their own

pakho bari. Public land is provided by Sankhu VDC. They are engaged in many types of work like construction, agriculture work and pottery (field survey, 070).

Services

8.33% of households have main occupation of services. They are in engaged in private institution. However, all households of sample survey are engaged in sericuluture as subsidiary occupation. Besides, sericulture all households are engaged in different subsidiary occupation such as laboring, services and livestock etc. (field survey, 070).

CHAPTER - VI

IMPACTS OF SERICULTURE ON STUDY AREA

In the study area, about 76% of households are engaging in sericulture more than last 12 years. And now it indicates that impact means what kinds of change have been seen in people after sericulture practiced than before. So the major impacts of sericulture have been recorded in the study area, which are given in subtopics:

Social Impact

In the study area when sericulture was begun people become awareness. Their social and behavioral attitude changed due to sericulture. When They are engaged in sericulture it was found that people have abandoned the smoking and alcoholism because serifarmers were aware that due to smoking and alcohol would might infect the silkworm and reduces the production of quality cocoon and sometimes it spreads diseases in silkworm so farmer should have adopted quite sanitation for rearing silkworm. So it has brought the healthy life and it also added that saving was possible by sericulture because 86 percent people were smoking and drinking alcohol it had stopped them of smoking and alcoholism and one more interesting thing they were in social work and help each other. 59 percent Hhs told their incomes are rising after introduction of sericulture, likewise, extension of mulberry plantation is rising even public land and 22 Hhs are saving 100 Rs per month. 18 households are sending their children in private school which is supposed to be quality education. And 37% of their income is going for the health so socio-economic factor largely changed after the introduction of sericulture in the study area. Due to sericulture crops diversification and income of people also are increasing.

Wasteland Use

Kavre district located in out of Kathmandu valley region and some percent of study area is in hilly region pakho land and is damaged by soil erosion and landslide.

Mulberry trees have been planted on marginal and sloping land where the farmer cannot grow any crops. Therefore farmer can get more advantage from planning mulberry tree on marginal land. Mostly plain area is come under rich farmer who does not want to adopt sericulture because he thinks this profession is only fit for marginal

land. In Sankhu VDC, most of marginal land holders and land less farmers are engaged in sericulture. Small farmers hold only *pakho* land. Which is mostly unproductive in comparison with plain land? In those types of land sericulture give triple profit than other crops. So sericulture in the study area has successful to use wasteland.

In Sankhu VDC, 75% farmers have planted mulberry plant in pakho land, 20% in marginal land and 5% in khet (field survey, 070). About 85% of mulberry plants are cultivated in nearby house so any time plants could be seen or cared so that wildlife could not be destroyed it. Another most important thing is that landless farmer is involving in sericulture planting the mulberry plants in public land in the permission of VDC office which is also pakho land. In conclusion that farsmers have mostly used waste land for mulberry planting.

Employment Generation

Population is rapidly increasing day by day but food grain production is decreasing. The nuclear family system results fragmentation of land. Which is not sufficient for their food? So over population may bring more unemployment problem. Sericulture requires more labor and generates more income from small piece of land even the high slope of land. Educated and uneducated both types of people get job. Especially it is suitable to income generation for woman and old person.

Education is related directly with employment. In Sankhu VDC, 3.12% Hhs are engaged in sericulture and it gives employment for 9% People (field surve, 070). In Nepal, people cannot invest enough money for industrial development as because of low saving 7% (Economic Survey, 068/069). So unemployment problem is serious in nepal. Usually unemployed people kill the time playing cards and drinking alcohol and again it brings complication in the society. From the sericulture, Seri-farmers use the leisure time in rearing silkworm and involve in economic activities. Among the seri-farmers they were 90% unemployed before the sericulture but some proportionate of unemployment reduced as it was only in small scale. If it is large scale sericulture farming there would be higher possibility of employment.

Reducing the Migration Problem

Due to unemployment problem, people are migrating from rural areas to urban areas for job opportunity, in the study area, only traditional farming was not sufficient for living hood for the marginal farmers, before introducing of sericulture in sample household, they would go to migrate for working to Panouti, Banepa and Kathmandu. But after involvement of sericulture they do not have leisure time to other. Obviously it has stopped the migration of people.

