

## Chapter - One

### INTRODUCTION

#### 1.1 Background:

Nepal is small country, which is located in the Southern part of Asia Continent. It is one of the least developed among the countries in the World with 23 million people with per capita US \$240. Its area is only 1, 47,181 sq.km, which occupies 0.03% of the Earth. It is a landlocked Country surrounded by mountains but Nepal is one of the richest countries in the world in terms of Biodiversity and Natural Resources, due to its unique position and latitudinal variation, the elevation of the Country ranges from 70m about above sea, level to the climatic conditions ranging from Sub-tropical to Arctic.

Ecologically the Country divided in to three belts, namely: Mountain, Hill and Terai belt, running east to west with a non- uniform width from north to south. A mountain belt covers mountainous areas of the country of the Gangetic plains of India. It has low flat land as well as dense forests.

Nepal is characterized by low levels of human development and incomes. According to the UNDP (2006), Nepal ranks 138 among 177 nations in terms of the Human Development Index, and 156 in terms of GDP per capita in Purchasing Power Parity (PPP\$). Both indicators rank Nepal the lowest among its neighbours.

The current state of Nepalese economy is characterized by underutilized Natural Resources miserable agriculture, Mass poverty, Illiteracy and so on. Nepal is predominantly an agricultural country and agriculture contributes more than one-half of the household income, provides employment to more than 66% percent of the active labour force and has a significant bearing on the manufacturing and export sector (Human Development Report, 1998). The share of agriculture in GDP is about 39% of the total GDP. The 27 percent of the total physical area of the country is cultivate and out of which only 20% is under cultivation and out of which only 20% (MOAC, 2002) which shows the scarcity of agricultural land in the country. The non- agricultural sector of the economy also largely depends on agriculture for raw materials. The agricultural sector grew 3.3% per annum during 1996 / 97 – 2001 / 2002 as compared to the non agricultural sector (3.9%) which is below the set target of the growth during the period (NPC, 2003). The agricultural production of the country largely depends on the seasonal weather conditions in spite of the government interventions in

irrigation, extension and technology development. The agriculture sector provides employment to the 65.6% of the country population (MOAC, 2002).

Nepal experienced a turbulent socio-economic situation during the 11-year insurgency, which cost an estimated 13 000 lives and inflicted considerable physical, psychological, social and economic damage. The historic agreement of November 2006 between the Seven Party Alliance (SPA) and the Nepal Communist Party (Maoists) paved the way for a promising opportunity to achieve lasting peace and to address the underlying causes of the conflict. It has also opened a window of opportunity for agricultural and rural development.

Nepal is vulnerable to several types of natural disasters such as droughts, floods, landslides, windstorms, hailstorms, cold waves, disease epidemics, glacial lake outburst flood (GLOF), fires and earthquakes. Drought, hailstorms, floods and landslides are by far the most serious ones and the most recurrent natural disasters, annually causing significant material and human losses.

In 2006, adverse climatic conditions significantly affected cereal production in Nepal, especially in the Eastern and Central Terai, which was badly affected by drought. Overall, paddy rice production, the most important crop in Nepal, is estimated to have declined by 13 percent nationally, and between 20 percent to 50 percent in some districts of the Eastern and Central regions. Total cereal production (rice, maize, millet, wheat and barley) in 2006 is estimated at 5.96 million tones, 4.5 percent below the previous year and 1.7 percent below the average of the previous five years. By region, 2006 aggregate cereal output is estimated to have declined by 16 percent in the Eastern Terai, 9 percent in the Central Terai, and 5.3 percent in the Western Mountains. The worst affected districts include Saptari (down by 30 percent) and Siraha (down by 28 percent) in Eastern Terai, and Mahottari (down by 21percent), Dhanusha (down by 20 percent), Rautahat (down by 12 percent) and Sarlahi (down by 12 percent) in the Central Terai.

Cereal (including potato in cereal equivalent) deficit in 2006/07 (November/October) at the national level is estimated at 225 000 tones, compared to some 23 000 tones in the previous year. Commercial imports are anticipated at 110 600 tones to cover some deficit in urban areas and the Terai. The total food aid requirement is estimated at 114 400 tones, including 1 400 tones in Western Mountains, 19 200 tones in Mid-Western Mountains, 31 000 tones in Far-Western Mountains, and 62 800 tonnes in Far- Western Hills. The

anticipated food aid imports by NFC and WFP of 101 800 tonnes will cover most of the remaining import deficit.

Agriculture sector has been a major source of production, income generation, and employment opportunities in Rural Nepal. Keeping this in mind, the Government of Nepal is giving continuous high priority to the Development of the Agriculture sector; but Nepalese Agriculture is still very much Primitive, Traditional and Subsistence in nature.

Low production and productivity are the root problems in the agriculture sector. Issues of and fragmentation, situation of dual land ownership, protection of the rights of tenants have not been addressed effectively. Growing dependency on pesticides and their haphazard and inappropriate use have caused negative effects on environment and human health. Although, the aggregate level, the country appears to be self sufficient in food production, 55 districts are still food deficit. In hilly areas, food related problems have become complicated due to the problems of transportation and uncompetitive markets. Agricultural commercialization has not occurred as intended. Crops and commodities of Nepal, having comparative advantage in the international market, have not been appropriately identified.

Nepal living standard survey 2(NLSS 2) reveals that agriculture in Nepal is still largely subsistence or semi- commercial but the extent of commercialization of agriculture has increased steadily. In 1995/96, sales of agricultural commodities by rural households on average were equal to 16 percent of gross crop output. By 2003/04, the value sales as a percentage of gross crop output increased to 25 percent .The share of household selling crops increased to 54 percent (CBS/NLSS, 2004). Market surplus of most crops like paddy, wheat, summer maize and lentils are still very low. Agriculture is progressively shifting from subsistence to a commercial orientation .over the last 15 years; the government has liberalized the agricultural input and output markets to foster private sector initiative. The response, innovative farmers are diversifying crop from cereals to off season vegetables, citrus fruits and vegetables seeds.

Agricultural perspective plan (APP) has rightly identified problems relating to agriculture sector in Nepal, which includes development of irrigation, roads electricity and market for agricultural products (APROSC and JMA, 1995).The issues and constraints in improved farming, institutional arrangement, agricultural marketing and credit availability's.

## **1.2 Condition of Nepalese Women in General**

Women constitute more than half of the total population in our country. According to Censuses 2001, 51% of the total populations are female and 49% are male, and no proper economic development can be achieved without the active participation of Women in gainful activities. Women participation in Development activities is required for the all round development of the Country as well as for the International Good will, Understanding and Peace. It would not be out of place to accept the Socio-economic standard of Women as an indicator of Development of the Country. The study of women reflects that in a Third World country like Nepal, the situation of women differs from the developed countries. In the context of Nepal, due to illiteracy, ignorance, conservative traditions and poverty, women are not able to make full contribution to the economy. The legal social and economic status of women in Nepal is inferior to that of the men. The Nepalese women are not of homogeneous group. Their position differs from place to place and community to community, depending upon the socio-economic condition, geography and number of the other variables imposed by wider national society in term of conditional and legal framework.

Women in Nepal are considered primarily as the recipients rather than the agents of development. Thus the sixth plan was the first to highlight the crucial role of women in agriculture and the need to raise the level of women involvement in agricultural development programs. Since then, the importance of women as active producers contributing to household's production and national income has increased.

## **1.3 The Role of Women in Agriculture**

Agriculture plays an outstanding role in the Nepalese economy. Despite the decline of its contribution to the Gross Domestic Product from 47.4 % in Fiscal Year 1990 / 1991 to 39% in 2004 / 05 (MOF,2006:10), it is still the largest sector of the economy and the main livelihood based for around 80% of population. During the Ninth plan period agricultural growth had improved by about half a percentage point to 3.3% agriculture can deliver the economic growth quickly and in most effective way.

Women plays an important role of agricultural development of Nepal, because of the multiple roles of women; it is also an acceptable fact that women are crucial forces in society and without their direct involvement in development process especially in agriculture, the National goal cannot be fully achieved by Men only.

In Rural Nepal, farm women play multiple roles; they integrate their responsibility of domestic affairs with that of farming work in field together with their male counterpart. Several studies over the years have clearly indicate that labour contribution of women in Nepalese agriculture appears to be higher than that of men and most the agricultural work is done by women in addition to agricultural work, They also have to perform many other household activities, like care and maintenance of the household and its members including bearing and taking care of children, food preparation, water and fuel collection, shopping, housekeeping and family health care. Such kind of reproductive work is crucial to human survival, yet it is seldom considered, “real work”. In our rural society, most of the farm women do almost all of these reproductive, work and much of the productive work. Several studies over the years have clearly indicates than of men, and most of the agricultural work is done by women. In agriculture, they are active in land preparation, compost preparation, especially land leveling, sowing, hoeing, transplanting, weeding and harvesting. The post- harvest work such as drying, cleaning, storing and processing of food grains is also the responsibility of women. The same applies to animal and livestock husbandry. There is hardly any activity in agricultural introduction with the exception of ploughing, in which women are not actively involved. Their involvement may vary according to ethnic groups and ecological areas. The degree of women labour involvement in farming system is affected by interplay of socio-cultural economic and environmental factors.

The participation of women in agriculture is distinctive due to the society of activities that they perform in a long stretch of time. Rural women’s activities are highly influenced by external forces such as temporary out migration of village men and men’s involvement in the Civil services and other Non-agricultural occupations system in Nepal is becoming more and more important due to the fact that the main portion of the family are seasonally or temporary moving to Urban areas for job and increasing numbers of the males are being observed in to non agricultural sectors. Thus rural women make up the majority of food producers.

Nepalese farm women can play a very crucial role in determining the future development of agriculture because many recent studies have revealed that farm women are strong force not only in various making process. It is mostly the women, who usually decide When and how the agricultural work is to be carried out. They make decisions on the type of crops to be planted, to use improved seeds, use of manure and fertilizers etc. in this way we can say that women play active roles both as participants and as decision-makers in works related to agriculture, particularly in food crop productions.

#### **1.4 Statement of the Problem**

Agriculture is the backbone of the Nepalese economy. It contributes to the supply of food raw-material and exportable products. Nepal used to export food grains to the neighboring countries, but now has become a net importer of food grain in less than a decade. Nowdays this situation seems due to rapid population growth in contrast to the tradition agricultural system, many other socio-cultural and economic condition that the prevailing in our country.

Development planners in Nepal have put much emphasis on agricultural development programs for the provision of better agriculture inputs, land reform, land resettlement, agriculture credit, agriculture extension service; irrigation etc. In spite of these planned efforts improvement in the agricultural sector is rather disappointing. Nepalese agricultural problem are complex. This requires better understanding of its existing farming system. Productivity is decreasing and pressure on land is increasing. Farmer's efforts to increase agricultural production to meet their survival requirements have led to further deterioration of soil fertility and environmental condition as cultivation is being extended even in more steep lands in-hill areas.

Nepalese agriculture is largely subsistence oriented; food based and relatively undiversified with cereals. Population is increasing at the rate of 2.2 percent per annum. However, government efforts for increasing production are still not successful to meet the food requirements of the fast growing population. Statistics have shown that 96 percent of women live in the rural areas and are engaged in agricultural task. (USAID, 1980).

Thus the rural women force in the economic development cannot be overlooked. Reports that women contribute more labours (50-80) agriculture than men do. Women are generally involved in crop related activities (composting, harvesting, transplanting, sowing, weeding, drying and kitchen gardening, in rising livestock, fodder collection, feeding livestock, milking. Cows and buffaloes and clearing animal seeds etc.) As well as other household activities like, child care, cooking, washing, cleaning and others.

The farm women are not recognized as farmers but are referred to as farmer's wives, sister, daughter or daughter in law etc. They are not given equal opportunities in trainings, seminars, visits etc. Hence gender discrimination is one of the major issues in the context of agricultural development. It is feasible for government support and finances certain separate extension services for each Sex. It follows that extension methodologies and the structure of existing extension services must be modernized to reach women as farmers.

As Nepal endowed diverse farming and social system spread over small geography so women's contribution should be analyzed with respect to such diversity. The generalization drawn from casual studies do not provide enough knowledge for particular condition and mislead the planners to support women and agriculture production. This study is proposed to be conducted in Shankarpur VDC of Darchula district which is one of the most remote District and conclusion of this study will fulfill knowledge gap remained regarding women contribution in food crop production here sex discrimination prevails in the form of labour wage system ,involvement in agricultural development programmes organized by government as well as by NGOs and INGOs.The proposed area is comparatively literate and educated, male migration is prevalent which add extra burden .Within this context this study will flashlight on educational migration and women's changing contribution in food crop production. Access to the road and new income opportunities the cropping patterns are being changed within the change context women's role is also changing it wrathful to conduct this study.

### **1.5 Objective of the Study:**

#### **General Objectives:**

The general objective of the present study is to analyse role of women in food crop production and to assess the detail information on agriculture in Shankarpur VDC, Darchula District.

#### **However, the specific objectives are:**

- a) To assess the socio-cultural and economic characteristics of rural women.
- b) To find out the role of rural women in farming in the study area.
- c) To analyze the contribution of rural women in principal food crop production.
- d) To identify the extent of women involvement in decision making for food crop production.

### **1.6 Significance of the Study:**

The economy of Nepal is largely dependent on agriculture; agriculture is one of the most important sources of raw- materials for the agro based industries. Where women play a major role by actively participating in the various farm activities. Women's role in various farm

activities is important not only because of a large percent of them are engaged in it but also because of the variety of agricultural activities they perform. Even though they are not given equal opportunities in trainings, seminars, visits etc. In order to understand the problem and to develop agricultural sector in real terms, a micro level study is necessary. Generally in this study the situation of food crop production will be analyzed especially paddy, maize and wheat in this region. Now women are getting equal rights in the theory, but in practices no society provides equal status between male and female this study tries to expose the gender discrimination, which is one of the major issues in the context of agricultural development.

Rural women's vital role in the Nepalese agriculture can not be ignored. For the propose, this study aims highlighting the contribution of women food crop production, it is necessary to identify and analyzed the farm activities and other voluntary activities of rural women. So far limited studies have been conducted, which directly focus on the analysis of women involvement in food crop farming.

