

**WOMEN'S PARTICIPATION IN COMMERCIAL AGRICULTURE FARMING
IN JILING VDC OF NUWAKOT DISTRICT**

**A Thesis Submitted to the
Central Department of Sociology,
Tribhuvan University,
In partial fulfillment of the requirements for the
Degree of the Master of Arts (M.A.)
In
Sociology**

**Submitted By
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LETTER OF RECOMMENDATION

This is to certify that Mrs. Kabita Pudasaini has worked under my supervision and guidance for the preparation of this thesis **“Women’s Participation in Commercial Agricultural Farming”** as a partial fulfillment of Master’s Degree of Arts in Sociology. The study is based on the empirical data collected from her field research. I therefore, recommend it for the evaluation by the research committee for acceptance.

.....

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APPROVAL LETTER

We certify that this thesis entitled “**Women’s Participation in Commercial Agriculture Farming**” submitted by Mrs. Kabita Pudasaini to the Central Department of Sociology, Faculty of Humanities and social science, Tribhuvan University, in partial fulfillment of Master’s Degree of Arts in Sociology has been found satisfactory in scope and quality. Therefore, we accept this thesis as a part of the degree said.

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CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Most of the third world economies are rural and women plays vital role in all the rural economics and farming system. Studies from most developing countries show that women participations in agricultural works, both in crop cultivation and livestock raising is wide spread. Women are the primary food producers in Africa where the division of labor is by crops (Gautam, 2010).

Agriculture is the main source of livelihood for human beings from ancient times. As in other developing countries, Nepal's economy is also based on agriculture. The agricultural sector provides employment to around 80 percent of the total labor force (CBS, 2012).

Nepal is an Agrian economy. It contributes 32.12% in Gross Domestic Production (Economic Survey, 2012). Agriculture sector is the backbones of the economy. Women contribute a major role in agriculture sector not only in Nepal but also in other developing countries.

United Nations 2016's statistics shows that women comprises on average 43% of agriculture labor force in developing countries, raising from 20% in Latin America, to 50% in eastern Asian and sub-Saharan Africa. Their contribution to agricultural work varies even more a widely depending on the specific crops and activity. Women in agriculture and rural areas have one thing in common across regions: they have less access than men to productive resources opportunities. The gender gap is found for many assets, inputs and services- land, livestock, labor, education, extension and financial services and technology-and it imposes costs on the agriculture sector, the boarder economy and society as well as on women themselves.

Woman farmers in Nepal are not different from their counterparts in other developing countries, where they are socially disadvantaged. Their contributions are not accounted in GDP. Out of total rural population in Nepal, about 90.5 percent of the woman are in engaged in agriculture. They contributes (55%) of total labour input in agriculture as unpaid workers and generate 57% of household income (economic survey). In the production of vegetables, women contributes 76% of total labor required per ropani (MOA, 2015). Excepting ploughing in land preparation, other remaining works like clod breaking, cleaning, weeding and leveling work are done by women.

The participation of rural women in farm decision making is significantly notable. In many African and in the Nepalese hills, women are the primary decision makers in the choice of crops, seed selection, fertilizer and labor allocation decision. Women from mountain and hills communities have greater control over their income. They participate more actively in household decision concerning the expenditure of earnings (UNDP, 2015).

In most Asian countries women are found commonly involved in producing and marketing of vegetables at local level. Hill and Terai Nepalese women are active in production and sales of vegetables (Bhattarai, 2010).

Commercial farming occurs when a farm is set up for the sole purpose of producing crops and farm animals for sale, with the sole intention of making a profit. In this type of agriculture practice, the output is not meant for consumption at the local level only. Usually it involves the production of a large surplus for export. In commercial farming, the farmer cultivates crops and rears animals for commercial purposes, i.e., for selling. The main motive of the farmer here is making profit. Most of the work is done by machines and the areas under cultivation, as well as the capital involved is huge. Commercial farming includes commercial grain farming, plantations and mixed farming. Commercial farms are richly sought after due to the immense competition involved. Another difference is that commercial farms regularly employ outside help due to the level of work required. Family members can also be involved, but a key factor that differentiates commercial farming is that hired help is used. Commercial farms also tend to make use of new technologies in order to increase output and create competitive advantages where possible (Paris, 2012).

Agriculture (including forestry) in Nepal provides direct employment to six and a half million of the labor force which is four-fifths of total economically active population. Four and half million labors are self-employed, and over two million work as wage labors. Almost half of the wage workers are part-time workers, coming from marginal and small holdings. Another one million laborers are full time farm wage workers. These workers are landless and subsist on wage income. Out of every 10 full time wage workers, 7 work as casual workers, and 3 work under a permanent labor relationship generally interlinked with credit and land relationship (Sharma 2010).

Over two-third of Nepal's labor force is engaged in agriculture. However, for many, with 80 percent of those below the poverty line depend on this sector for their living. Moreover, the conflict

is having a profound impact on the agricultural sector, as land owner are displaced to urban areas and agricultural production falls as consequence.