Linkage with Animal Husbandry and Other Farming

Sericulture not only produces silk also produces a nutritional food for animals. It can be practiced with other farming as an intercrop. Various kinds of beans, legumes vegetable, soybean, orange and maize can be grown between the Spaces of mulberry plants, which can provide double advantage. Sericulture, animal husbandry and other farming have related to each other. The good quality leaves are fed for animals. The waste matters of silkworm have a very high protein and make excellent feed for animals, chickens and fish. The waste matters of silkworm and lime powder become precious things to improve fertility and moisture holding capacity of the land.

Besides these sericulture is also related to the other agro-based activities such as juice, jam, wine, paper, fiber and tools etc. Mulberry fruit can be used to make juice, jam and wine which can help to generate income and develop local light industry, mulberry branch can be used for firewood, which substituted the fuel problem and prevent deforestation and its wood can be used to make tools. It can be used to make high quality at paper and fiber.

In the Sankhu VDC, 60% Seri-farmers have used mulberry leaves to feed to the silkworms to feed. Only 40% farmers used the mulberry plants to feed other animal such as cow, goat and buffalo etc. farmers said, soybean and maize are planted in mulberry garden which gives more profit. Similarly, 65% farmers use the waste of silkworm to feed animals and chickens (field survey, 070).

Increasing Economic Condition

The main focus of all program is to uplift the economic condition of people. Farmers can do sericulture with intercropping and animal husbandry together on the same piece of land. Therefore, they could get profit from these three sources at the same time. They could get more profit by producing silk, milk, meat, vegetables and fruits together. They reported that income from sericulture is three times more than from other crops.

In the study area, seri-farmers are fragmented into five different wards; they are also divided into different segments on the basis of landholdings. Landless Hhs have 7.8% income from sericulture, 17% income from animal husbandry, 5% income from intercrops in their total income. Similarly, 1-3 Ropani landholders Hhs have 5.6% income from sericulture 12.52% income from animal husbandry and 7.06% from intercrops.

Shoots of mulberry are using for firewood and sapling. Cutting branch of mulberry used for firewood about 63%Hhs. So that they have not spent their money for fuel. Saving fund is major activity of Seri-farmers. They have made the culture of saving for future. And they have also formatted a group including non-sericulturits. They mobilize their small fund into inner group at 12% (field survey, 070). By this loan, they are encouraging to buy the goats and after increasing number of goats they sell and return back the loan and same fund can get another needed farmers. It indicates that people mobilize small capital for productive purpose. So the employment, production and income increases and people can expend the income. They have also surplus income. Then surplus income is again reinvested in the groups. And the production grows higher than previous. From this analysis, it shows that it leads to the improvement of economic condition of people.

Positive Impact on Environment

Mulberry is the deep-rooted forest tree and its plantation prevents soil erosion and landslide and helps to preserve soil fertility. It provides fire wood to farm which can substitute. Therefore deforestation may be controlled. Controls of soil erosion and sedimentation to the down stream can be minimized and other geomorphic hazards

can be controlled. Thus, the sericulture should be a better way to reduce mountain hazard and risk and it is suitable in the middle hill mountain of Nepal.

Cultural and Behavioral Aspects

People always follow their tradition and culture as a part of their lives. It affects their lives and social behavior. Some traditions and culture help to make people better and some help to turn it in a wrong way such as by consuming alcohol and other once a part of their culture. More and more people in rural areas become alcoholics and smokers. It seems difficult to change their habits easily. Their culture behavioral intricacies could have multiple effect upon their occupations and skill which sometimes, create nostalgic phenomena. As such in sericulture, people having alcohol and drugs are very harmful to the silkworms rearing so it is necessary to change their drinking and smoking habits before starting sericulture. The survival of silkworm depends upon the way in which they are being reared and it is the rearing which could provide benefit to the people.