This study is aimed to generate information and understanding about the women's roles and factors affecting the women in the food crop production. In this way, this study attempts to analyze the food crop production and population to find the situation of food in the VDC. Hence this study will be of some help for planners and policy makers in formulating and implementing realistic and suitable programs to improve rural women's productivity, employment and income for development.

The findings of the study will be worthy for planners specially working in agriculture and rural development field. Agriculture is major source of income employment and food security in Darchula district and analysis of women contribution in food crop production will help extension workers to enhance women's knowledge, skill with respect to food crop production to increase food production and productivity in the district.

Further more this study tries to expose the gender discrimination which is one of the major issues in the context of agricultural development. Hence this study will be helpful for those planners and policy makers in formulating and implementing realistic and suitable programs to improve rural women's productivity, employment and income for development and their livelihood.



## **1.7 Limitations of the Study**

This study is conducted only in Shankarpur VDC of mountainous district Darchula. It is limited to rural women in food crop production activities. Due to lack of time and resources this study intends to cover only some problems of rural women as food producer. This study is limited to specific location and conclusions drawn from this study will be generalized only for similar location and socio-economic environment.

The present study is carried out in the micro level; it may not be generalized at macro level. This study is conducted only in Shankarpur VDC of Darchula and it is limited to rural women in food crop production activities.

In this VDC various food crops as well as cash crops are grown but my area of study is focused on some major food crops which are Paddy, Wheat, and Maize. In Nepal, rural women face many problems. Due to constraints of time and resource, this study intends to cover only some problems of rural women as food crop producer. The field survey is based on memory recall of the respondents and availability of data and information has determined its scope.

## **Organization of the Study**

**The study is mainly divided into six chapters, which are as follows:**

- Chapter one deals with the Background, Condition of Nepalese women in general, Role of rural women in agriculture, Statement of the problem, Objective of the study, Significance of the study, Limitation of the Study.
- Chapter two deals with the review of literature.
- Chapter three deals with the research methodology, which explains the methods used in the study including presentation of the research design.
- Chapter four gives a brief description of the study area.
- Chapter five presents the findings and the analysis of the collected data.
- Chapter six combines the study together with Conclusions, and Recommendations the Bibliography, Questionnaire and The map of VDCs.

## **Chapter Two**

### **REVIEW OF LITERATURE**

Varied studies have been conducted on different issues related to women and agriculture from different perspectives. This study focused on Rural Women Involvement in Food Crop Production .Therefore; here an attempt has been made to review some available literature which are pertinent to our area of study.

Farming activities where women play a curial role are a combination of activities performed in the house and those performed in the field. Women were involved not only in food production, but in its processing and distribution as well (Ivy,1983),The farm community of united kingdom has maintained three “ideal roles” for women and they are,(1) as farm housewife,(2) working farm wife and (3)women farmer (Gasson,1980).

In Nepal, women are involved in 50-80 percent of the farm work depending on the ecological regions they dwell in and the ethnic group they represent (CEDA, 1981).

ILO (1984) reported that in developing countries, nearly two-thirds of the worlds 600 million working women were in rural areas. Farming is the main sources of employment for 60 percent of African women, 73 percent of Asian women and 40 percent of Latin American women. However, according to FAO (1984) studies, Africa women work up to twice as long as man in the field. In Tanzania, while men work 1800 hours a year in farming, women do a minimum of 2600 hours.

In Nepal,women out number men both in terms of labour contribution in farm management and decision making activities (WAS, 1984).

In Asia, women account fir approximately 50 percent of food production overall in the region, with considerable variation by country. For example, women comprise 47 percent of the agricultural labour force in the Philippines, 35 percent in Malaysia, 54 percent in Indonesia and over 60 percent in Thailand. In south East Asia, women play a major role in rice production particularly is sowing, transplanting, harvesting and processing (Karl, Marilee, 1996).

A starting point for determining the extent of women's participation in agriculture in the sexual division of labour. In many cases women are primarily responsible for weeding, harvesting, transporting, storing, processing, and marketing; but often contribute greatly to ploughing, planting and fertilizer application as well. In some countries the sexual division of labour is according to the type of crop. The agricultural activities of women and men vary according to region, the structure of house hold and the productive resources available. (FAO, 1996).

Men and women not only have separate labour role for household food production and cash crops but also differential managerial and financial control over production, storage and sales of surplus. In sub-Saharan African women have crucial role in all the aspects of food crop production. Men often do the physically demanding work of land clearing, burning and ploughing. Women specialize in weeding transplanting, post harvesting, and in some areas land preparation with small hoes. Both take part in seeding and harvesting. In most countries, some food production inputs organize labour and control the use, storage and sale of the crops, (FAO, 1984).

In this book "An Introduction to Nepal" has mention that the agriculture is in fact the mainstay of Nepalese economy. About 94percent of Nepal's total labour force is engaged in farming and 66 percent of its national income comes from agriculture. He has elaborated that the total cultivated area of land is put at 2.3 millions hectors that lack capital investment, improved, seeds, manure and technical knowledge and is damage by wildlife's in a village.<sup>28</sup> (Rishikesh shah 2001).

Kansakar V.V.S (1981) has analyzed in "scenario analysis of the basic minimum need for Nepal 2000 A.D." About food crops .Finally he has recommended that Nepal must increase food production either through reclamation of land .Improving the productivity in the existing land in order to meet the growing food requirement of the country.

S.L. Amatya (1976), in his book case crop farming in Nepal has explained the several cereal grains being grown in Nepal, but rice and maize are indeed predominantly. These crops are not evenly distributed in the country rice has highly grown in the Terai, inner Terai and some river village, whereas high concentration of maize is found in the eastern and mid western hills. Millet is grown high altitude where other cereals do not grow well. Wheat is grown on hilly region. Wheat can be referred as a most potential cereal crops in Nepal.

The food grains in Nepal are paddy, maize, wheat, millet and barley upon which majority of population depend upon. Among the food grains, prime position is taken by

paddy which covers about 46.32 percent of the total cropped area, followed by maize, wheat, millet and barley; which accounts for 24.58 percent, 19.90 percent, 8.06 percent and 1.14 percent respectively. The respective production of these crop are 57.51 percent, 21.6 percent, 15.81 percent, 4.5 percent and 0.58 percent respectively in the year 1997/98 (Nepal in figures, 1998/99). In the fiscal year (FY) 1998/99 total production of food crop is expected to stand at 6.465 million metric tons with marginal increase of 2.1 percent compared to the previous year. Cropped area in the current fiscal year is estimated to increase by 0.1 percent compared to the previous year and is expected to reach at 3.253 million hectares (economic survey 1998/99).

The total population recorded in 2001/02 census of agriculture was 19032.5 thousand. Of these, 9385.8 thousand were males and 9646.7 thousand females. At national level the farm population considered of 82 percent of total population in 2001/02. As compared to 1991/92, the percentage of farm population has decreased slightly. In 1991/92 the farm population was 88 percent of the total. The male and female populations comprised about 49.3 and 50.7 percent of total farm population in 2001/02, CBS.

World conference on international women's year (1979) pointed out the women bore most of the burden was exaggerated by their multiple roles: as children bearer and rearer, home maker and as agricultural were usually the unpaid daily labourers. The multiple role of women in farming was further suggested by Axin (1985) who cited that women performed a double important role in food and agriculture. Women looked after the seed; women did the farming operation, milked the cattle, prepared the manure, did the cooking and feed the livestock.

Review of literatures on women involvement in farming indicated that neither demographic nor agricultural traditional nor women's biological role in reproduction should be allowed to decide the extent of women participation in the labour force. Women should be provided with opportunities for fulfillment in familial and non-familial role. It was also clear that the agricultural sector was predominant by women in most of the developing countries. This is also true in Nepal.

Boserup (1970) identified three types of rural women work which directly correlated size of farm with the extent of women labour involvement on the farms, namely: (a) socio-economically advantaged women who were engaged purely in domestic jobs and had large farm-holding, (b) primarily domestic women who participated in agriculture labour on a

limited extent with medium sized land holding; and (c) women farm workers working as hired labourers and had small landholding.

U.N Decade for women (1980), Baskota (1079) and Copper,et.al.(1083)reported that women had been leading very wretched life fetching water ,collecting faggots, cooking food, cleaning the house, washing cloths ,collecting fodder for cattle, taking care of children and family and working n the field.

Adhikari and Rana (1985) reveled that women spent much of their time in to of the most time consuming tasks: gathering the firewood and carrying water over the long distance, while doing the daily household chores. In addition to these, they were also involved in some other small-scale activities during their free time between agricultural operations.

In developing countries .agriculture represents the principle employer of female labour. In 1980, two-thirds of the paid labour force in agriculture was accounted for only one third share each for paid women labour (ILO, 1977). In all three sectors, women were clustered in unskilled jobs with low pay and little potential for training for advancement (Sivard, 1984).

According to ILO publication (1977), about two thirds of the worlds paid labour force in 1950 and less than in half in 1980 were in agriculture. Again ILO (1982) reported that those women usually worked for longer hours than men. Rural women often often averaged about 18 hours of work a day though they remained highly segregated in low paid jobs .Similarly, UN decade for women (1980) pointed out that women performed two thirds of all working hours, received one-tenth of the world income and owned less than one percent of world property.

Throughout the world women are poor and their number is also growing in comparison to men because of unemployment, low pay and unskilled job (Sever, 1984.)This observation holds true more in developing countries like Nepal, India, Bangladesh and Pakistan (Diaxon, 1978).

Women produce more than 50 percent of the food grown worldwide ,according to FAO estimate (FAO,1995).While there are still sufficient gender - disaggregated data to give exact figure on women's contributions to agricultural production everywhere in the world, disaggregation of data is increasing .These data, together with field studies, participatory rural appraisal and gender analysis, make it possible to draw a number of conclusions about the extent and nature of women's multiple roles in agricultural production and food security. Women's contributions to farming, forestry and fishing may be underestimated ,as many

surveys and censuses count only paid labour .women are active in both the cash and subsistence agricultural sectors and much of their work in producing food for household and community consumption, important as it is for food security, is not counted in statistics. (FAO, 1998).

Farming women in the third world are often “invisible” or at best have low visibility in census figures and employment statistics. Because their work is unpaid and takes place within a traditionally and concentrated family framework, it is usually classified as “family labour “and the women themselves as “housewives” or “economically not active”. This is a disability which many farming women may feel the least, but which diminishes awareness of them and their work at planning, policy and legislative level, e.g. In the budget of development programmes.

Due to the general handicap of widespread illiteracy or low educational levels, farming women in the third world lack information’s about cooperatives and the relevance of such organization to their problems. In this way, the women remain unaware, only imperfectly aware of the possibility of meeting their needs a farmer through cooperative –or even of the ways and means of joining or farming cooperatives (Lamming1983).

Agriculture is becoming progressively feminized .many women engaged in family farms are still reported as economically not active .nevertheless even according to census figures, the proportion of female labour force in agriculture has increased between 1972 and 1991 in 1971, women constituted 30.4 percent of the agricultural labour force. That increased to 36.4 percent in 1981 and to 45 percent in 1991.Although female employment is increasing in the non agricultural sector, comparatively a larger proportion of agricultural labour force are women (Acharya, 1990).

Vidya et al. (1990) suggest that women contribute between 50 and 80 percent of total agricultural labour depending on both different geographical and socio-economic variations.

A research study conducted by the Women Development Research Publication Center (WDRPC) state, “of the total population aged 10 years and above, the percentage of inactive population was 22 percent and almost two thirds of this population was male, indicating that more women are in labour force”(WDRPC 1992).

It was also found that women spent about 11 hours a day working with 75 percent spent on household chores (including cattle raring, collection of fuel/fodder, fetching water, cooking etc), 20 percent on farming and 5 percent on income generating activities. Hill women were found contributing more labour in farming than Terai women which may be due

to “socio-cultural difference of the population, constraints imposed by topography and level of socio-economic development including level of mechanization existing in different district.”

The study provided information on decision making too. Most of the decisions concerning farm activities were made by men. About 58 percent of decision were made by men, 11 percent jointly and only 31 percent by women. (WDRPC, 1992).

Since the dawn of history, women in Nepal have been engaging in different aspects of agricultural activities. Their labour involvement in agriculture is not less than that of men. Except ploughing women perform that all the agricultural activities and their daily labour input is 9 hours as against 5 hours by men. But the degree of involvement varies considerably across ethnic groups and social classes in Nepal. In fact, in Nepal, women are far more involved in farming activities than man.

Bajracharya (1994) revealed that women share about 50 percent of total farm work and they work mainly on subsistence crops and men mostly on cash crops. Women’s work is relatively more important in the subsistence economics of the hill and mountains where there is less capitalist development, commercialization and markets. (Bajracharya,1994).

An in-depth study from Nepal gives an unusually detailed picture of the labour contribution by sex for rice and other staples. It reports that women perform 66 percent of the labour involved in planting .75 percent of that required for weeding, and all of the cleaning and storage of rice. In the production of wheat, they contribute 66 percent of work; for maize.94 percent; for millet 94 percent. In addition, they make 42 percent of the agricultural production decisions and are most influential about seed selection and fertilizer use. (Acharya and Bennet,1981).

Except ploughing women perform almost all the agricultural activities and their daily labour input is 9 hours as against 5 hours by men. But the degree of involvement varies considerably across ethnic groups and social classes in Nepal. In fact, In Nepal, women are far more involved in farming activities than men. They also have to perform the domestic tasks of the household.

To fully mobilize women in development progress and to provide them increasing opportunities to lead secure, productive lives they should be specifically targeted within each development sector. Additionally, development planners can intervene to encourage greater equity in distribution of benefits between men and women.

In spite of the substantial contribution made by women on the family farm and as well as in household decision making, Nepalese farm women have the image of playing a supporting role while men are considered to be the bread winner of the family. In Nepal development strategies have so far bypassed the needs and interests of rural women now it is realized that the common framework of our development strategy does not fully safeguard the need and interests of rural women. Therefore, they should be treated as a separate target group. But the tendency to consider women as a homogeneous group might lead us again to the same fallacy of our development, experimented during the past three decades.

It has been found that women tend to be more reliable than men when asked to recall the amount of time spent on activities with specific beginning and end times (planting, weeding etc). But women tend to be less reliable than men when asked to recall the amount of time spent in tasks with non-specific ends (collection of fodder or firewood, for example) men make the major household policy decisions in the eastern hills, including which crops to plant, which varieties of crops to plant, and where such crops should be planted, women are more involved in making day to day decisions as to what is to be done that day and by whom. Therefore, it is recommended that agricultural interventions continue to be introduced through men of the household, but that adoption studies focus on women respondents (SERED 1987).