The National living Standards Survey 2010/11 found that land holdings are becoming smaller having reduce from an average size of 1.1 hectares in 2003/04 to 0.8 hectares in 2010/11. Moreover, the quality of agricultural land, water and forest resource is diminishing, thus reducing food security. About 28 percent of Nepal's area is classified as cultivated land (including grass land). The national cultivated land holding per capita in 2001 was 0.175 hectares. In the Terai, which has the greatest proportion of the population, the average per capita landholding in the hills was 0.162 hectares, and in the mountain was 0.301 hectares (CBS 2012). The 2011 National Census of Agriculture found that about 75 percent of Nepal's cropped area is planted mainly with legumes, oilseeds and vegetables. Cash crops make up and extremely small proportion. Rice is the most important crop, with 92 percent of holding growing it. This is followed by wheat and maize. Agriculture land is either flat or terraced, and may be irrigated or rain fed, although the latter is more commons (CBS, 2012).

Women make substantial contribution in agriculture sector. According to MOAC 2009, 72.8 percent of economically active (age 10 and over) women are engaged in agricultural work compared to men's 60.2 percent. The percentage share of women to agriculture sector is 12.6 percent higher than of men. This is one of the major evidences for poor performance in HDI and GDI. Many of the poorest countries have an agriculture-based economy. About three fifth of the world's poor women, scores of whom depend on agriculture for survival (CBS, 2012).

There is much evidence from past and current studies that both men and women contribute significantly to farming systems of Nepal. Poor rural women play important roles as unpaid family workers, hired laborers, income earners, savers of expenditures, and major caretakers of family health and nutrition. In Asia, the prevailing rice cultivation practices demand heavy manual labor inputs and drudgery, particularly on women. However, gender roles in Asia vary by region, agro-ecological system, type of farming systems, crops grown, interlinks with livestock and fish production, and opportunities for off-farm occupation for family members. According to a recent study conducted by IRRI in 2009, female participation increases with poverty and unfavorable

environment. World Food Program revealed, “Gender inequality is a major cause and effect of hunger and poverty” (Sharma, 2010).

Gender analysis helps in understanding nature and extent of men and women’s participation in various sector of agriculture such as crop, livestock, fisheries, and other related components. It also explains different roles and responsibilities of men and women such as who does what, where and when do they work is obvious. The differentiation in allocation of labor, nature of labor, and extent of their use is influenced broadly by religion, culture, social, economic, agro-ecological, and political situation of the country. However, a multiple factors are responsible for gender variation in participation in agriculture activities within each region and socio-culture parameters (Sharma, 2010).

1.2 Statement of the Problem

The participation of women in agriculture is distinctive due to the variety of activities that they perform in a long stretch of time. In addition to their regular household duties like grinding grain, fetching drinking water, fodder for livestock, firewood, preparing family meals and taking care of the children, women are engaged in all kinds of operations required for growing food grains and vegetables and rearing livestock. In agriculture they are engaged in land preparation, compost preparation, especially clod breaking and land leveling, sowing and transplanting, weeding, harvesting, cleaning, drying and marketing produced goods and storing. For livestock keeping they collect fodder, clean animal sheds, milk animals and process dairy products. Due to the variety of activities that women perform they have less free time than men but it is a great irony that their unemployment and under-employment are higher than men’s.

Women contribute more labor to Nepalese agriculture than do men. Women generally work from sunrise till the evening. The tasks which women perform in the farming sector are several and often require hard physical labor. However, farming women in the third world are often regarded as “invisible” or as mere “housewives” or “economically non-active”, in spite of the fact that they have to perform a “dual role” in agriculture as well as household work. Despite the major contribution of women in agriculture, they are considered as the second grade citizens and their role and contribution in the development process is always ignored (Sapkota, 2009).

It was recommended by the international Labor Organization that women's work in the household be also recognized and respected as a productive activity. Women should no longer be treated as recipients of welfare but as partners in the arming sectors of the development process. Hence, this study will aim at highlighting the participation of women in farm management, especially in the agricultural sector at Jiling, VDC of Nuwakot district and shed light on the crucial contributions of women in agriculture. The research questions for the study are as follows:

- i) What is the status of women participation in study area?
- ii) What are the prospects and problems of women participation in commercial vegetable farming?

1.3 Objectives of the Study

The main objectives of this study are to analyze women's participation in commercial vegetable farming in Jiling VDC of Nuwakot district. The specific objectives of the study are as follows:

- i) To examine the status of women participation in commercial farming.
- ii) To identify the prospects and problems of women participation in commercial vegetable farming.

1.4 Significance of the Study

The slow pace of development, particularly in rural areas has underscored the long- standing neglect of women as a key element in development policy. Governments and the international development community are reformulating policies and reallocating resources in the understanding that the low social and economic status of women translates into slower rates of economic growth.

The right to economic independence is one of the core rights that influence the ability of an individual to make decisions and act on them; In addition, it has an impact on the access to and exercise of other rights, such as the right to education and health. Their contribution of Nepali women in economic contribution is neither recognized nor valued as they do not much control over family property and other resources. While more than 75% of women are engaged in agriculture, only 10.84% of households have land ownership of women. Women basically are engaged in unskilled domestic work, a contribution that has gone largely unnoticed by the State

and within their own family. Lacks of economic empowerment means women are dependent on men and hence vulnerable to exploitation (Bhattarai, 2010).

In spite of the fact that women's contribution in the agricultural sector appear to be higher than men's, the discrimination against women is rather disheartening. So far as land rights, tenure rights, decision making and ownership of property are concerned men still have the domineering power over women.