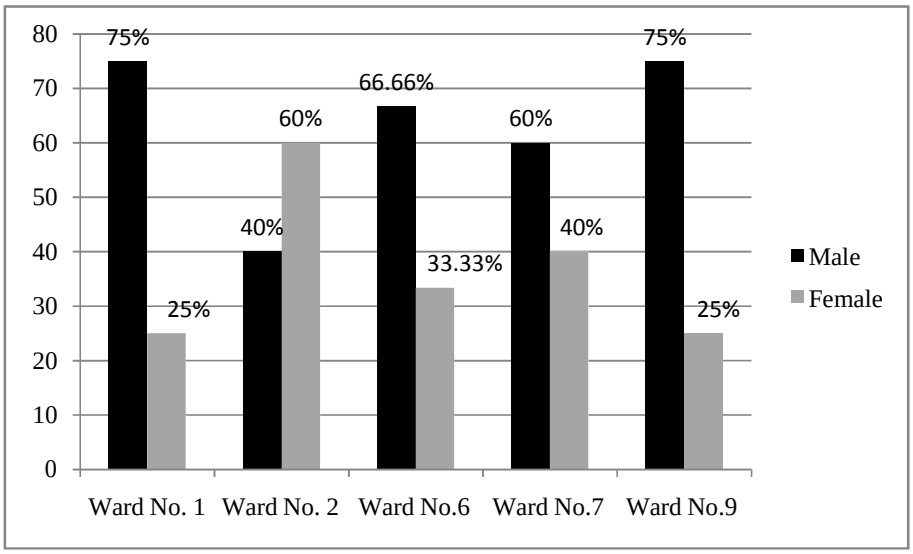
Sericulture requires a more clean and disinfected environment. So who starts sericulture, they must be neat and clean to make disinfected environment. Thus, it brings great change in human life and society. Most of rural people have been addicted with drinking and smoking, they need to change their habits if they would like to earn good yield from sericulture. In rural area, may this be one of the reasons for poor yielding of silkworm rearing.

Woman Participation

In Sankhu VDC, the great attention to encourage the women to participate in sericulture and communities activities. The communities of these areas are also male dominated and women are highly neglected to involve in social activities. There are 9 women owning directly in sericulture. In the sample study of 24 households, 158 is total population. Women represent 84 out of 158 and 53.16% which is larger than population of male which is 74 and 46.84. it clearly indicates that there is greater proportionate of population of women involvement in sericulture. The following bar diagram shows the number of men and women in each ward no. involvement in sericulture.

Figure No. 6.1

Percentage of Men and Woman Involvement in Each Ward



Source: Field Survey, 2070

From each ward women take part actively and they discuss about their problems. 62.5% households are male and 37.5% are women involvement in sericulture. In ward no. 1, around 75% silkworm farming owned by male only 25% owned by female but around 76% works of sericulture is done by female, in ward no. 2, 40% sericulture owned by male and 60% owned by female here also, most of works done by female, in ward no. 6, 66.66% owned by male and 33.33% female here too, 66% of works corresponding sericulture done by woman, similarly ward no.9, 75% male and 25% female sericulture owned. Here, clearly we can see woman are doing the most of sericulture works even if maximum sericulture holding of household is done by male. Woman labour is used for sericulture like land preparation, manuaring and weeding are major activities for mulberry cultivation. Similarly, warm house making, repairing rack, leaves plucking and cutting are major activities under silkworm rearing where women's labour are most useful in Sankhu VDC. Woman have contributed in mulberry wedding, pruning manuring and leaves harvesting. Similarly leaves cutting and silkworm caring works have been done by Women (field survey, 2070).

CHAPTER- VII

LISTING OF PROBLEMS BELOW FACED BY SERI-FARMERS

Although, having favorable agro-climatic condition and suitable socio-economic condition for sericulture. Sericulture in village is on its infant stage, there are numbers problems and inconvenient in the way of successful sericulture. In the village, agricultural problems are specific they are understood by farmers but problems faced on sericulture is different. They have to understand the biological development of silkworm and management in one hand, on the other hand, they have to cultivate mulberry. For the extension of sericulture farmers face many hindrances. The major problems come to sericulture is drawn on the views of household's opinion.

Lack of Irrigation

In the study area, farmers were totally depending on the monsoon. They do not have irrigation facilities. When the rainfall is unfavorable, it can affect the leaf production. It causes the inadequacy of leaves to the silkworms, categorically, 37% of households were of opinion of irrigation to decrease cocoon production.