A common shortcoming of macro statistics is the undercounting of women's extensive participation in production in production, in both agriculture and income generating labour within the informal sector. An illustrative case is Pakistan, which registers only 15 percent of women in the labour force survey although its 1980 census of agricultural households estimated that 73 percent of women in agricultural households were economically active. The labour force survey in 1990/91 showed women's economic activity rate of 7 percent when using the conventional questionnaire and 31 percent when questions on specific activities such as transplanting rice, picking cotton, grinding, drying seeds and tending livestock were also included.

Similar misperceptions and undercounting of rural women's work in India and Bangladesh were also reported (UN, 1995). As documented in rural Viet Nam, Laos, Cambodia, Indonesia and the Philippines, where agriculture is the mainstay of economic activity, women are always seen toiling in the rice fields; cultivating the field, planting, transplanting, fertilizing, weeding, irrigating, harvesting and engaging in post harvest activities (UNICEF). In Bhutan, with the exception of bounding and ploughing, women are



involved in the entire agricultural process and rural women earn income through sales as well as through waged labour (Ehsan,1993).

Agricultural policy reforms implemented during the past ten years have led to a significant withdrawal of government involvement in pricing and marketing of agricultural products and inputs. The underlying reasoning is that agricultural support services are to be provided mainly by the private sector in partnership with the government, hence the concept of “public-private partnership”. Inputs and services like seeds and fertilizers as well as extension and animal health services are to be provided mainly by the private sector. A second important pillar of the policy environment being put in place is the organization of farmers into groups for a variety of purposes, such as for the delivery of credit and irrigation management. The Agricultural Perspective Plan (APP) places significant importance on commercialization of agriculture.

World food days was observed for the first time on 16 October by more than 150 countries. The member governments of FAO had decided that this days, anniversary of the foundation of the organization in 1945, should be observed every year at local, national and international levels to increase public awareness of the nature of world food and agricultural problems and of the steps necessary to overcome them. (FAO,1981).

The targeted annual growth rate of 4.11 percent in the agriculture sector, the average annual growth rate during the Tenth Plan period remained at 2.67 percent, due to adverse climatic condition, less investment than expected and political instability. Due to cumulative effects of the following achievements on the agriculture sector, the incidence of poverty reduced from 38 percent to 31 percent in the country by the fourth year of the Plan. Quantitative achievements made during the Tenth Plan period.

Globalization has brought changes in the labour market structure but agriculture is still the main occupation for an overwhelming, majority of the population, more so for women. Both census and more recent National living standard survey data confirm this trend. Though the number of women involved in agriculture is decreasing, an overwhelming majority of women still works in agricultural sector as wage earners or farm family labour. As wage earners in the agricultural sector; women receive lower wages than men in year, both in and outside agriculture.

Women are paid about 2/3 of what men earn in agriculture and 3/4 outside agriculture (World Bank 2000). Within the agriculture sector there is a distinct gender division of labour and responsibilities. Nepalese women spend the most, number of hours in the field. Moreover

gender differentiated activities profiles also so that crop farming, kitchen gardening, livestock rising, women primarily undertake forest development. Women, both as participant and decision makers, share the responsibilities of planting ,transplanting ,Weeding, Harvesting, caring grains to the mill for grinding ,and myriad of similar works including collecting wood ,water, and fodder .Agriculture is becoming progressively feminized, as more women inter into the sector and increase their contribution to the household food basket,(ADB 1999).

Despite women's important role in agriculture, traditional social norms and customary laws which generally are biased in favor of men, at as barriers to women's equitable access to productive resources (Acharya and Bennet 1988; Acharya 2000; Chettri 1996).for example, farming women only have access to low level of technology and primitive farming practices. Women are also largely marginalized from ownership of land due to inequitable inheritance system and are frequently denied control by men in marketing. They are also denied the incomes earned from agricultural activities (Acharya 2000; ADB 1999).

Stephens (1992) argues that counting and valuing women's work is necessary not only for the sake of women who are over-burdened under compensated, but for the sake of the development of the agricultural sector itself. The economic value of women labour can be viewed in two perceptions;

- Direct involvement engaged in farm operation. especially in the field or as hired labour, and
- Indirect involvement engaged in farm operation inside the house, livestock operation. Indirect involvement of women can play an important role in adding household income because it can not be substituted by hired labour.

A base line study conducted by women farmer development division in Jhapa, Chitwan and Tanahu districts, revealed women have a crucial role in food crop production of Nepal. Most of the women's labour in food crops cultivation is hired labour but the common phenomenon existing in Nepal is "Parma" system. "Parma" system is the exchange of labour at household level performing agricultural activities. Almost all rice growing households of all the area rely on "Parma" system foe planting, weeding and harvesting of major crops. For the highly intensive agricultural work, when own labour force is inadequate, this exchange of labour plays an important role in agricultural production. (WFDD,MOA, 1993).

Although the fact that women play a crucial role in many area of agriculture is now documented, the issues relating to their involvement have not been satisfactory addressed by national agricultural plans, development projects, extension services or researchers. As a

result, the issues that concern women have not really been integrated into research and development endeavors. Whereas the contribution made by men to agriculture and production has always received due attention in research and planning. The role of women has tended to go unnoticed .Despite the large number of extension approaches currently in use, on has given adequate attention reaching women and understanding their needs. This is mainly due to the belief that women only produce subsistence crop which are provided as being of a negligible contribution to raising national level of agricultural productivity. Farm women are not recognized as individual farmers but are referred to as farmer's wives, sisters, daughters etc. cultural traditions also exist which are considered as inhibiting direct communication with female farmers. Rural women are one of the last groups in society to benefit from modernization and the introduction of new technology.

Not only in Nepal but also in other countries women are excluded from training and extension services pertaining to agriculture. Information and training services are often directed to men even in cases where women play important roles. Researchers assume that technical knowledge, information and skills given to male farmers will automatically trickle down to their wives (Bajracharya, 1994).

According to the 'progress report of the UN Decade for women in Nepal 1985, women are responsible for the continuous and tedious tasks in all agricultural operations .Although the involvement of women is more than that of men, they have had little opportunities to receive information on new agricultural technologies. It is imperative that more opportunities for training and education in this field be made specifically available to rural women. Certain changes must be made in order to maintain and argument the contributions of women in this field.

When technical assistance is provided by the government for food crops and production, men often preferentially receive the assistance instead of women .In the national maize project in Tanzania, for example, 20 percent of participating women were visited by an extension agent, as compared to 50 percent male participant.(Tinker,1979).

- There is a need of generating technologies with the following objectives;
- To increase women's energy output/input ratio, for efficient use of available resources ;
- To reduce drudgery of farm women at work ;
- To raise women's socio-economic status ;

- To reduce farm women's dependence on man folk skills;
- To enable farm women you take equal part in decision making processes ,
- To generate self confidence in farm women and to strengthen farm women's participation in the national development stream. (Sing and Bhattacharya, 1988).

### **Role of Women Decision making**

Women are widely recognized as a important contributor to decision making and management in traditional and modern agriculture. Res (1983) 35 observed that the influence of women on decision making depends on the wife's and husbands personality, and the relationship between them. He reported that in decisions which have consequences for the labour input as well as in the household budget, women are always involved.

In Nepalese context, Singh (1983)<sup>36</sup> stated that women are active participants in household decision making. He reported that in such decision as seed selection ,seed procurement, fertilizer application institutional borrowing, and marketing of crops (price fixation) men dominate, but in non institutional borrowing marketing of crops (quantity fixation)and marketing of dairy product women take the lead.

According to the Status o women (volume II part 7) the role of women in household decision making and the allocation of household resources depend upon a number of factors. These factors include type and composition of the household age and life style of the women in question, and the number of household males absent from the village. (Bennet, 1981).

Pradhan (1983) reported that in agricultural decisions, women have an overwhelming majority of the decision particularly those concerning the use of their own or improved seeds (20.7% by men and 60.4% by women) and the seed selection process (81.2% of the decisions are made by women).Three decisions are crucial to high production of crops.

In the Status of Women in Nepal' (vol II, part 9), women made 42.1 percent of the agricultural decisions, own that decide jointly with male household members in another 12.6 percent of the case. Men made the decisions in only 25.2 percent of the cases. The data has also revealed that tradition plays a significance part in agricultural decision making, serving on the basis for 20.1 percent of the decisions records. Women also play major roles in decision making with respect to the sale of household production. They made 42 percent of decisions on the sales of grain compared to 40 percent made by men. (Acharya and Bennet, 1981).

In overall terms, the majority of decisions (62 percent) concerning crop production are made jointly (Shrestha, 1989). This implies that women have a significant role in making decisions related to crop production. With regard to crop production decisions made alone, women dominate in deciding about the use (amount and kind) of traditional fertilizers, weeding time, harvesting, storage, grains to be consumed, processing and crop to be planted and men dominated in type and amount of chemical fertilizer to be used. Decisions regarding food crop production costs are equally shared by both men and women although usually men will make the final decision (Bajaracharya, 1993; Day, 1985; Sharma and Awasthi, 1993, Shrestha, 1989; cited Bajaracharya, 1994). The decision making role of gender varies with ethnicity, economic status, farm size and type of crops.

## **Chapter -Three**

### **RESEARCH METHODOLOGY**

Research methodology is the important guideline for the research work. This study depends upon the primary and secondary data sources. Data has been generated mainly through field visit. Farmers are the source of data collection to achieve the main objectives of the study. Different research methodologies have been formatting. To get necessary information, formal as well as informal procedures are used. To explore the hidden facts and realities of role of rural women in food crop production the following methodologies have been applied.

#### **3.1 Selection of the study Area**

Shankarpur VDC is one of the rural areas in Darchula, which has been selected for the present study. Shankarpur VDC is located 25 km. north from Khalanga, in this areas the majority of the people are Chhetri (Dhami, Bohara, Saud, etc), who have been staying here from many generations. The village economy is generally based on farm income and most of the farming operations have been done by women. The main food grains grown in this village development committee are Paddy, Maize, and Wheat.

The study area comprise of land with sloppy topography. The soil of the area is of sandy loam to clay loam types with good drainage. The organic matter content and general soil fertility is moderate to poor. According to Village profile 2065, the total population of Shankarpur VDC is 3258 out of which male population is 51.36 percent and 48.64 percent are female.

Darchula has been linked to the national highways i.e. Mahendra Rajmarga through Gokuleshwor road. This high way is alternative way to the district but the main route to the district and the study area is through the Indian road built along the boarder line. The main entry to the Shankarpur village is through the Indian market Jauljivi.

The village economy is generally based on farm income, and most of the farming operations have been done by women. The main food grains grown in this village development committee are paddy, wheat, maize, millet and barley.

### **3.2 Research design**

The present study is designed in an exploratory as well as descriptive framework to analyze the rural women's role in food crop production in the study area. It is exploratory because the study attempts to explore and investigate the socio-economic and agricultural issues of the study area with special emphasis on the participation of women in farming as compared to men. It is also descriptive because all the observed and preserved socio- economic and agricultural activities of the study area have been described from physical feature of the study area to conclusion.

### **3.3 Population and Sample**

Shankarpur VDC of the Darchula district has been purposely selected as the study area because in this VDC all the household are engaged in food crop farming. The total number of household in this village is 586 and the total population is 3258. Out of total population 100 household were selected as simple random sampling. With average family sizes of 5.55. The sample size for the study was approximately 17.06 percent of the total.

### **3.4 Collection of Data**

Primary as well as secondary data has been used in this study. But the study is based mainly on primary source collected through the objective oriented household questionnaire survey which were used in interviewing the farmers regarding their socio-economic characteristics, farm size, land type, farming system, labour involvement in the food crop production activities etc. and intensive field survey, during June - July 2008. Necessary and desired information were collected by taking personal interviews with the household heads or with any other senior members of the each sampled farm household. Responded information was filled up in the pre- structured questionnaire.

Relevant village level and district level secondary data were obtained from Shankarpur VDC office and from district level office in the district headquarter 'Khalanga'. Secondary data on general information about the village were gathered from existing records of "Small Farmer Development Programme" and "Moon Light Youth Club." .Additional necessary information were taken from other secondary published and unpublished sources, mainly, Census Statistics, Agricultural Statistics, previous studies especially in the context of women's information and related journals and articles were also referred

### 3.5. Sampling procedure:

This study had been selected in the Shankarpur VDC, of Darchula district. Out of 586 household 100 household were sampled with simple random sampling method with exploratory method had been used for household survey. The sampling structure had given below.

Total household (N)	Sample size(n)	Sample %
N= 586	n=100	17.06

Here, total population of House hold (N) = 586

Sample (n) =100

Sample Size =  $\frac{\text{Sample Taken (n)}}{\text{Total Household (N)}}$

$$= \frac{100}{586} \times 100 = 17.06\%$$

### 3.6. Sources of data collection:

The study goal is to explore the main role of women on the process of rural development and food crop production. Thus the primary data were collected from household survey .Female members of each household were approached for fill up the questionnaire. In case of the members who could not fill up the questionnaire. Questions were asked and filled up. Similarly, the secondary data were collected from published or unpublished written documents from individuals, experts and organization related to agricultural production.

### 3.7. Techniques and Tools Adopted for Collection of Data:

The information of research work is mainly based on primary data sources, also including secondary sources. Reconnaissance surveys were done before actual survey and data collection. The primary data were generated by using the following techniques and corresponding tools:

- direct field survey of households,
- key informants interview



- field observation , and
- Informal discussion.

### **3.8 Household Survey:**

Household survey include age/sex structure, education, occupation, participation, and awareness, etc. questionnaire had been prepared to generate the realistic and actual data from household's survey. The respondents were requested to fill up the questionnaire. Besides the household survey the following tools and techniques had been used to collect data and current information during the course of this study.

### **3.9. Key informant interview:**

The primary data had been collected from key informants using the interview guide with semi or unstructured questions. The interview had been taken as cross checking for data obtained from household survey.

The informant had been interviewed on the role of women in local activities and agriculture development. In this process information had been taken from Politician, VDC Secretary, local leaders, teachers, disadvantage groups, deprived people and social workers, they had given valuable suggestive measures.