Women in Nepal have been engaging in different aspects of agricultural activities. The role of women in agriculture is very crucial in various activities in agricultural production in terms of high share of invisible labors. They perform most all activities required for growing food grains and vegetable cultivation. Hence, the contribution of women in agriculture is not less than or equal to the contribution made by men. Therefore, women's vital role in the agricultural sector cannot be ignored. For the purpose, this study intends to assess the level of contribution of women in agriculture at Jiling, VDC of Nuwakot district. It will also suggest some specific strategies for improving the participation of women at Jiling, VDC. Finally, this study will be some help for National Development Planning as well as Rural Development Planners in formulating and implementing agricultural innovations especially directed towards women for uplifting and upgrading their participation in agriculture.

1.5 Conceptual Framework

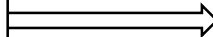
Different researches have indicated the impacts of socio-economic factors on the participation of women in agriculture. Though it may seem that the individual's interest, skill, time, family structure and background are general factors that determine participation, these factors are not absolute in themselves to determine participation. Though an individual may have the interest and skill to start certain job, s/he may not be able to work or participate in that job due to various socio-economic factors. Hence, in this case the rate of participation of women is to great extent determined by the socio-economic factors. Following figure shows the relationship between the independent and dependent variables, which will be taken into consideration.

Independent Variables:

- Age
- Education
- Marital Status
- Family size
- Household Income
- Size of Farmland
- Decision Making in Farm Management
- Customs and Traditions
- Market access
- Quality of seeds and quality control
- Grading
- Packaging
- Productivity
- New Technology
- Uses of chemical fertilizer and pesticides
- Transportation
- Irrigation
- Income and expenditure
- Labor availability
- Labor relationship
- Harvesting

Dependent Variables:

Participation of
Women in Vegetable
Farming



1.6 Organization of the Study

The study is organized in order to six chapter. First chapter provides introductory information which includes background of the study, statement of problems, objectives of the study, significance of the study and the conceptual framework. Second chapter present literature review that describes about the concept of participation of women in commercial agricultural farming in

national and international level and the review of previous studies. The third chapter relates to the research methodology that describes research design, study area and rationale for its selection, nature and sources of data, the universe and sample, technique and tools of data collection and data analysis interpretation. Fourth chapter describes the status of women's participation in farming. Fifth chapter presents the problems and prospects of women's participation in commercial agricultural farming and the sixth chapter presents the summary of the finding and conclusion of the study.

CHAPTER-II

REVIEW OF LITERATURE

2.1 Theoretical Review

A women's role access to resources and power within the household is through husbands and sons. But the status of a powerful woman is derived status (derived through husband and sons) and as individuals women have little value in the social system. In general, the women are the main component of agricultural system in Nepal. Without women's involvement in farming, agricultural development seems to be impossible to carry out.

Nepal is composed of diverse geography, climate, caste, ethnicity, linguistics etc. It is small in the world geography, yet varying diversity of climate and others that's supporting various types of vegetables growth within the national climate. The major part of vegetable farming in Nepal is executed by female population which demands consistent labor in the field. Yet the role of women in vegetable farming is shadowed in the Nepalese economy. The female population of Nepal is higher than male. It's 51.50 percent in compare to 48.50 percent of male population (CBS 2012). The supply of labor force in vegetable farm covers more females than males. Yet, the commercial values and commitment of women in national vegetable production is unsatisfactory.

In this study, farmers' adaptations in agriculture have been explored and with that the future prospects of Nepalese family farming. Through analysis of empirical data it has been documented that Nepalese farming has experienced major structural change and continues to face major challenges related to upholding farming on many units in the future. Still, there is a group of farmers that are interested in investing and developing their farms. This should not be under-communicated. These are still family farmers, many relying on expectations of a family successor to keep up their motivation for further investments. Due to the cultural practices, the Nepalese women are involved in agriculture as slaves and do not hold right over land, earnings and right over other fixed property. Nepalese women are not in power in the field of decision making their health status, nutrition and education status etc. even though they are involved in the production of cash crops they are not allowed to handle the output (Sapkota, and Pokharel, 2002).

Fifty percent of the total food production is credited to women. This fact reveals that maximum women are participated in agricultural sector. Furthermore about 50-60% in Asia and more than

80% in Africa (Sub-Saharan) female are involved in production of food. Women make-up the majority of subsistence farmers. Most of the women workers in rural cultures and their work proceeds basic diet and any supplementary food that may be obtained from barter or selling surplus goods. (Kari, M. 2010).

The above discussions point out that women play a vital role in the management of farm resources. In spite of this, as compared to their male counterparts, women have very little power so far as land rights, tenure status, and household decision making are concerned.

Agricultural research in Israel is based on close cooperation and interaction between scientists, consultants, farmers and agriculture-related industries. Israel's semi-arid to arid climate and shortage of high quality water are major constraints facing Israeli agriculture. Through extensive greenhouses production, vegetables, fruits and flowers are grown for export to the European markets during the winter off-season (Paris, 2012).

Dry farming on a subsistence level was practiced in the Land of Israel for over 2000 years. The forerunners of agricultural research in Palestine were the teachers and instructors of the Mikveh Israel agriculture school, established in 1870. The pioneers of many of the early farming settlements cultivated experimental plots supervised by an agronomist. Arriving in the country with little or no previous agricultural experience, this kind of experimentation was vital for the development of such crops as grapes, citrus and almonds. Arab agriculture revolved primarily around dry farming with barley, chickpeas, sesame and olives predominating (Paris, 2012).