Insufficient Mulberry Plants

The sufficient and quality of mulberry plant is essential for growing silkworm. Lack of disinfective mulberry plants or low improved nursery, quality mulberry plants were not met as demanded by farmers so it has hampered in the extension of sericulture and inadequacy of leaves to feed silkworms. And 24% farmers would say that to become less production of cocoon is because of low mulberry plants available at need time.

Lack of Tools

At the initial time of introduction of sericulture in Nepal, government would give more concerned to mitigate serifarmers problems and provide the essential tools free of cost and sometimes subsidized price for sericulture which is most needed for rearing silkworms. But these days, farmers are not getting the tools and they are using traditional tools which have low efficiency in production.

Lack of Training

Providing training is limited. Especially SDP has provided training opportunity to women but always opportunity have been taken by men and only 14% women come to take but about 66% of works of sericulture have been done by women. Therefore lack of training facilities woman could not do better in sericulture.

Lack of Knowledge and Skill

The silk rearing system is more complicative. The small mistake of work leads to great loss. It is necessary to do all the works on proper time such as to keep right temperature and humidity, to feed silkworm, bed cleaning, spacing, leaves plucking etc. it is such a skillful job. Due to lack of knowledge and technology it is very difficult to maintain silkworm rearing for local farmers.

Marketing Problem

There is no organized market for the cocoon in the country, all the cocoon production of farmers is bought by government. The fact that there is no competitive price only monopsony price fixed by government that leads to low profitability from cocoon market.

CHAPTER-VIII

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Summary

Sericulture is a mixture of agro-based industrial business. At the agro-based farming, sericulture has labour intensive, which is fit for developing countries like Nepal. In Nepal Rana Prime Minister Chandra shamsher introduced the mulberry sericulture in Birgunj. But 2032/033 B.S. HMG has managed 6.25 hectare land in khopasi at Kavre District. Sericulture development division was established under MoA.

Sankhu VDC lies in Kavre District, Bagmati Zone, and mid-development region of Nepal. In this area, SDP Khopasi has vital role to introduce sericulture. And Sankhu VDC is neighbor and lies southern part, too. Since, its establishment it has continued to training and mobilizes and it is extended too many parts of VDC. It is known that process of sericulture farming is slightly complicated. It has basically two parts outdoor and indoor activities. The outdoor activities are concerned with biological process of silkworm rearing which completes through four distinct stages: eggs, larvae, pupa and adult. The larval stage is very important to the rearer and it divided into five stages the 1^{st}, 2^{nd} & 3^{rd} stages instars are called young ages silkworm and 4^{th} & 5^{th} stages instars are called late-ages silkworm. The study area has high density of population and 63.11% people are engaged in agriculture. Agriculture productivity is very low and sericulture activities can play an important role in income generation. And it also provides employment.

The present study about sericulture activities has been on primary as well as secondary data of Sankhu VDC. The main object is to assessing the socio-economic impact of sericulture on this area. Most of the people of the study area are uneducated and have no plenty of land for crops. Different caste/ethnic group like, Tamang 28.63%, Chhetri 17.25%, Newar 27.92%, Bahun 21.63%, Kami 1.04%, Gurung 0.12%, Damai 1.01%, Sarki 1.25% Gharti 1.22% and Limbu 0.12% are settled down in study area. Geographically division of land is not equal in this VDC, like hilly or mountainous region or slope land and plain land. The people who live in hilly region or slope land sericulture are practiced.

In Sankhu VDC around 1.18% land is covered by mulberry plants. Amount of mulberry supplied are 86000. Among these supplies about 67.44% were survived. About 3.123% of households of this VDC are engaged in sericulture. Population engaged in sericulture is 53.16% female and 46.84% male. The major impact of sericulture results on socio-economic condition of the people. It is related with different farming like animal husbandry, food grain and vegetable farming. All of the Seri-farmers changed their habits like drinking alcohol and smoking during the silkworm rearing and silk reeling. 75% farmers have planted mulberry plant in pakho land 20% farmers have planted mulberry in marginal land.