### **3.10. Direct Field visit observation:**

During the research period, the information were obtained by visiting the respondent's house to house as well as in their farms, which was useful to know what was currently happening in the research area. This helped to verify the statements made by the respondents in the questionnaire.

To get more information about farm women's activities and the role of women in food crop production. Hundred households were selected by simple random sampling had been visited and local development activities had been observed in various sectors with the help of observation guide. And it has been recorded in file. Another short and simple checklist was prepared only for farm women.

### **3.11. Focus Group Discussion:**

Group discussions were conducted with both men and women of all ethnic groups as well as with the executive members of committee. Altogether 20 persons were participated in group discussion. The group discussion was a useful tool for in depth interview and to become familiar with the field situation and about different problems that persist among farm women in the study area.

### **3.12. Secondary Data Collection**

Secondary data related to the study were collected from various published and unpublished documents related to the study. Secondary data were collected to supplement the primary data. The sources of secondary data collection were;

- Ministry of Agriculture.
- District Profile Darchula
- Village Profile Shankarpur
- Central Beuro of Statistics

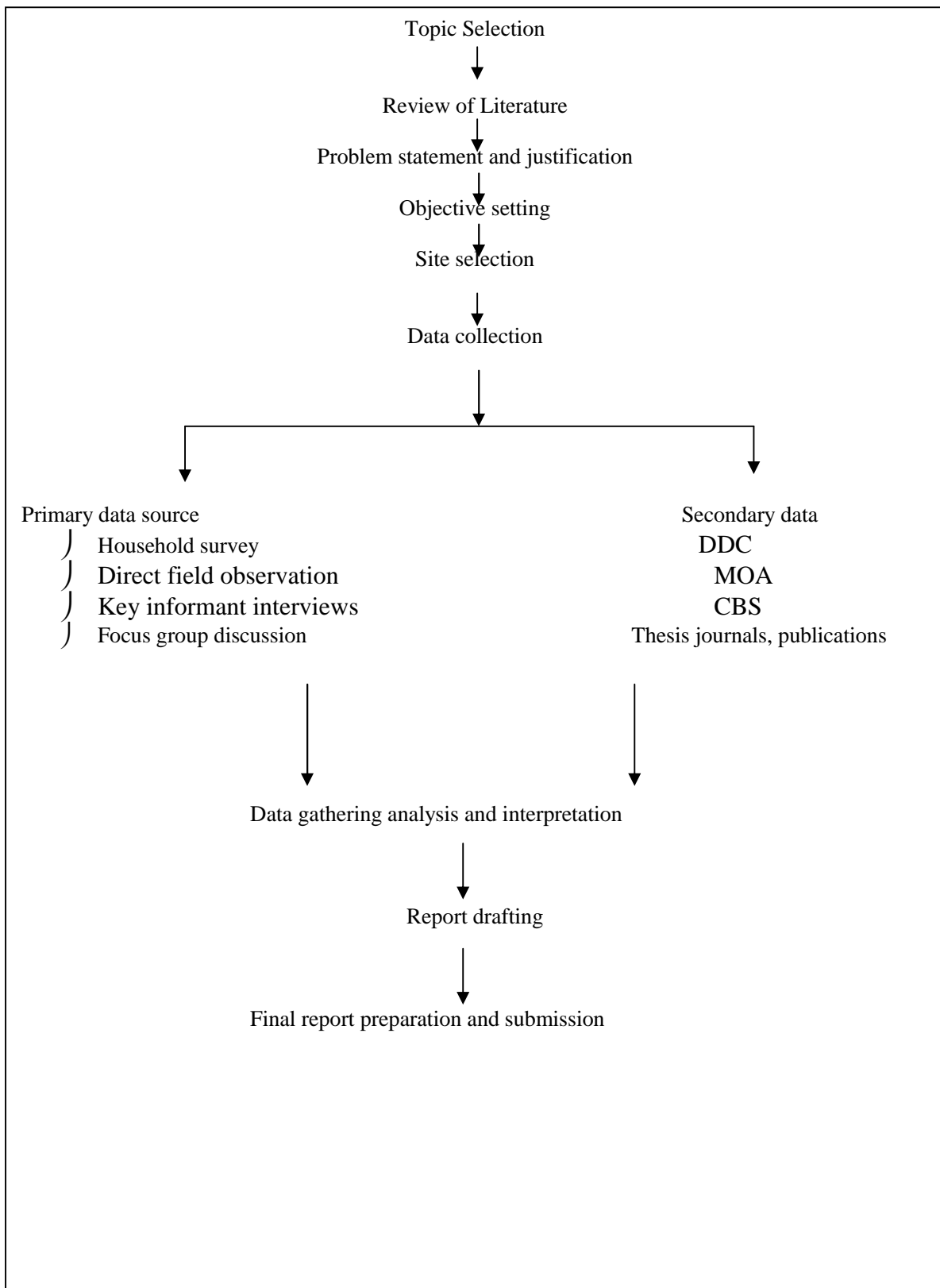
### **3.13. Tools used for Data Analysis**

Analysis is the careful study of available facts so that one can understand and draw conclusion from them on the basis of established principles and sound logic. This study is mainly based on secondary as well as primary data. The study findings were mainly relied upon tabular analysis for data interpretation. However, simple statistical tools like percentage, ratio and average have also been used during the analysis.

### **3.14 Statistical Tools**

To draw the conclusion by analyzing the collected data, statistical tools like multiple bar diagram, percentage, etc are used and tabulation are made to implicit the comparative results. Diagram and graphs are visual aids which give a bird's eye view of a set of numerical data which make comparison easy between two or more variables out of different types of diagram. Multiple bars are used in cases where multiple characteristics of the same set of data have to be presented and compared. Percentage is one of the most useful tools for the comparison of two quantities. It is used to analyze different type of data.

## Broad Outline of Research



## **Chapter Four**

### **DISCRIPTION OF THE STUDY AREA**

#### **4.1 General Introduction of Darchula District**

Darchula is the mountainous district of far western development region; it is on of the four districts of Mahakali zone. It lies on the far North. It is bounded by two developed countries India and China. It is situated between 29°36' east longitude covering a total area of 2322 square kilometers (CBS 2062/63). It is bounded by river Mahakali in the west and eastern boundary is river Chaulani. The altitude of the district ranges 500-600m from the sea level. In this district there are 41 Village Development Committee has its own identity in the history of Nepal, faces number of problems, but it seems economically well but poor in transportation, health, education, and communication facilities relative to other districts.

According to population census 2001 the total population of Darchula district 1, 21,996 out of which male population is 59,791 and the female population is 62,205. The literacy rate of this district is 40.98 percent. The average size of household is 5.8 (population census, 2058). The literacy rate is 40.98 percent (Darchula District Profile by DDC 2058).

It is an economically backward region where many people can easily find jobs and earn money in Indian boarder but the condition of women is miserable in this region. The major socio - economic indicators of Darchula District are still very poor, life expectancy of the people was about 52 in 1996. We have to realize that there is a big gap in the literacy rate of the male and female.

. The literacy rate of male is 64.38 percent where it is only 18.39 percent for the female. The Gender Empowerment Measure (GEM) is also very low in Darchula.

In Darchula, 89.90 percent of the population depends upon agriculture. Among the cereal crops, wheat, maize, paddy, millet and barley are the major crops grown in the district. Among the cash crops, potato, ginger, vegetable, soybeans, citrus are the common and important crops grown in the area. Agricultural wages are very low and fail to keep pace with inflection.

#### **4.2. Location**

Darchula is the far western most district of Nepal and lies in the mountain range. It is bordered by Bajhang district in the East, India (Pithoragarh District) in the west, China in the

North and Baitadi District in the South part of this District. South west Darchula (Shankarpur VDC) lies in Mahakali zone of far western development region of Nepal is located at 29 43' N 29 45' latitudes and 80 22' E longitude covering approximately 17 sq. km. and Shankarpur at south. The area under the present investigation ranges from 640-2000m is highly nature due to the presence of hills and deep gullies. Geologically the region has been identified as low Himalayan the orogeny. Due to high hill there are small tributes and high undulation in topography.

### **4.3. Demography**

Darchula is home to many indigenous ethnic nationalities such as the Chhetri, Thakuri, Brahmin, Dalit, Bhote, etc. It is diverse and rich in culture and traditions and Indian culture has also influenced in different ways. All the tribes/ethnic groups have their own languages, customs and traditions, and they celebrate their festivals every year.

### **4.4. Food**

Kheer (Pudding), puri, Sel roti (fox bread), Tama (bamboo shoots) and items mada, batuk, nissosya, dhikri, phini, aarsa, are special items.

### **4.5. Major festivals**

Dashain, Tihar or Deepawali, Teej, Rakshya Bandhan, Gaura Parva (Gora), Hori, Bishu, Saune Sakranti, and Maghi etc. are the major festivals celebrated in this district, but Gaura parva is considered as an important festival especially for women.

### **4.6. Religious Places**

Worshiper from different parts of Nepal and India visit the Malikarjun Temple (Shikhar dham), Durga Bhawani Mandir (Bajani), Tapoban (Latinath), on special occasions. Temple of Lord Shiva in Khalanga, where native bhote celebrate Shivaratri by dancing in group by wearing their traditional dresses.

### **4.7. Accommodation**

Darchula is accommodated with well facilitates modern hotels especially Khalanga where modern restaurants serve Nepali, Indian and tourists from different parts. Besides Khalanga,

different local markets in different parts of the districts today are with well facilities of lodging and foodings.

#### **4.8. Climate, Soil and Topography**

The climate of south west sectors of Darchula, like other sectors of the Himalaya varies greatly with the altitude. The side of Mahakali River is tropical but subtropical at the high altitude in the study area. The average maximum and minimum temperature of Darchula district is 27.8 degree c and 13.2 degree c respectively. The average annual rainfall is 2219.6 mm. relative humidity is maximum 85.4 and minimum 66.2 % ( HMG/N, 1994).

It receives 250 to 300 cm of rainfall a year, and mostly during the monsoon season in the summer and its hilly northern area receives more rainfall than the southern. Its major river rivers, like the Mahakali river, Chaulani River, Kali khola, Bhartola khola, Dhauli khola, Kachauli khola, Nijang khola, Lasku khola, pharse khola,

Basedi khola, etc provide water for irrigation. The area of Darchula District comprises of land with slopy topography. The soil of the area is of sandy loam to clay loam types with good drainage. The organic matter content and general soil fertility is moderate to poor. The depth of the soil is deep enough for the promotion of vegetable, field crops and citrus fruits.

The Shankarpur VDC lies at about 1200m up to 1800m above mean sea level and experiences sub - tropical and warm temperate type of climate. The rainy seasons usually starts in the third week of June and continue till the end of September. There is intermittent rainfall in winter as well. Incidence of hailstorm is not frequent, and thus is not a problem in this area.

#### **4.9. Attractions and Sites**

Darchula also has several religious and historical sites of great importance Aapi Himal 7123m (Ghusa), Bayas Himal 6770m (Bayas), Nampa Himal 6754m (Bayas), Surmasarobar Taal (Khandeshwari), Lipu Leak 5000m, Dharmi Gupha (Khandeshwari) etc. This district is also the gateway of India and China.

#### **4.10. Development**

Darchula is one of the least developed districts of the country. The condition of transportation is very poor. This district has to depend on Indian transportation agency. There are only few schools and colleges so Indian colleges and educational institutes have great contribution in increasing the educational status of the people of this district. It has one airport but it is often irregular and there is only one hospital which is not enough, so the patients have to move to Indian border hospitals for treatment.

#### **4.11. People of the study area**

The tribal group in that area belongs to the caste Joshi, Pant, Bhatt, awasthi, Mishra (Brahmin), Dhama, Bohara, Dhanuk, Saud Rawal, Khatri, (Chhetri), Chand (Thakuri), Lohar, Parki, Tamatta (Sudra). The main occupation of the people is agriculture, intercrop, integrated livestock system. Horticulture especially the ghee has been traditional sources of farmers that mean the livestock production has to play a vital role in the economy of locals. Churi ghee is produced by chure and previously it used to be exported to the adjoining Indian borders.

## Chapter- Five

### DATA ANALYSIS AND INTERPRETATION

After completing the field survey from the field observation, collection of data has analyzed with table, graphs, pie chart were used for data analysis. In this stage, descriptive methods were used for qualitative data. The data has been presented on the tables and graphs/ figures according to need of the study. And also maps and photographs have been presented where ever they are useful.

#### 5.1 Socio-Economic Status of Respondents

Agriculture is the basic source of rural economy. Economic condition of any place describes the sources of income of people and activities that have been undertaken there. The majority of the people in the study area are engaged in agriculture which is the main source of income of the people. Among 3258, 48.64 percent are female and their socio-economic condition depends upon agriculture especially the food crop production.

Various researchers indicate how socio-economic factors have a strong impact on the participation of women in agriculture .In fact the participation of women to a great extent is determined by the socio-economic factors. Here an attempt has been made to include all possible socio-economic aspects of the respondents in the present study.

##### 5.1.1 Population and Household

The total population of the Shankarpur VDC is 3258, out of which male and female population are 1673 and 1558 respectively. Total number of households in this village are 586, sample household survey indicate that average family size of surveyed area is 5.55, and male and female are 51.35 and 48.64 percent respectively.