Women play a significant role in all the various stages of crop production, processing and preparing for markets. Rural women are responsible for 60 to 80 percent of food production in developing countries, yet female farmers are often underestimated and overlooked in agricultural policies and strategies. According to the study carried out by FAO in 2005, women in the high mountain areas contribute more in agricultural work than men, more or equal work in the middle hills, and slightly less work in the Terai (low foothills and plains). However, in all agro-ecological zones, men generally perform tasks that require heavy physical labor such as ploughing (although women all over rural Nepal can be seen carrying heavy loads of fuel-wood, water, and fodder). Women, on the other hand, chiefly perform tedious and time-consuming work such as weeding, harvesting, threshing, and milling. Studies have shown that women involvement is greater in the

case of minor and subsistence food crops production such as millet, maize, soya bean etc. However, in the case of cash crops and commercial production men involvement has been observed significantly. For example, rice is a staple food crop of Nepal and grown in larger scale in Terai region, where involvement of men is observed to be more as compared to that of women in hill and mountain regions due to socio-cultural restrictions particularly in the case of higher caste such as Bhamins and Chhetris (Adhikari, 2010).

Livestock, cow, bull, oxen buffalos, sheep, goat, and pigs farming on small scale in the backyard is widely prevalent in Nepalese farming system. Besides livestock, poultry and fish play a subsidiary role to crops and contribute in meeting human needs both to consumption and sell for income. The socio-cultural, economic, and agro-climatic condition influences the number of holdings and pattern of livestock. In mountains where food production is difficult due to poor geographical conditions, raising of livestock head is more as compared to Hills and Terai However, in all the three ecological regions irrespective of social and ethnic groups, both men and women contribute significantly in livestock production and management (Adhikari, 2010).

In developing countries, at least 50 percent of the population depends on agriculture for a living. A study of 38 Sub-Saharan African countries found that population pressure tended to increase cropping frequency and land degradation. Population is growing fastest in the regions of the world with the least efficient of food production and distribution system. The rural livelihood systems in the developing countries are predominantly agricultural; there are two major immediate factors of human-induced environmental degradation. On the one hand there are the traditional agricultural activities that pushed to unsustainable intensities, such as expansion of cropland in forests, onto steep slopes or in dry areas. On the other hand environment are made in those traditional activities which are harmful for the environment, such as the shortening of the fallow periods which measures to restore soil fertility and counteract its increasing exposure to erosion (UNICEF, 2006).

More than 95 percent of economically active women are engaged in agriculture and have little or no access to alternative means of earning income to feed their families. Meanwhile, family growth is reducing farm size. In situation such as these, the agribusiness sector provides opportunities for women farmers to achieve some degree of economic independence. Agribusiness sectors in which women dominate include sericulture, sutho/dry ginger processing, cardamom drying, fruit

processing, tea and coffee processing, angora wool, dairy products, meat and fish processing, cut flowers and saffron (Sharma, 2005).

In recent years, the government has devoted considerable energy to integrating women into its agricultural development efforts. A national policy in effect since the sixth five years plan period (1980-85) is dedicated to eliminating the obstacles to women's participation in agricultural development. The eighth five years plan (1992-97) also recognized the need for increasing women's participation at each decision making level in government and semi-government set ups (Sharma, 2005).

The objective of the tenth plan has also been set up to increase agricultural productivity and income for food security and poverty reduction. It has incorporated sustainable strategies, agricultural extension programme, new methods and techniques in agricultural input supply, filtration in the use of modern inputs like chemical fertilizer, pesticides and promotion in the diversification of organic fertilizer regional and potential base farming and environmental conservation and pollution control especially in the agriculture sector(CBS,2012).

Women play a vital role in the production of all high- value commodities, most notably in sericulture (where they account for 79% of labor), vegetables (67%), vegetables seeds (58%), and ginger (64%). Women play a significant role in the market of agricultural products. In many cases this involves carrying heavy loads over long distances. Little has been done to improve the working conditions of women (Sharma, 2010).

Women's access to paid work is crucial to achieving self-reliance and the well-being of dependent family members. But a large part of women's work is in low-paid or unpaid occupations. In agriculture, family enterprises and the informal sector, women have little possibility for saving, credit or investment, and limited security. The work they do in these areas is of tremendous importance to the well-being of families, communities and nations but it is poorly measured in official statistics (Rao and Lata 2005).

Whether in industry, services or agriculture, women and men have different responsibilities and activities. For most women, family and work are constantly tied together. For most men, work means an income- producing job with a fixed schedule outside the house. In poor agricultural

societies women work in the field as well as tend to the daily needs of their families, gathering fuel wood, collecting water and cooking are unpaid. Men more often engaged in producing and marketing cash crops. In the more developed areas a larger and increasing proportion of women are in paid employment but still maintain household and family responsibilities (Rao and Lata, 2005).

2.2 Review of Previous Study

According to Gurung (2005), has studied about vegetable farming is a base of livelihood in Basantapur VDC of Tehrathum district. For this study he has taken 91 household as samples. In this study, he has attempted to analyze the socio-economic condition of farmers, role of women in vegetable farming and access of farmers in markets. He has found out the improvement of farmers living standard, improvement of women such as rate of wage, role of women in house management, number of girls student and so on.

According to Chapagain (2006), has studied about changes in farming system of eastern Nepal. In this study, he has attempted to analyze the farmer's farming practices from the subsistence production to the commercial production. For this study, three small villages were selected. During his study, he has found that the farmers of Yolma and mixed village adopted the cash crops farming immediately after the construction of the road and getting easy access to the marketing opportunities but the Yakha farmers were not adopted immediately impact of their economic, social, and cultural condition of living not only agricultural landscape and environment.