Moreover, 9.0% people have employment through sericulture. 60% farmers used mulberry leaves to feed to the silkworms. Only 40% farmers used the mulberry leaves to feed animals such as cow, buffalo and goat etc. 65% farmers use waste of silkworm to feed animals and chickens. Landless households have 7.8% income from sericulture 17% income from animal husbandry 5% income from intercrops in their total income. Shoots of mulberry are used for firewood and sapling. 63% households use as firewood of cutting branches of mulberry trees. 10% farmers cropped vegetables as intercrops. Farmers utilize waste matters of silkworm to feed animals food. Farmers started to save the money and mobilize the fund at 12% rate of interest in their own group. It expands goat keeping among farmers.

Women participation in sericulture is higher than man in Sankhu VDC. 65% sericulture works is done by woman but still, there is no dignity and dominated by male. In decision making woman are neglected. Basically woman participate in sericulture works like land preparation, manuring, weeding in mulberry cultivation and warm house making, repairing rack, leaves plucking and cutting are major activities. It is a new technology for this area and it is more complicated than traditional farming must be transformed from technician to farmers through training.

40% farmers have taken training and 60% farmers received knowledge about silkworm rearing by field visiting. Among the sericulturists income changed after introducing sericulture 58% farmers said their income is increasing. Similarly, expenditure on education is24.45% is second largest amount spent after fooding. So in future, it definitely changes the existing educational status of this VDC. On the field

visit, sericulture farmers would say that we would extend the scale and area of sericulture in upcoming years.

Conclusions

The farmers who are settled in hilly area in pakho land they are interested to extend the sericulture in future, in compared to other crops like maize, millet and wheat sericulture gives more benefit. And more income from sericulture they are gaining. Organized work is more effective than individual work, when farmers are organized with specific purpose NGO and INGO are interested to support their program and they provide economical and technical help for them. In the study area 76% farmers sare planting mulberry as well as practicing intercrops in the gap of mulberry garden. So they can earn additional income.

Mulberry leaves is main food of silkworm it is rich in protein. if it is given to animal such cow, buffalo and goat increases the production of milk and meat. Similarly fruits of mulberry has various utilization and it is nutritional fruits itself and used it to make jam and jelly. Branches of mulberry trees can use as firewood for fuel so it reduces the cost of fuel and save the money. On the other mulberry tree is deep-rooted plant it conserves the environment and stops the soil erosion and landslides.

In Nepal unemployment problems is rampant, migration to city for searching job opportunity is necessary, economic condition of woman is weak, for the small expenses, woman have to depend on their husband, this burning problem of Nepal, adopting sericulture can have reduced some proportionate in the study area, because 65% women have involved in sericulture, it has increased the income generation of woman and decreased the dependency.

Recommendations

Sericulture is basically manpower oriented activities it needs adequate man power and it plays significant role of income generations and uplift the economic condition of farmers. Despite of various benefits of sericulture, farmers are not been able to get advantage as they expected. So following suggestions are recommended by analyzing above findings and household mentioned the problems occurred in the sericulture from field visit of study area.

- Irrigation plays vital role extension of mulberry cultivation, in the study area due to lack of water resources farmers cannot irrigate the mulberry plants so it has the reduced the production of mulberry leaves and cocoon. To grow the production of cocoon, irrigation must be done in time, so that in dry season plants could not die.

- Various kinds of disease and pest attack on mulberry plant and silkworms which must be controlled in time and credits plays important role in expansion of sericulture and also control disease and pest on mulberry and silkworm because most of farmers lacks money to buy the required chemical fertilizer to control the diseases so credit should be provided reasonably.

- The main aim of increasing productivity of the sericulture is training. So it must be provided to the farmers in time. Many farmers are practicing the sericulture without training, to such farmers, knowledge and skill of sericulture should be increased by providing training.

- Rearing house must be disinfected before rearing and it is separated from living house but 80% farmers use living house as silkworm rearing house. Therefore infections of silkworms increases and reduces quantity and quality of cocoon. So it need separate house for rearing silkworm.

- Most of sericulture works are done by woman, and production is not satisfactory but if it is brought of labor of male into sericulture the production volume would increase.

- Government is itself doing all the activities for the expansion of sericulture. Its effort is negligible effects on expansion of sericulture it should include private sector, too.

- Cocoon price is not adjusted for long time, but cost of producing of cocoon is growing day by day, so farmers would not get profit from sericulture as compared to other alternative crops and farmers can swift over the sericulture, price adjustment is compulsory. So concerning department or government should takes initiatives.

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