**Table -5.1 Number of surveyed household, population and average family size**

No. of household surveyed	Population(no of family members)				Average family size	
	Male		Female			Total number
	No	Percentage	No	Percentage		
100	285	51.35%	270	48.64	555	5.55

Source: field survey, 2008



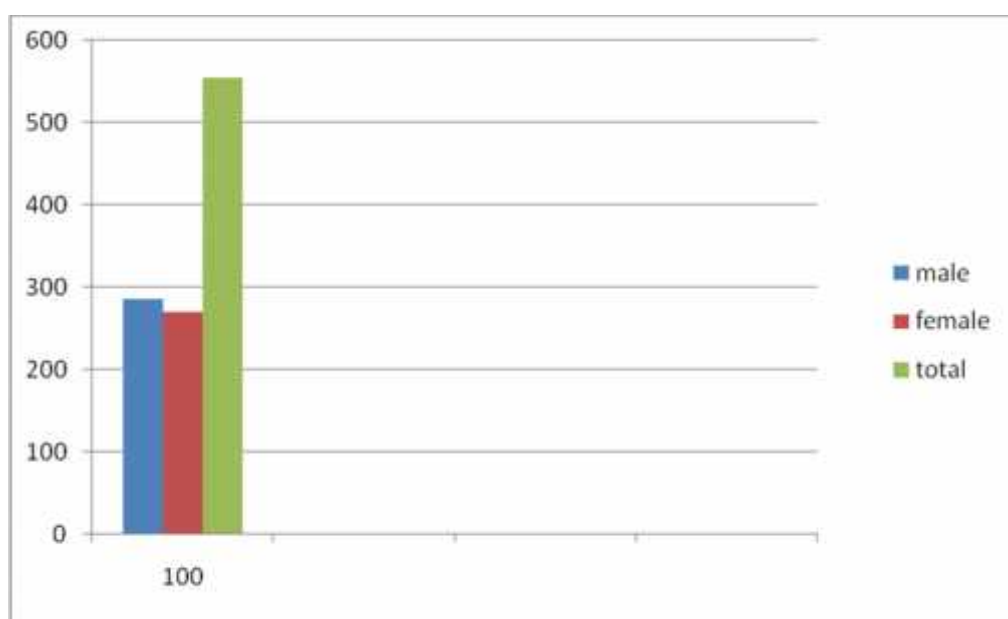


Figure- 1 Number of surveyed household, population and average family size

**Table – 5.2 Age and sex composition of the population**

Age group	Male		Female		Total	
	No	Percentage	No	Percentage	No	Percentage
0-5	56	19.64%	69	25.55%	125	22.52
6-14	58	20.35%	59	21.85%	117	21.08
15-39	112	39.29%	98	36.29%	210	37.83
40-59	51	17.89%	40	14.81%	91	16.39
60 above	8	2.80%	4	1.48%	12	2.16
<b>Total</b>	285	100	270	100	555	100

Source: field survey, 2008

Age group and sex structure in population of sample households in study area are presented in the table 2. Of the total population 22.52 percent is below 6 years of age and 21.08 percent is with in the age group of 6-14. Young population with in 15-39 years is 37.83 and 40 -59 years of age groups are 16.39 percent respectively. Only 2.16 percent belong with in the age group of 60 above. In this study area, child population (aged 0-14 years), is higher for female 47.4% and for male 39.99%, where as the old age (60 years and above), the population is 2.80% and 1.48% for male and female respectively.

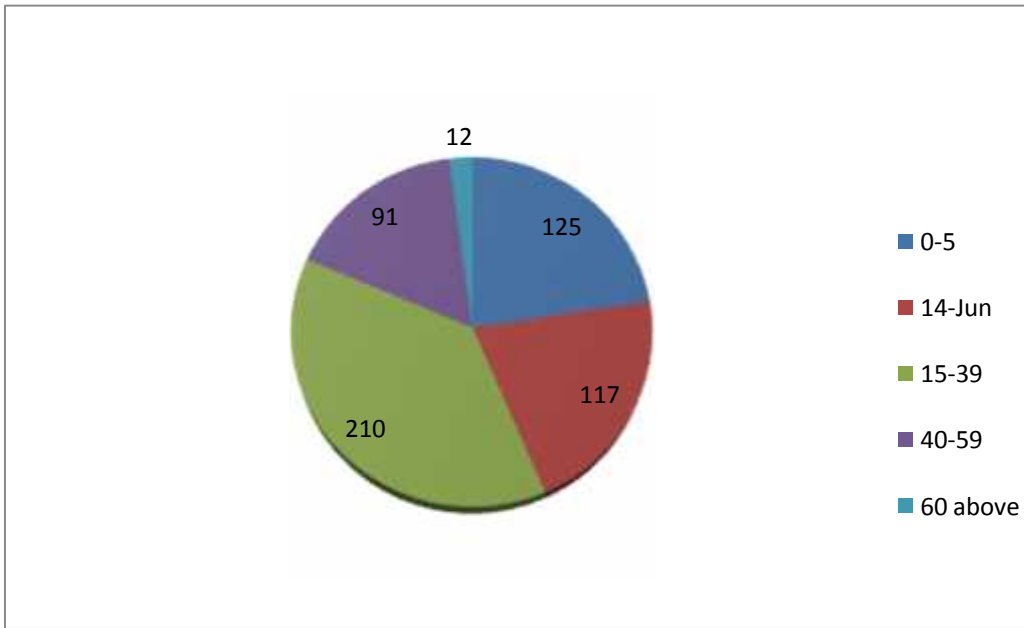


Figure - 2 Age structure of the population

### 5.1.2 Dependency ratio

The population of the surveyed area is broadly divided in to three major groups: the age groups of 0-14 years, 15-59 years and 60 and above years. The age group of 15-59 years is considered to be economically active population. The age group of 60 years and above is considered as dependent on their sons or relatives for their livelihood. Dependency ratio in the study area is shown in table.

Table -5.3 Dependency ratio

Age group	Population	Child dependency ratio	Old dependency ratio	Overall dependency ratio
0-14	242	80.39		
15-59	301			
60 above	12		3.98	84.87
Total	555			

Source: field survey 2008.

Child dependency ratio in the study area is 80.39. The old age dependency ratio is 3.98 and the overall dependency ratio is 84.87. The high overall dependency ratio is mostly accountable to high child dependency ratio.

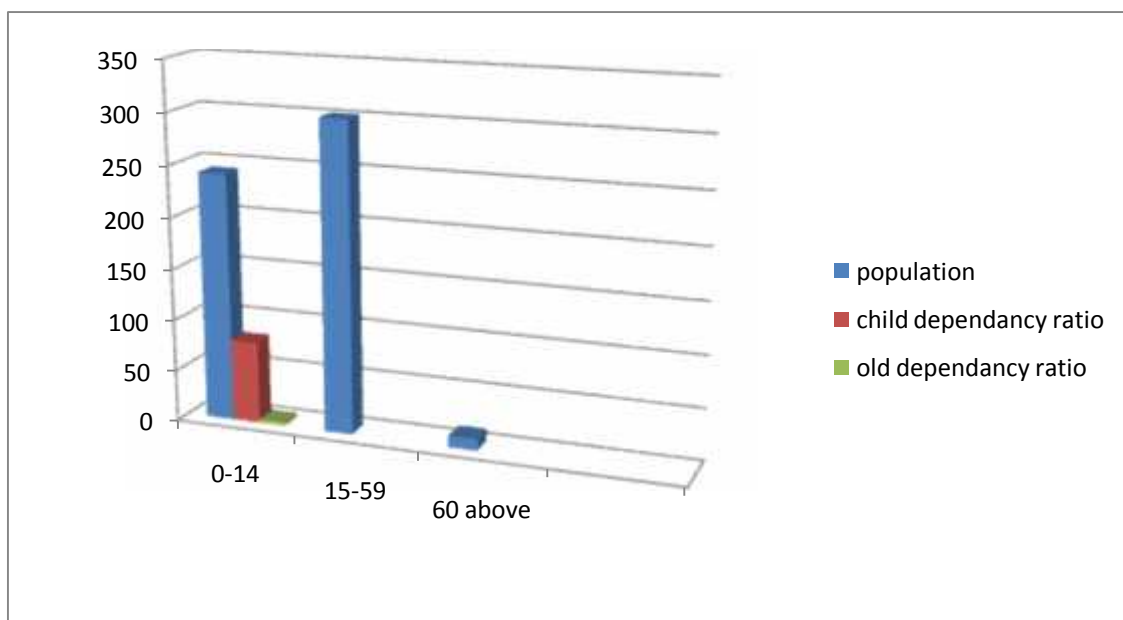


Figure-3 Dependency ratio of the population

### 5.1.3 Ethnic composition

The population of Shankarpur VDC is composed of various ethnic groups like Brahmin, Chettri, Thakuri, and Dalit etc. They live in different part of the village.

Table -5.4 ethnic composition

Ethnic group	No of household	% of household	No of population			Average family size
			Male	Female	Total	
Brahmin	39	7.02	112	106	218	5.58
Chettri	47	8.46	130	118	248	5.27
Thakuri	10	1.08	27	29	56	5.5
Dalit	4	0.72	18	15	33	8.25
Total	100	17.28	287	268	555	5.55

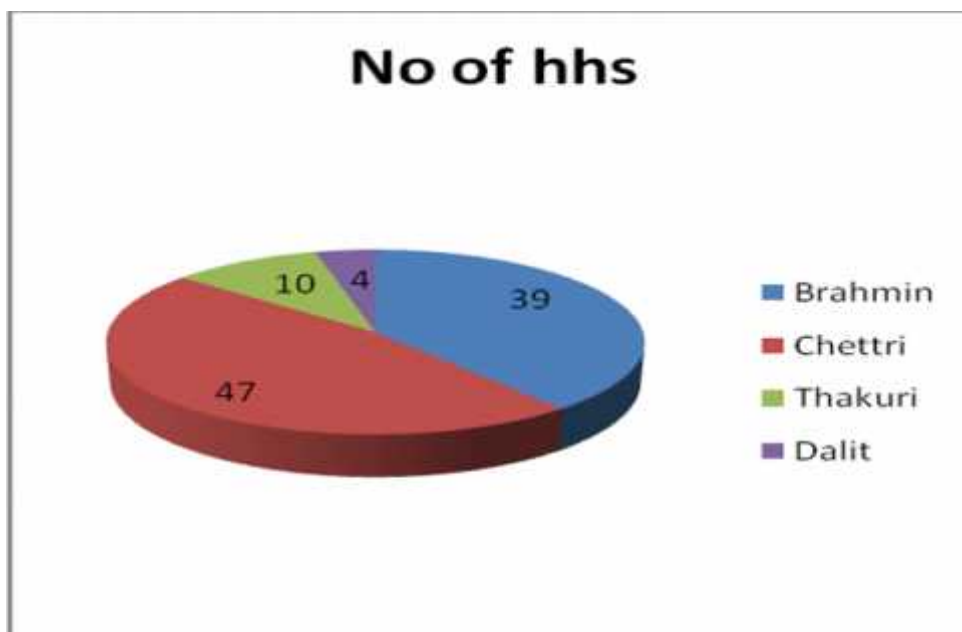


Figure-4 Ethnic composition population

The above Table shows that out of the 100 household, 47% of the total household is Chettri and their average family size is 5.27. Brahmin comprises of 39% of the total households, Thakuri comprise of 10% and Dalit 4 percent. Their average family size is 5.58, 5.5, and 5.25 percent respectively.

During the field survey, it is observed that the highest amount of land is owned by Chhetri as they cover the highest population (1836) than Brahmin (1036) followed by lower cast (240) and least by Thakuri. Comparatively lower cast are poor and illiterate than the other upper castes.

#### 5.1.4 Family structure

Family structure play an important role in determining the women's involvement in various aspects of agricultural and household activities, the burdens of which are more in joint family than in nuclear family. Family structure also determines the extent of land fragmentation

Table -5.5 Family Structure

Types of family	No of HH	% of HH	Population
Nuclear family	70	70	185
Joint family	20	25	210
Large family	10	15	160
Total	100	100	555

Source: field survey 2008

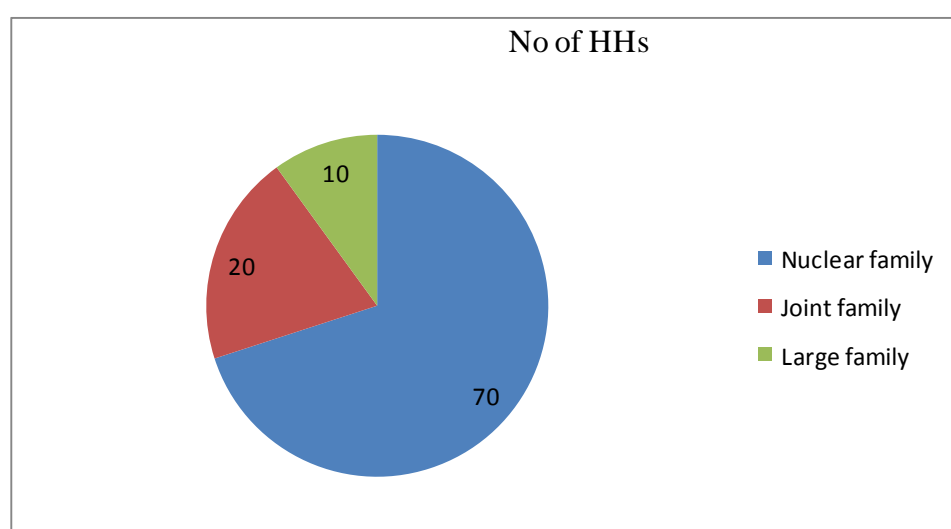


Figure-5 Family structure

In this study area, nuclear families are found in higher 70 percent, joint families are 25 percent and the percentage of large family is the lowest i.e.15 percent.

### 5.1.5 Educational status

The educational status in the village is good. One of the important reasons responsible for this is boarder impact in is most of the population of the study area move to Indian boarder for education, which is near by especially after completing the intermediate. Indian universities has great role in the increasing the education level not only of the people of this VDC but also of the whole district. The literacy rate of the District is 40.98 percent and that of Shankarpur is 61.8 percent.