According to Sapkota (2009), has studied farmers' choice and farmers' voice on the use of local versus modern inputs on peri-urban agriculture in Kathmandu Valley. This study has taken 20 vegetable growers as samples. In this study he has attempted to explore some contradictions. During this study, he had found that the local farmers have been trying for long time to sustain agricultural production through using indigenous compost and farm and manner system.

According to Phulara (2010), has studied about changing livelihood patterns of vegetable farmers Charghare settlement of Kritipur municipality. In this study, he has attempted to analyzed land use pattern, impacts of vegetables on livelihood and socio-economic condition of vegetable farmers of the study area. He has taken 55 household as samples. From this study, he has found that fresh vegetable is perishable product which can't store long time after harvesting.

2.3 Policy Review

The slow pace of development, particularly in rural areas has underscored the long standing neglect of women as a key element in development policy. Governments and the international development community are reformulating policies and reallocating resources in the understanding that the low social and economic status of women translates into slower rates of economic growth. Certain vegetables have been grown in Nepal since very time immemorial; however systematic research and development started only after the establishment of governmental horticulture farms in the sixties. In 1972, the vegetable development division in the National Agriculture Research center (NARC), now national agriculture research council was established to co-ordinate research, seed production and developments of vegetables crops in Nepal. In 1987, NARC was given the mandate for an agricultural research, including vegetable crops in Nepal through annual plan and policy.

Although, private sector investment in agriculture is mostly from scattered and unorganized small farmers, large scale corporate investment has been initiated in some sub sectors mainly high value commodities like poultry and dairy. Favorable investment climate can attract corporate investors in other sub-sectors in future. Large scale private investment in agriculture can create employment, transfer technologies and create forward and backward linkages. Although, corporate investment could be the driving force for commercialization and modernization of agriculture if properly backed up by appropriate policies, there is risk that these investments may bypass small scale producers and pose additional risk to the livelihood of local communities. This can be prevented by the policies which ensure transparency and accountability of large investments. Governance of these large scale investments should be cautiously addressed in agricultural policy.

Therefore, forthcoming agricultural development strategy should attract large investors but in the meantime interest of small farmers should be protected with due respect to the rights of small scale marginal producers. The policy should promote transparency and accountability of large investment and also ensure meaningful inclusion of local communities preventing transfer of productive capitals mainly land. Connection and relationship between large scale investors and small scale marginal producers should be a win-win model. This connection can be strengthened by mechanisms to ensure benefit sharing from large scale investments to the local communities. The strategy should promote direct involvement of local farmers in agriculture value chain. For

example, contract farming regulated by appropriate and clear policy could be an option to attract large scale investment without transferring ownership of land and serving the interest of both.

Moreover, youths are not sufficiently motivated to invest their time and money in the agriculture sector resulting either the agricultural land left barren or feminization of agriculture due to immigration of young males in search of employment. Policies to attract large corporate investors in agriculture may not necessarily motivate those youths to the agriculture sector as employment in agriculture sector is usually less attractive than in other sectors. Therefore, Agriculture Development Strategy should address this issue and create policies to attract youths in the agriculture sector.

Different divisions had been operated as separate offices, while in July 1999, they were considered assisting divisions of the department and financial transactions also were conducted by the department, narrowing down the role of the division. Because of this, service works were slowed down due to requirement of the longer administrative processes. Realizing the negative effects of this process on development, these divisions were re-identified as separate offices under the ministry of agriculture and cooperatives' present organizational structure based on the decision of the Nepal Government (Ministerial Level Panel) of July 10, 2000. This time, Divisions were renamed as directorates and they were mandated to provide administrative control over and financial guidelines to the offices under them.

Two separate offices with different staffs and program budgets; Potato Crop Development Section, presently National Potato Crop Development Program, and Ginger and Cardamom Development Section, Presently, National Spice Crops Development Program, were kept under administrative control under this Directorate from July 1992, while, since 2000, this Directorate was assigned to undertake financial transactions as well. Realizing difficulties in this process, these programs were assigned to operate financial transaction themselves from 2003 based on the Nepal Government's decision.

Presently, Vegetable Development Directorate serves as a vegetable sub sector focal point for national and international level institute of related fields. It helps Development of Agriculture and Ministry of Agricultural Development in formulating national policy, strategy, periodic plan and annual program. It also prepares guidelines for the implementation of program. It supervises and

monitors the district level vegetable program and gives technical back stops to the districts and research centers in solving their problems especially in technical aspects. During the course of program implementation, it also coordinates in fulfilling the necessary production inputs required, especially quality planting materials i.e. vegetables seeds through government and private sectors. It also maintains the necessary information required for vegetable subsector and also maintains national level data base a vegetable sub sector. It prepares subject matter special technical materials in the form of pamphlet, posters, and booklets and distributes to the districts.

Of the two national programs under the directorate, Potato Crop Development Program has been developing and managing improved technologies including varietals improvement of potato crop to support enhanced income and food security of farmers and consumers thereby leading to economic development of the country. Spice Crops Development Program, the other national program under the directorate, is coordinating body of development and extension of spice crops such as cardamom, ginger and other spice crops; turmeric, garlic, chilly, cumin, pepper and coriander etc.

Vegetable farm stations/centers are responsible for quality breeder and foundation seed production which is technically linked with designated Nepal Agriculture Research Council's research farms/stations. Other activities performed by the vegetable farm stations/centers include vegetable seedling production, germplasm collection, maintenance and evaluation of vegetable crops, seed buffer stock maintenance. Likewise, supervision and monitoring of district level program especially in vegetable seed production pockets are equally important tasks to be performed by the vegetable farms/centers in order to maintain the quality seed production in farmers/co-operative levels. They also conduct specialized technical/practical training to JT/JTAs and leader farmers in fresh vegetable (seasonal and off- seasonal) and vegetable seed production aspects and also conduct coordinated and collaborative/adaptive type research in vegetable sub-sector. Apart from these, they are the sites for technical demonstrations, farmers' visits and technical learning place for extension agents and farmers as envisaged in agriculture policy 2014.

CHAPTER-III

RESEARCH METHODOLOGY

This is a descriptive type of study. The nature of work of proposed study is such that it required a considerable level of field works for collection of primary information from various levels. The methodology was based on primary and secondary data collection.

3.1 Rationale for the Selection of the Study Area

This study intends to analyze the status of women's participation in commercial agricultural farming on rural farmers for their economic prosperity. While selecting the site, topographic maps were also used to familiarize and quick reconnaissance the idea about the area. To obtain the valid information 4, 5, and 6 wards of Jiling VDC of Nuwakot District was selected as the study area.

Nuwakot district is located in Central Development Region, Bagmati Zone. This district is situated 68 Kilometers Northwest from the Kathmandu. It has altitudinal variation from 540m to 2500m. The district is surrounded by Sindhupalchok and Kathmandu district in the east, Rasuwa district in the north and Dhading district in the west and south. Nuwakot experiences maximum temperature of 37.5 degree Celsius in Jestha to minimum of 4.5 degree Celsius in Poush. Likewise, it receives rainfall of 1514mm.

From the agricultural point of view, this district is one of the most productive one. It has all types of macro and micro climatic zones right from the mean sea level. Therefore, this opportunity has made this district, a potential one for the agricultural production. It is one of the vegetable farming area, where most of the people depend on agriculture resources. It is highly occupied by the vegetable farmers and they have been taking benefits from vegetable farming. First, economic source increase day by day, life style change and second employment of people.

The issues related to women involvement in development activities have not been addressed well. Various development activities also have not given adequate attention to uplift women. Especially, women of our country belonging to rural areas are confined within their household activities. Both men and women have equal responsibility, so, there is a need to empower women regarding their social and economic condition, women should be in mainstream for equal development, so the main purpose of women's participation in vegetable farming of Jiling VDC.

3.2 Research Design

The research design adopted for this study will be descriptive as well as exploratory in nature. It describes the present socio-economic condition of commercial vegetable farming of the study area and challenges and prospects of women participation in agriculture farming. The main objective of this research is to find out the vegetable farmers and specially the women's participations in this process. Age, education, marital status, family size, households income, size of farm land, decision making in farm management and customs and traditions are independent variables which affect participation of women in vegetable farming.

3.3 Nature and Sources of Data Collection

The nature of the data for this study were both qualitative and quantitative in nature. Both primary and secondary data were used to fulfill the objectives of the study. Secondary data were collected from VDC profile, documents, operational plan etc.

3.4 Universe and Sampling Procedure

The households of three wards 4, 5 and 6 were listed as a sampling frame. The total number of households in 4, 5, and 6 wards are 109, 105, and 108 respectively which was identified as the universe of the study. There are 450 women in 322 households and 60 (from three wards) respondents were chosen randomly as sample. In the sampling process simple random sampling were adopted. Female only were the respondent in sampled household. The sample size were about 15 percent of the universe.

3.5 Techniques and Tools of Data Collection

In order to obtain the mentioned techniques following tools were used. The following techniques were applied for the collection of data from the field:

- Interview Schedule
- Key informant interview
- Field observation

3.5.1 Interview Schedule

A set of questionnaires were prepared and in depth interview has been carried out. The respondents are made to understand the question first and then answer. Most of the questions were close ended

while some which asked for respondents' views and ideas are left open for respondents to express ideas freely.

3.5.2 Key Informant Interview

Interview schedule for key informant interview: five people were identified as key informants. They were secretary of the ward office, leader of farmers, JTA, district agriculture officer and community council (Cooperative, wholesalers and dealers). The interview schedule has been prepared for the interview and the data so collected has been coped with the information of key informant.

3.5.3 Field Observation

Checklist for observation: The researcher has been constantly observing the field to derive out conclusions. With the checklist, group discussion on the issue of the role of women in agriculture has been helpful for the conclusions which increased the reliability of the data. Through the observation, the participation and the role of the respondents has been known.

3.6 Methods of Data Analysis and Presentation

The collected primary data has been classified, tabulated, and interpreted according to the requirements. A simple statistical tool has been used for analyzing the quantitative data and the qualitative data has been described, explained and logically analyzed.

3.7 Limitations of the Study

Due to time and resource constraints, the collected information were inadequate. As this study is especially directed towards women's role in agriculture, only female respondents were selected in the study. There are a wide range of socio-economic characteristics which affect women's participation in agriculture, but only a few such variables were included in the study. These various limitations of the study may bring about some problems in making generalizations on women's participation in agriculture. Hence, the findings of the study were not generally conclusive.

CHAPTER-IV

STATUS OF WOMEN'S PARTICIPATION IN FARMING

4.1 Agro economical background of the study site

Jiling VDC comprises of 9 wards. The total household number is 1156 consisting of a total population of 6453, of which 3131 are male and 3322 are female. The total number of households in 4, 5 and 6 wards are 109, 105, and 108 respectively. There are 450 women in 322 household and 60 (from three wards) respondents has been chosen randomly as sample.