Table-5.1.6 Educational status

Sex	Educational status								
	Illiterate	Literate	1-5 class	6-10 class	SLC pass	Intermediate	Bachelor	Master	Total
Male	22	37	69	53	7	12	21	17	238
Female	44	53	31	33	12	8	9	7	197
Total	66	90	100	86	19	20	30	24	435

Source: Field survey, 2008

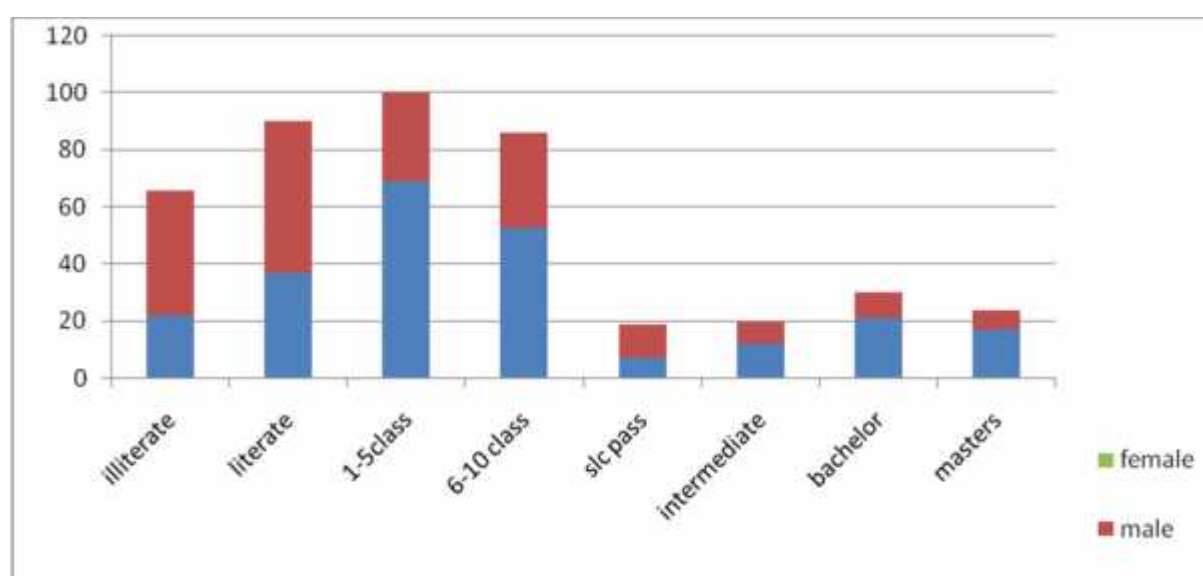


Figure-6 Educational structure of the population

Table 6 shows that 15.17 percent of the total population (6 years and above) are literate, 20.68 percent are literate and 22.98 percent have reached a certain level of schooling. Out of total sample taken 19.77 percent are under SLC level, and 4.36 percent are the populations that are SLC passed. In the case of higher education 4.59 percent, 6.89 percent, 5.51 percent out of total sampled population having intermediate, bachelor, and master's degree respectively. In the survey it is can be generalized that education level of female is below that of male but no significant difference has been found.

### 5.1.6 Occupational composition

Table -5.1.7 Occupational of economically active population by their major occupation

Occupation	Male		Female		Total	
	No.	%	No.	%	No.	%
Farming	70	42.94	112	81.16	182	60.46
Daily wage labour	30	18.40	4	2.90	34	11.29
Black smith	9	5.52	4	2.90	13	4.33
Service	54	33.14	18	13.04	72	23.92
Total	163	100	138	100	301	100

Source: field survey 2008

Most of the economically active population (15-59 years) is engaged in farming. 64.46 percent of the total economically active population reported their major occupation as agriculture. Clear gender discrimination is found in the occupational status. For male, the ranking of occupation comes in order: Farming (42.94 percent), daily wages labour (18.40 %), blacksmith (5.52%) and service 33.14. For the female, the rank of occupational follows. Farming (81.16%), daily wage labour (2.90%), blacksmith (2.90%) and service (13.04%). The female population actively engaged in farming is higher than the male population.

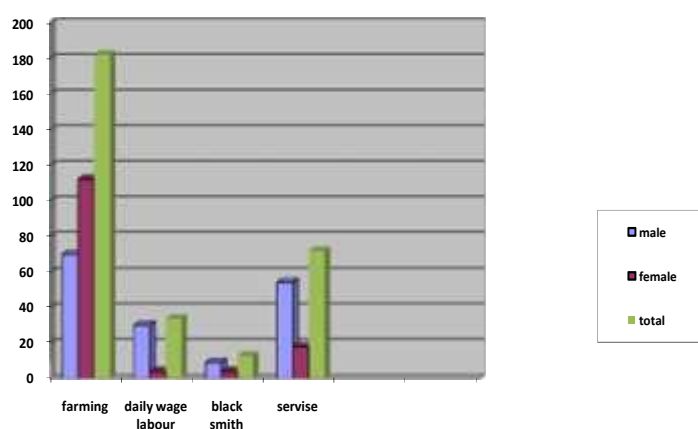


Figure-7 Occupational composition

### 5.1.7 Land holding

In Shankarpur VDC, the Bari (up land) area is more than the khet land (low land) area. The lands are terraced according to the expansion area of the land and slope. The cultivated area in the village is about 943 ropanies, of which 518 ropanies are Bari land and 425 ropanies are khet land. Out of the total cultivated land 393 ropanies are irrigated and 550 ropanies are unirrigated. The average farm size of the sample farm family is found to be 0.47 hectare, comprised of 0.21 hectare khet.

Table-5.1.8 Average size of land holding by family

Land type	Irrigated	Unirrigated	Total	Average land per family
Bari	218(10.9)	300(15)	518(25.9)	5.18(0.259)
Khet	175(8.75)	250(12.5)	425(21.25)	4.25(0.212)
Total	393(19.65)	500(27.5)	943(47.15)	9.43(0.471)

**Note:** Figures in parenthesis are hectare.

Source: Field survey, 2008



Figure-8 Land holding



Table – 5.1.9 Land holding system of the study area

Land	Bari land (in ropani)	No of farmers having Bari land	% of farmers having Bari lands	Khet land (in ropani )	No of farmers having khet land	% of farmers having khet lands
Own land	499	100	100	490	94	94
Rented in land	7	2	2	16	3	3
Rented out land	12	4	4	9	2	2
Total	518			515		

*Source: field survey 2008*

Although system of renting in land is practiced in this area but the proportion is small. Every household has its own Bari land, but 6 percent of households don't have their own khet land. On the other hand 2 percent farmers have rented in the Bari land and 3 percent for the khet land too, where as 4 percent farmers rented out the Bari land 2 percent for the khet land.

### **5.1.8 Cropping pattern**

The main food crops grown in Shankarpur VDC are paddy, wheat and maize. Millet barley, lentils, etc are also grown but in small amount. Paddy and maize are grown in summer season while wheat in winter season. But according the respondents existing crop pattern is highly determined by the type of land and irrigation facilities. Thus wide range of crop pattern existing in the study area. The major cropping pattern in khet is paddy followed by wheat, where as in Bari there is millet- maize cropping pattern. The common crop rotations followed in this area are:

Table – 5.1.10 cropping pattern of the study area

Irrigated Condition	Unirrigated Condition
Paddy-Wheat	Paddy-Wheat
Paddy-Potato	Maize-Wheat
Paddy-Vegetables	Maize-Oilseed
Paddy-Legumes	Maize-Vegetables
Vegetables-Vegetables	Citrus with intercrops

Table –5.1.11 cropped area under different crop production

Crops	Cropped area (in hector)	Cropped area (%)
Paddy	21.4	29.88
Maize	24.11	33.66
Wheat	25.05	34.98
Millet	1.05	1.466
Total crop area	71.61	
Total cultivated land	47.15	
Cropping intensity	151.87%	

Source: field survey, 2008

Note: Cropping Intensity = (Total crop area / total cultivated land) × 100

The above table shows that paddy is grown in 21ha. (44.53%), maize in 25 ha (53.02%), wheat in 15 ha (31.81%), and millet in 1 ha (2.12%).The cropping pattern intensity has been estimated to be 131.49percent in the study area.

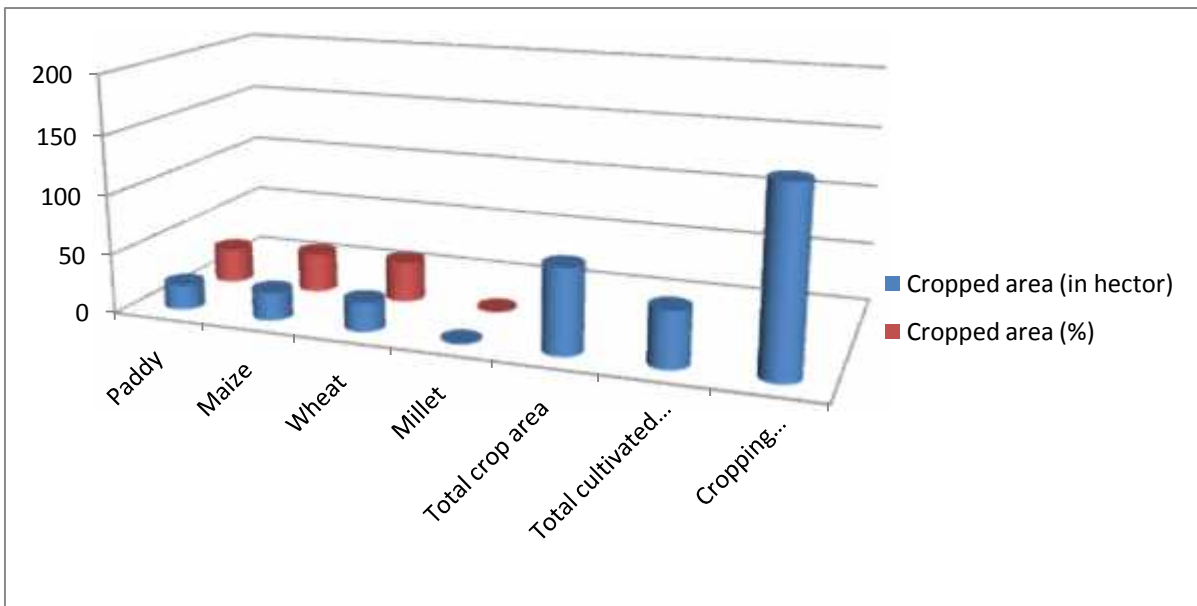


Figure-9 Cropped area under different crop production

### 5.1.9 Farming practices and farm production

The agricultural practices in this VDC are based on traditional farming system which is integrated with livestock and agro forestry.

Traditional farm yard manure (FYM) application system is very common, in this area. FYM is the easily available manure obtained from domestic animals (cows and buffalos dung) and it is generally used in every type of food crop farming .In addition to home made manure, chemical fertilizers are used for cultivating paddy and maize but not for wheat and millet.

The main purpose of food crop production in the study area is for home consumption, but during the survey it has been found that 28 percent of sampled household could not meet food grain requirements from agricultural production.

Mostly females are engaged actively in preparing this manure (compost fertilizer).Study showed that more than 95% of the total sampled population are females (mostly married women) contribute in production of FYM, but most of these are unknown about use of chemical fertilizer. Every decision about the use of chemical fertilizers is made by males only.

## 5.2. Farm labour

Parma labour system which is the traditional labour system that exists in most of Rural part of our country. In the Shankarpur VDC also Parma labour system seems to be very common. “Parma” is the very reciprocal exchange of family labour. Generally most of the farm women contribute their labour as exchange labourers. Only 8 percent of the sampled farm family’s employ other for farm work as wage labourers and there is a higher contribution from men than women as wage labourers in food crop production. Women are generally hired for transplanting, weeding, applying manure and harvesting whilst men are mostly employed for ploughing and threshing generally, farm labourers are given wages in kind (paddy wheat, maize or other food grains ) in this area.

Wage discrimination by gender is common in the study area. The wage paid for male and female labour vary not only by activity, but also for the same activity men are paid higher rates than women.

Table – 5.1.12 Male/ Female Mean Wage Rate by Activity (Rs. / Day)

Activity	Wage rate (Rs per day )	
	Male	Female
Ploughing/ digging	200	160
Sowing / transplanting	160	120
Weeding	156	124
Harvesting	128	100
Post harvesting activities	125	100

Source: field survey 2008

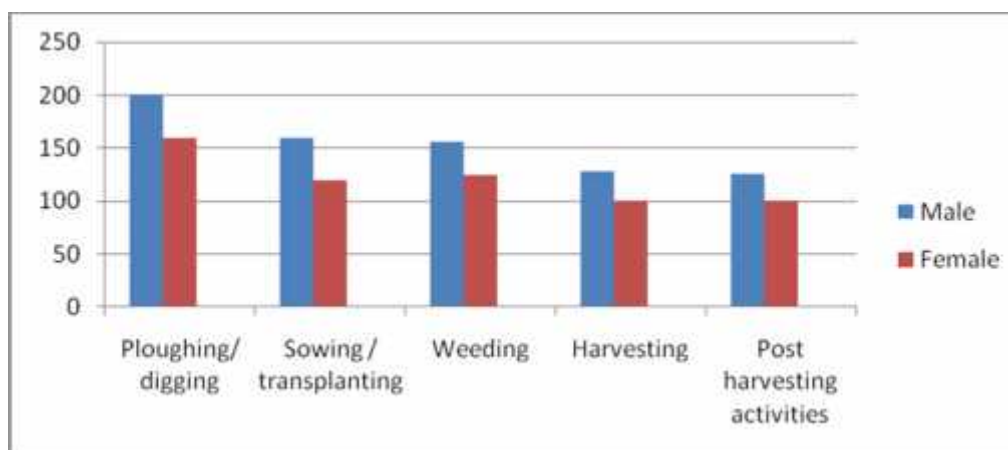


Figure-10 Farm labour

Table shows the mean wage rate for male and female hired laborer by activity. The wage ratio for ploughing and digging is higher because of the greater physical effort requires for ploughing /digging male and female labourers are paid Rs.200 and 160 for paddy respectively. Transplanting and weeding are consider to be female work, but male are paid at a higher wage rate than females for these activities, with regard post harvest activities male and female labourers are paid Rs.120 and 100 per day respectively.

The study on labour use characteristics is based on household members belonging to the economically active age group (i.e. 15-59 age groups).The comparative study on male and female labour use in food crop production was carried out. The female labour involvement is found higher in comparison to male labour in all types of food crop production. Total male/female labour use per hectare of land by crop type and the estimated male: female labour use ratio in various food crop productions are found as follow:

Table -5.1.13 Labour input per hectare of land in various foods crop productions

Crop	Labour Input (labour days/ ha)		Male: female(labour use ratio)
	Male	female	
Paddy	139	153	1:1.10
Maize	75	117	1:1.56
Wheat	89	122	1:1.37
millet	12	18	1:1.5

Source: field survey 2008

### 5.3 Women's participation in food crop production

Nepalese women are engaged in all kinds of field operations required for crop production, excluding ploughing. Here concerted efforts have been made to analyze the extent of women's participations in food crop farming as compared to their male counterpart in ShankarpurVDC.The field survey collected data on male/female labour input in various agricultural activities by type of crop in the study area has been presented in table 13.

Table: 5.1.14 Labour contribution by gender and activities per hectare of various food crop productions (Labour Day/ hectare)

SN.	Activities	Labor contribution (land per hector )								
		Paddy			Maize			Wheat		
		M	F	T	M	F	T	M	F	T
I.	Land preparation	43 (84.30)	8 (15.69)	51	34 (54.34)	28 (45.16)	62	23 (69.70)	10 (30.30)	33
2.	Applying manure	4(20)	16(80)	20	8(25)	24(75)	32	5 (20.83)	19 (79.17)	24
3.	Use of chemical fertilizer	2(66.66)	1 (33.33)	3	2(100)		2	2 (100)	-	
4.	Transplanting / sowing	16(26.66)	44(73.33)	60	8(42.10)	11 (57.90)	19	17 (39.53)	26 (60.47)	43
5.	Irrigation	4(66.67)	2 (33.33)	6	-	-	-	5 (83.33)	1(16.67)	6
6.	Weeding	26(38.80)	41 (61.20)	67	12(29.27)	29 (70.73)	41	6 (21.42)	22(78.58)	28
7.	Harvesting	19(42.22)	26 (57.78)	45	7(33.33)	14 (66.67)	21	7 (21.21)	26(78.79)	33
8.	Threshing and storing	22(61.11)	14 (38.89)	36	2(66.67)	1 (33.33)	3	24 (58.53)	17(41.42)	41
9.	Post harvesting	-	-	-	2(16.67)	10 (83.33)	12	-	-	
	Total	136	152	288	75	117	192	89	122	211
	Total %	47.60	52.49		39.07	60.93		42.18	57.82	

Note: Figures in prenthes indicate the percent.

Source: field survey 2008.

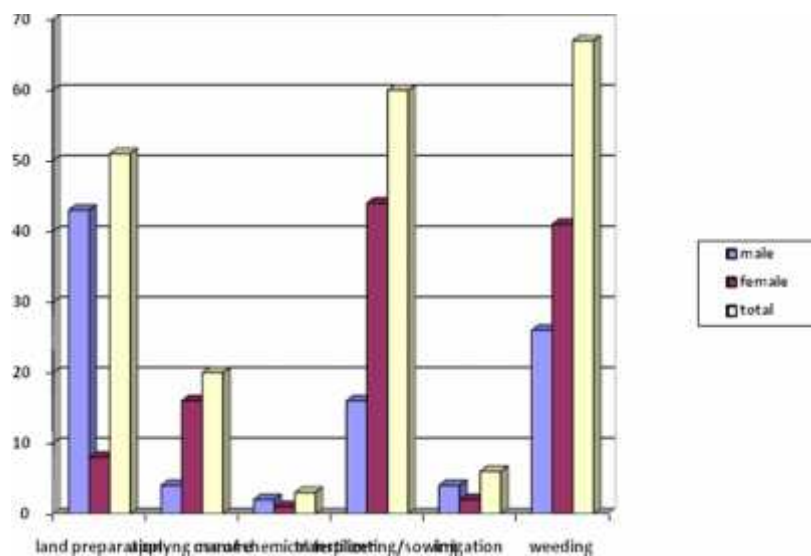
### 5.3.1 Women's participation in paddy production

Table 13 presents the average labour per hectare to paddy production by gender and activity. Land preparation includes ploughing, leveling, clean cultivation and seed- bed preparation. These jobs demand heavy physical effort, thus men participation was more in such operations. Data show that on the average, 43 labour days of male labour (84.31%) and 8 labour days of female labour (15.31%) where used for land preparation operation. Women were involved in clean cultivation. Manure is collected near the cowshed and used when ever land is ready for sowing. In our study area, manure is transported manually with the help of

“doko”. Manure application was predominately performed by women, contributing 16 labour days (80%) out of 20 labour days required per hectare. The study found that in the surveyed area, village women has insignificant role in use of chemical fertilizers. For this activity 2 labour days of male labour (66.66%) and 1 labour days of female labour were used. Transplanting is the major operation in paddy cultivation, where huge number of man power is required. Out of 60 labour days required per hectare for transplanting women contribute 44 labour days (73.33%). Irrigation required 4 labour days of male of male labour and 2 labour days of female labour .Weeding is also labour intensive operation, which is done by the manual labour. For the weeding 26 male labour days (38.80%) and 41 female labour days (61.20%) were used. In the study area, harvesting of paddy is done manually by using sickle. Harvesting required 19 labour days of male labour (42.22%, and 26 labour) labour days of female labour (57.785%). Threshing is usually done manually by men, where as the post harvesting activities such as winnowing and cleaning are done by women. On the average 22 percent labour days of male and 14 labour days of female labour were utilize for threshing and storing activities.

The total manpower requirement to paddy production in 288 labour days. Out of this men’s participation was (45.63 percent ) 136 labour days and women’s participation was 52.77 percent (152 labour days) result show that all the farm activities were jointly under taken by male and female labour but female labour contributed more in mannuring, transplanting, weeding and harvesting.

Figure 12 Labour contribution by gender and activity per hectare of paddy production (LD/ha)



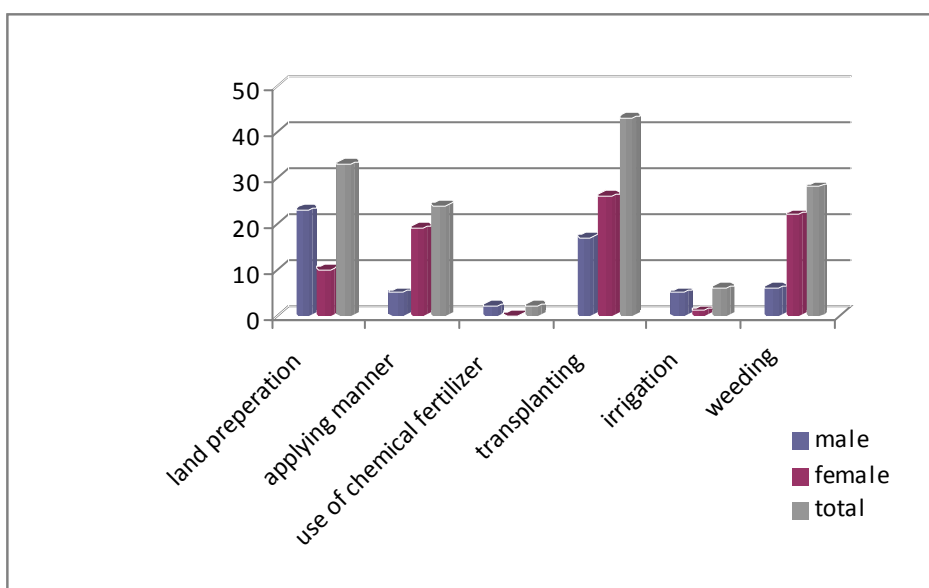
### 5.3.2 Women's participation in wheat production

The average labour use by gender and activity per hectare of wheat production is presented in table 13. Data show that women's take the dominant role in manuring, weeding and harvesting.

Land preparation required 23 labour days of male labour. Female labour provided 79 percent (5 out of 19 labour days) of the required labour for manure application. This activity seems to be dependent on women. On the other hand, the application of chemical fertilizer was carried out exclusively by male labour, contributing 100 percent of 2 labour days are required. Transplanting/sowing required 17 male labour days (39.53%) and female labour days 26 labour days (60.47%) for this activity. Irrigation being minor job in this VDC thus requires 5 labour days male and 1 labour days of female. Weeding was largely dependent on females in case of wheat production. Out of 28 labour days, male contributed only 6 labour days (21.42) while female contributed 22 labour days (78.58%). Harvesting was mostly carried out by women contributing 26 labour days (78.79%), and 7 days (21.21%) by male .Threshing and storing required 41 labour days out of which 24 labour days (57.53%), 17 labour day (41.42%) for female per hectare.

In total 210 labour days of human labour was used per hectare of wheat production in the study area. Out of which female labour contributed 121 labour days (57.61%) and 89 labour day (42.38%) by male farmers.

Figure-13 Labour contribution by gender and activity per hectare of wheat production





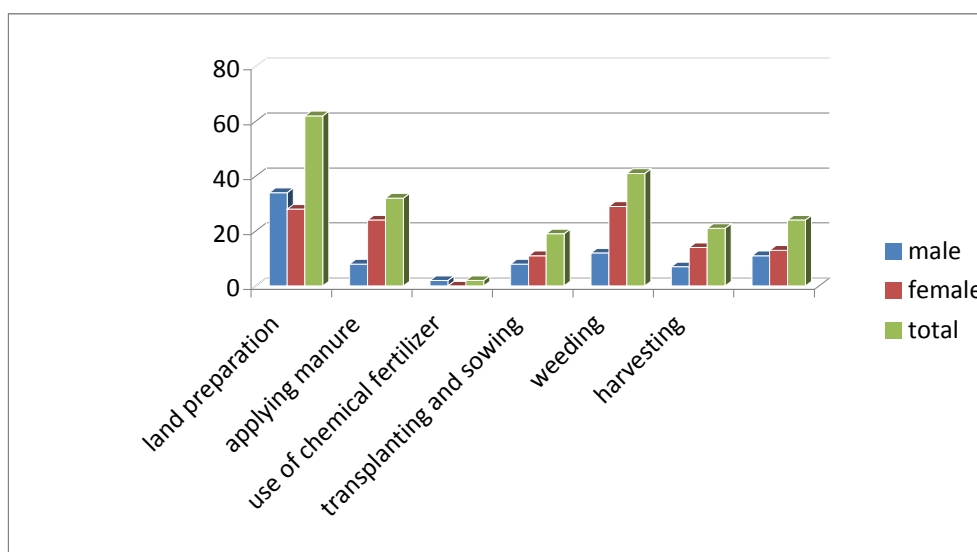
### 5.3.3 Women's participation in maize production

Maize is generally cultivated in Bari (upland) with little or no irrigation. Data show that female labour accounted for the greater share of the total required labour for maize production. Table 13 presents the average labour use by gender and activity per hectare of maize production.

Land preparation required 62 days of human labour and for this activity men's participation was 54.34 percent (34 labour days) and women's participation was 45.34 percent (28 labour days). For the manure application 32 labour days were used, out of which 75 percent (24 labour days) were female and 25 percent (8 labour days) male. 2 labour days of male labour was involved in chemical fertilization. Seed sowing required 21 labour days and female labour provided 57.90 percent (11 out of 19 labour days) for this activity. Weeding in maize cultivation includes removal of unwanted grasses and earthing up plants. The operation required 70.73 percent (29 labour days) of female labour days and 29.27 percent (12 labour days) of male labour. Harvesting was also dominated by female in the case of maize production. That is 66.67 percent (14 labour days) while only 33.33 percent (7 labour days) by male. For the operation of post harvesting out of 24 labour days, 11 days of male and 13 labour days of female labour were used.

Total number of manpower required in one hectare of maize production was 201 labour days all the activities through performed by the contribution of both male and female labour contributed 59.20 percent (119 labour days) of the total labour force employed in maize production.

Figure 14 Labour contribution by gender and activity per hectare of maize production (LD/ha)



### 5.3.4 Involvement of women in Decision making in farm

Farm womens role is not reflected only with their participation in various farm activities and contribution to the household income but also in decision making process about farm production.

Table -5.1.15 Gender variations in decision making with regard to food crop production activities.

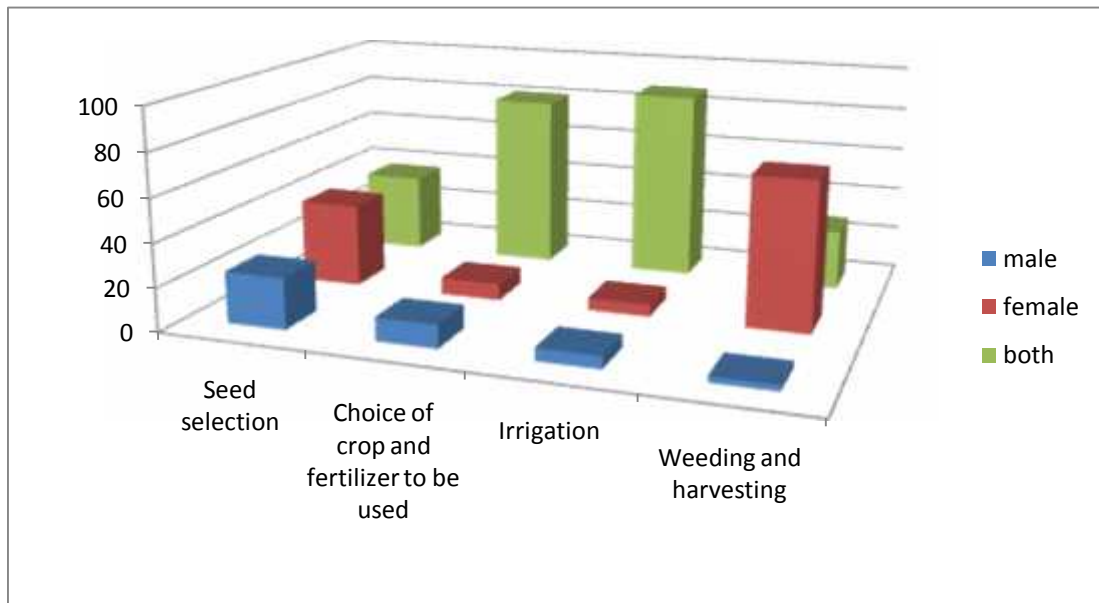
S.N	Activities	Decision maker						Total
		Male		Female		Both		
		No	%	No	%	NO	%	
1.	Seed selection	24	24	39	39	37	37	100
2.	Choice of crop and fertilizer to be used	11	11	8	8	81	81	100
3.	Irrigation	6	6	6	6	88	88	100
4.	Weeding and harvesting	3	3	69	69	28	28	100
5.	Allocation of grains for domestic consumption and sale	12	12	17	17	71	71	100
6.	Wage labour arrangement	60	60	15	15	25	25	100

*Source: Field survey 2008*

Involvement of women in decision making in food crop production activities is presented in table14 .In seed selection activity women decide in 39 percentages while men in 25 percent and 37 percent of cases were decided by both men and women together. In the case of decision related to be choice of crop and fertilizer to be used, majority of decisions (81%) were made by male and female member of the family. 11 percent of the decisions were made by male and 8 percent by female. Decision regarding to irrigation were equally shared by both male and female. The decisions related to weeding and harvesting was clearly the province of women alone and 28 percent of the cases were found to be decided jointly. Men take a pre-dominant role than a woman in wage labour arrangement such decisions is concerned with the decision on the hiring of labourers and fixing their wages. Regarding these activities, women decided in 15 percent of cases for the allocation of grains for

domestic consumption and sale, 17 percent of decisions were made by women, 12 percent by men and remaining 71 percent jointly. able 14 indicates the fact that in Shankarpur VDC ,the women of the sample population carried out the majority of the decisions (69 percent) in weeding and harvesting ,which they shared the lowest decision (6 percent) in irrigation. Field survey results show that, in overall term, the majority of decisions concerning food crop production were made jointly.