4.1.1 Population description

Population describes the number of male and female population in the VDC. It can be determined either through VDC profile, documents, etc. While analyzing the population we can determined the different demographics terms and socio-economic aspects. Without population description the study of the female in commercial farming is impossible.

Table 4.1: Population description of Sampled Household

Family members	Number	Percentage of the total
Male	152	47.5
Female	168	52.5
Total	320	100

Source: Field Survey, 2017.

From the 60 household surveyed with the total population the female members were found to be more than the male members. The average family size of the respondent farmers in the area was 5.33. The age range of family members was between 1 to 69. Female are larger in number than the male number in the context of our country.

4.1.2 Age of Respondents

Age is one of the factor which determines how much the respondent is capable for doing work in the field. But it does not mean that older age cannot do work in the farm land, it depends upon the capacity of him/her. In general, we see that mostly middle-age people work hard for their livelihood.

Table 4.2: Age Group of the Respondents

Age	Frequency	Percentage
16-29	22	36.67
30-39	28	46.67
40+	10	16.67
Total	60	100.0

Source: Field Survey, 2017.

The survey in the Jiling VDC shows that age group of the respondents 30-39 are more than other age groups participating in commercial vegetable farming. This age group is the middle-age group who mature enough to work in the farm land which is similar in all the occupation all over the nation.

4.1.3 Caste wise population distribution

The distribution of population according to the caste determines how many people are engaged in different types of occupation. As it is already divided by the ancient ruler but there is not hard and fast rule for this generation. Anyone can do any occupation as they wish to do. Although population has been distributed as per caste, capacity and willingness has not been distributed.

Table 4.3: Population distribution by caste/ ethnicity in Jiling VDC

Caste	Number	Percentage of the total
Bahun	25	41.67
Chettri	15	25
Newar	3	5
Tamang	17	28.33
Total	60	100

Source: Field Survey, 2017.

In the study area, Bahun are major ethnic group. Regardless of the religion, all of the respondents are Hindu. Chettri is the second caste that is higher in Nepal which was seen second highest in case of Jiling VDC.

4.1.4 Educational and literacy status

Literacy rate, defined as the ability to read and write. If people are not educated well then they cannot drive the society even his family also. If the parents are not well educated then their children

also ignores the study. Most of the rural people have poor economic condition, due to which their children compel to leave the school. If mother in the family is educated the whole family will be educated. As education is the third eye of the human being it has play vital role in every type of activities.

Table 4.4: Population distribution by literacy and education level in Sampled HH

Education Level	Number	Percentage of the total
1-8 Class	9	15
9-10 Class	8	13.333
11-12 Class	19	31.67
Graduation & Above	1	1.67
Illiterate	23	38.33
Total	60	100.0

Field Survey, 2017.

Majority of the people were literate and 31.67 percent of the respondents has studied up to intermediate level where only 1.67 percent have graduated which shows that the VDC is well educated in whole sum. As compared to the nation the number of women who involved in the commercial farming is higher in this VDC because of more farm and it is seen that literacy rate is high in this VDC.

4.1.5 Major income sources

Different people are engaged in different field of occupation according to their qualification or capacity. Nepal is an agrarian country, more than 80% of the people are engaged in agriculture for their livelihood. Agriculture is taken as the main source of income besides other works like animal husbandry, private services, abroad etc. As society is being modernized, urbanized and globalized different sources of income are being seen in the society for carrying out day to day activities.

Table 4.5: Population distribution according to the income sources in Sampled HH

Occupation	Number	Percentage of the total
Agriculture	74	46.25
Business	13	8.12
Public Services	4	2.5

Private Services	5	3.13
Abroad	6	3.75
Not Economically Active (Student & Younger member of the HH)	58	36.25
Total	100	100

Source: Field Survey, 2017

In the survey area, more number of the population have agriculture as a main source of income. Mostly agriculture is taken as the major sources of income in Terai and hilly region of our country.

4.1.6 Land Status of the Respondents

Every respondents are owner in themselves in case of land. If the farm land is large the productivity will be large. Most of the respondents have adequate land for commercial vegetable farming from where they can earn enough money for their livelihood.

Table 4.6: Land Status of the Respondents

Land in (Ropani)	Frequency	Percentage
6-8	12	20.0
8-14	48	80.0
Total	60	100

Source: Field Survey, 2017.

Among 60 respondents around 80% of the respondents have enough land for vegetables production which is higher in case of Nuwakot district. This shows that most of the farmers left their agricultural production works after the commercialization of it.

4.1.7 Types of crops production before the commercial vegetable farming

Agriculture doesn't mean only vegetable farming. It may be the cultivation of paddy, wheat, maize and so on. Before the commercialization of the vegetable farming different products like paddy, wheat, and maize were grown in the Jiling VDC for their livelihood. Farmers earn income from other different crops before commercialization. This type of farming gives outcome in short period of time. This system of farming decreases unemployment opportunities.

Table 4.7: Types of Crops Production

Crops	Frequency	Percentage
Paddy	35	58.33
Wheat	7	11.67
Maize	18	30
Total	60	100.0

Source: Field Survey, 2017.

Study shows past to the commercial vegetable farming around (58.33%) respondents produce Paddy Maize before the commercial vegetable farming. The commercialization concept is not so old in Nepal in the context of hill region. It increases the income of the farmers in short period of time so farmers are attracted in this type of farming.