Figure-15 Gender variation in decision making with regard to food production activities.



#### 5.4 Opinion of farm women in the study area

The household questionnaires which were used in interviewing the farmers regarding their socio-economic characteristics, farm size, land type, farming system, labour involvement in the food crop production activities etc. and intensive field survey, during June- July 2008. But to acquire more information about rural women, another short simple questionnaire was also used which was prepared only for farm women. Among the 100 sample respondents were married and the age group of them ranged from 18-55 years in the study area. The village economy largely depends upon farming and which is dominated by female farmers. Although women contribution in farming is major but they don't have any technical knowledge about farming, still they are following the traditional method of farming. Out of 100 respondents, only three farm women had participated in a training provided by the small farmer development (SFDP).

When farm women were asked about the presence of extension workers like JT/JTAs in their village, only 9 respondents (9 percent) knew about the presence of JTAs and none of the respondents have had contact with JT/JTA .According to the farm women, in order to improve the level of their participation in farming, 16 percent of the total respondents said governments policy should be favorable towards women and 15 percent respondent concluded that women should be educated. Many of the respondents did not agree that education as being important factor for improving the level of participation a women in farming. On contrary, they were with the view that, access to education would lead to non - manual and non- farm works.

The majority of the respondents ( 59 percent) presumed that their participation could be more effective if there was provision for training programmes within the village giving information about modern technologies applied in agriculture, use of improved seeds and fertilizers ,manure , proper irrigation system within the village, etc. Among the sampled respondents, 8 percent were with view that lack of transportation and marketing facilities was also the discouraging factor in the active participation of women in agriculture.

Table-5.1.16 Farm women’s opinions about their effective participation in farming

S.N.	Factors to improve the level of participation of farm women	Respondents	
		No.	%
1.	By providing education	15	15
2.	There should be provision agricultural training programme.	59	59
3.	Government policy should be favorable towards women	16	16
4.	Family planning	2	2
5.	Transportation and marketing facility	8	8
6.	Total	100	100

Source: Compiled by the author based on field survey, 2008.

## Chapter - Six

### SUMMARY, CONCLUSION AND RECOMMENDATION

#### 6.1 Summary of the Study

The main focus of the study was to examine the farm women's role in terms of decision making and physical labour participation in food crop production. This study was carried out among 100 sampled farm households, at Shankarpur VDC of Darchula district. Interview of one of the respondent from each sampled household was taken by using pre-tested structured schedule.

The study area lies in the far western part of Nepal at Darchula district. In this village, food crop accounts for the major part of agricultural production. The major food crops grown in this VDC are paddy, wheat and maize. This study indicates that women have a comparatively greater involvement in the production of food crop. Here, the major findings of this study are as follows:

#### Socio-economic characteristics

- ) There are many ethnic community in Shankarpur VDC consists of upper castes like Bhatt, Pant, Awasthi, Joshi, Bohara, Dhanuk, Chand, Saud, Dhami, etc. and lower caste like Parki (Handicraft), Lohar (blacksmith) and Tamata (Copper-worker). Significantly higher percentage (35%) of the total households belong to Dhami.
- ) In the VDC, nuclear families are found in higher percentage (70%). The average family size is 5.55.
- ) In our study area, child population is higher for female than for male. Whereas the old age population is 2.80 percentages for male and 1.48 percent for female. Belonging to the economically active age group (15-59 years), male population is 54.15 percent and female population is 45.84 percent. Child dependency ratio is 80.39 percent and the old age dependency ratio is 3.98.
- ) Education status in the village is good. Out of the total population 3258, the literacy rate is 61.40 percent.
- ) Nearly 60 percent of total economically active populations are reported to have their major occupation as farming. Female are found to be more concentrated on farming than that of the male. The main food crops grown in this area are paddy and wheat

in low land (khet) and maize and millet in high land (Bari). The average farm size of the sample farm family is found to be 0.47 hectare, comprised of 0.25 hectare Bari and 0.21 hectare khet land.

- J Every household has its own Bari land but 5.18 percent of total sample household don't have their own khet land. The system of renting in land is practiced in this area, although the proportion is small.
- J Parma labour system seems to be very common in this area. Most of the farm women have contributed their labour as exchange labour
- J In the case of wage labour women are paid less than that of men even for the same task. There is usually a higher contribution from men than women as wage labourers in farm activities.
- J Farm women play full and active role in farm work but unlike men they also have to attend to domestic duties and child care.
- J There is the lack of the knowledge among female as well as male farmers about supplies of agriculture input on time, provision of improved technologies are the area in which the farmers need extension services.

#### **Women's participation in food crop production**

- J In paddy production, land preparation is exclusively done by male labour. All the other farm activities are jointly undertaken by male and female labour. Transplanting required the highest number of female labours. All the activities combined, female labour contributed 51.77 percent of the total labour force employed in paddy production.
- J In food production women take the dominant role in manuring, sowing, weeding and harvesting. All the activities combined, female labour contribute 57.61 percent of the total labour force employed in wheat production.
- J Female labour accounted for the greater share of the total required labour for maize production. Weeding required highest number of female labours. All the activities constituted 59.20 percent of maize production.
- J This study indicates that, in overall term, the majority decisions concerning crop production activities are made jointly by male and female. Regarding crop production decision, women dominated in deciding about the seed selection, weeding time and harvesting and men take a pre-dominant role than women in decision regarding wage

labour arrangement and use of chemical fertilizers. In this way, farm women have a significant role in making decisions related to food crop production.

- J) Most of the farm women being illiterate, could not analyze how assess to education could influence or improve the level of their participation in farming. Through they mutually accepted the fact that given proper training, their role in farm activities could be up graded to a great extent.

## **6.2 Conclusions**

This study highlights the role of rural women in the production of major food crops in Shankarpur VDC of Darchula District, which represented the hill condition of Nepal. Agriculture is the pre-dominant economic activity of the village is dependent on agriculture sector. According to field survey, out of the total economically active population, about 60.46 percent are engaged in farming. The proportion of the female population actively engaged in farming is higher than that male population. Rural women's role in crop production is influenced by many factors such as: family structure, caste system, educational status, age of the farmer, crop type, etc. The study reports the following factors as: increasing the involvement of women in farming, nuclear family, high altitude farming, and active age group of farmers. The present study shows that rural women actively participate in the various activities in food crop production, but their participation in ploughing is the only one activity in farming in which women are not actively involved. Women's participation is found higher in operations like; transplanting, manuring, weeding and harvesting. The participation is from their own family labour, Parma system and from wage labour system. Besides farm activities, rural women are also involved in different activities such as milking buffaloes, cleaning animal sheds and grazing animals. They also have to do household activities and child care with little or no assistance. Therefore rural women are the main driving force in crop production system in the study area.

Farm women are also strong force in decision making process related to crop production. Particularly on seed selection, weeding and harvesting.

## **6.3 Recommendations**

Nepal is developing country with 85 percent population depend on agriculture. The economic, social and political situation can be improved by the specific model agricultural system in Nepal .The agricultural issues should be the top agenda of developing country.

- Though majority of the women in Shankarpur VDC are actively engaged in agriculture but the socio-economic condition is still poor which is mainly due to low productivity and lack of modern agriculture system. Government should support by providing irrigation facilities, improved seeds, chemical fertilizers and technical support as well as modern tools with affordable cost and in accessible area for local farmers to bring about quick change in raising their condition.
- In addition to agricultural activities, rural women have to perform their require household activities. They have to work hard with in inefficient and Tradition tools and household facilities. Therefore the new Technologies (labour saving devices like smokeless stove in the kitchen, Water mill, etc. that increase Women's working efficiency and at the same time reduce their drudgeries in household activities,) are to be introduced in the rural area.
- In the study area, loans and credits are not directly available to be women because of the institutional bureaucratic system as well as the socio-economic traditions. Provision of credit on group liabilities should be made in order to motivate the Women farmers towards income generating activities .Now it is realized that the Common framework of our development strategy does not fully safeguard the needs and interests of rural women. Therefore, rural area should be treated as a separate Target group.
- Since women's participation in agricultural development activities is presently very poor, the concerned agricultural office should focus on increasing women's participation in training, group visits, demonstrations, and exhibitions etc.
- Male agricultural extension staff rarely contact female farmers partly for cultural reasons and partly because they underestimate women's contribution of farm production. Therefore, to make the agricultural extension programs more effective in reaching female farmers, female extension workers should be recruited to serve the female farmers.



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## Map of Nepal

### Location of Darchula District in the map of Nepal



### Location of Shankarpur VDC in the Map of Darchula District





## Appendix-One

### QUESTIONNAIRE FOR HOUSEHOLD SURVEY

Name:-

VDC:-

#### A. General Information:-

1. Name of Household head
2. Name of Respondent:
3. Age:
4. Education level
5. Occupation:
6. Sex: You can know from name?
7. Family Structure:

- Nuclear family ( )
- Joint family ( )
- Large family ( )

#### 8. Information related to Family

Name of family member	Relationship with head of the family	Sex		Age	Education level			Occupation	
		Female	Male		Illiterate	Literate	Class	Main	Secondary

**B. Information related to Farming:**

i. Landholding (in ropani).

➤ Low Land ( khet)

➤ Upland (pakho)

➤ Pastureland

i. Do you earn from others land?

➤ Yes

➤ No

ii. If yes could you give any description?

➤ Adhiya

➤ Thekka

➤ Trikhandi

➤ Others

iii. How many types of crops have in your farm? How much you can produce? (In Hali) one hali is =3-4 ropani)

Crops	Area of land	Production (kg)
Paddy		
Maize		
Wheat		
Millet		
Others		

iv. Which are your priority crops?

➤ Paddy ( )

➤ Wheat ( )

➤ Maize ( )

➤ Millet ( )



v. Food sufficiency for the family?

- Up to 3 months
- up to 6 months
- Up to 9 months
- Up to 12 months
- Surplus ( sell)

vi. What types of fertilizer do you use in different crops?

Crop	Chemical fertilizer ( kg )	Compost/FYM Kg (doko)	Others
Paddy Ropni or?	1. 2. 3.		
Maize	1. 2. 3.		
Wheat	1. 2. 3		
Millet	1. 2. 3		

vii. Give your opinion about labour days in your production work?

Food crop	Labour days		
	Labour days of Female	Labour days of male	Total days
Paddy			
Maize			
Wheat			
Millet			

viii. How much you get food crop production from khet/ Bari?

Food crop		Production in Quental/ropni	
		From khet	From Bari
1	Paddy		
2	Maize		
3	Wheat		
4	Millet		

ix. How much do you need food crop production for your annual consumption?

Food crop	Annual consumption
Paddy	
Maize	
Millet	
Wheat	

x. Do you have to sell any production? If yes how much?

Production of crop	Selling month	Rs/kg
Paddy		
Maize		
Millet		
Wheat		

xi. If you are buying any food crop production from where to buying and whom?

- a) From Indian market
- b) From neighborhood
- c) From local market
- d) From neighbouring village

Xi If u are buying what crop and how much?

Crops	Buying month	Price/kg

**C. Women's involvement in farming:**

a) Give information about women's involvement in your farm?

Age	No of women	Marital status	Educational status
10-15			
15-45			
45-60			

b) Who take the decisions related to farming activities of different sector?

S.No.	Activities	Male	Female	Combine
1	Refine seeds			
2	To select fertilizer for cereal crops			
3	Decision making about irrigation			
4	Cutting crops			
5	To quantify the cereal crops for house use and selling			
6	Management of wage and labor			

c) Do you have to pay wages to women to make them work in your Farm land?

➤ Yes

➤ No

d) Comparative Information about male and females involvement in agriculture:

I. How much do you use labour in wages except your own family member?

Main agricultural activities	Per day wages ( Rs)	
	Male	Female
Digging / ploughing		
Sowing		
Weeding		
Hoeing		
Harvesting		

II. Show the labour days of women and men to complete these farm works?

S.N o.	Main functions of agriculture	Paddy		maize		Wheat		Millet	
		Male	Female	male	female	male	Female	Male	Female
1	Digging field/ ploughing								
2	Terracing								
3	Use of Compost fertilizer								
4	Use of chemical fertilizer								
5	Berna ukhelne								
6	Weeding								
7	Hoeing								
8	Sowing								
9	Drying								
10	Harvesting								
11	Store								
12	Others								

III. What is your view towards role of women in food crop production?

- Very important
- Important
- Less important
- Don't know

## APPENDIX-TWO

### Questionnaire Only Used For the Farm Women

Name:

Marital Status:

Age:

- a) What is your occupation for your livelihood? If agriculture is the main occupation please give the reason.
- b) Does your husband or other male members of the family help to perform household works?
- Yes
- No
- If yes, which type of work do they usually carry out?
- c) If you involved in any organization?
- Yes ( )
- No ( )
- d) Have you got any training?
- Yes ( )
- No ( )
- e) Have you learned about advantaged technology of training?
- Yes ( )
- No ( )

Are there extension agents take JT/JTA as in your village?

6. In your opinion how can people participate in a more effective way in farming in your village? By providing education

- There should be provision for agricultural training program
- Government policy should be favorable toward women
- Family planning
- Transportation and marketing facilities

## Appendix Four

### PHOTOGRAPHS



Photo plate 1- A general view of hill slope landscape, sowing hill slope (terraced cultivated)



Photo plate 2 –showing irrigated khet land and rainfed Bari land and land covered by forest locally preserved. Shankarpur Village.



Photo plate 3- Pond Irrigation System in Shankarpur VDC.



Photo plate- 4 land preparations for wheat cultivation, women are involved in breaking the clods and pulverising the soil, Shankarpur Village



Photo plate- 5 maize farming