4.1.8 Agricultural system and practices in Jiling VDC

Agriculture is one of the important sources of livelihood of the people of Jiling VDC. Though some people are involved in other occupation, still agriculture holds to be the major source for their livelihood. In the agricultural systems, both indigenous knowledge system and modern technology are being used. So far the adoption of modern technology is concerned, farmer now use hybrid seeds. They are now more concerned about the quality of the produce.

Cropping pattern

Pakho: Cauliflower/Cabbage/ potato – Maize – Cauliflower (off-season) – Cauliflower

In Pakho, the cropping pattern starts from either seasonal cauliflower or cabbage or potato in the first, then the maize and followed by off- seasonal cauliflower and vice versa.

Khet: Paddy – Wheat- Maize

In the Khet, the cropping pattern starts from paddy followed by wheat and maize is the final crop grown.

Khet: Paddy – Cauliflower- Cabbage-Potato

Similarly, in the khet the cropping pattern starts from paddy followed by cauliflower then cabbage and finally the potato is grown.

Livestock rearing

Livestock is one of the important components of farming in Nepal. Each and every household owns some livestock. Some of them have three to five livestock while some other may possess one or two. Livestock rearing is a traditional job. Upper caste people own cow, buffalo, and goat while lower caste people own livestock as pig, poultry and sheep. Livestock is not only regard as a component of farming but it also helps make some money and the fertilizer made from the dung of the livestock helps in increment of vegetables product. In Jiling VDC, two households have poultry farm. Almost all households raise some livestock, which they also take as a side business.

4.1.9 Total Land for Vegetable Production

According to the survey, the total land allocated for vegetable production is 768 Ropani. The average land holding for vegetable production for each household comes to be around 12.8 Ropani. Most of the farmer has started cultivating vegetable from the year 2061-2062. From the year 2065, they started cultivating vegetables for market consumption. In the beginning, they cultivated only on 1-2 ropanies. However, as they saw market potentiality for their production, farmers were interested in bulk production. So they expanded production area from 1-2 ropani up to 10-14 ropanies. This signifies that production volume has increased as area has been increased.

4.1.10 Farmers Engagement in Groups, Organizations, Cooperatives

Nowadays, farmers are engaged in the farming through groups, organizations and cooperatives as there is less land, low capital with the single farmer, lack of manpower, etc. As groupism is the power in itself, it decreases the problem associated with farmers through group discussion. The financial problem gets reduce through organizations and cooperatives involvement.

Table 4.8: Farmers engagement in groups, Organization, Co-operatives in Sampled HH.

Particular	Number	Percentage of the Total
Engaged	45	75
Not engaged	15	25
Total	60	100

Source: Field Survey, 2017.

Seventy five percent of the respondents' farmers are engaged in some sort of farmers group, organizations or co-operatives. This indicates that farmers groups are being popular these days. This may be because in this group, farmers are open to discuss their day to day problems freely

and they find solution in mass. As many farmers are engaged in groups any new intervention and technology dissemination can easily be done through these groups approach.

4.1.11 Major Vegetables Grown

In the Study area farmers grow many vegetables. The major vegetables grown by the farmers are cauliflower, radish, cabbage, capsicum, tomato, green chili, bitter gourd, pumpkin and potato. Among these, cauliflower, cabbage and potato are chiefly grown for market consumption purpose.

Table 4.9: Area, Production and Productivity of Vegetables

Items	Average Area (Ropani)	Total Production (ton)	Productivity (ton/Ropani)
Vegetables	13.5	10.86	0.804

The average area and total production for vegetables is 13.5 ropani and 10.86 tones. The productivity of vegetables in sampled HH is about 0.804 ton per ropani. It is higher in the Nuwakot district as compared to other VDC.

4.1.12 Loan Facilitators and Takers

Every farmers are not rich enough to invest huge capital in the farm. So they have to search or take loan from different medium to run their commercial vegetable family though they have their own farm land. In Jiling VDC out of total 60 respondents, 39 respondents (65%) were continuing their business through loan from either Agricultural Development Bank (ADB) or cooperatives or Small Farmers Cooperative Bank (SFCB) or Neighbors. But 21 respondents (35%) were self-owner of their farming land. Different banks, cooperatives and other financial institution were established to facilitate the farmers or people over the nation for doing the financial transaction.

4.2 Marketing Characteristics

4.2.1 Marketing channel

From the study, three types of channel are found to occur:

- I. Producer → Consumer
- II. Producer → Wholesaler → Retailer → Consumer
- III. Producer → Village traders (Middle man) → Wholesalers
 Retailers → Consumers

In channel I, there are no any market functionaries involved. This is the shortest channel to deliver the product from production center to the ultimate consumer. This is popular and feasible only in rural areas.

In channel II, the product is being transferred from producer to wholesalers to retailers and then to the consumers. In this channel wholesalers assemble the thin volume of product from so many small farmers then when produce attains a wholesale volume then sells it to retailers who transfers the product to the final consumer in retail price. The market functionaries whatsoever is involved charges certain amount for their service delivered.

In channel III: This is a common channel to deliver the product from producer to the consumer far away from production center. Middlemen assemble thin volume of the product from many farmers and sell it to the wholesalers. In turn, wholesalers sell produce to retailers in wholesale amount. Finally retailers distribute the product to the consumers at retail price. The market functionaries charge certain amount for their services delivered during the marketing system.

Generally, cleaning, grading etc. are done in the field itself by the producers but in special cases if cleaning grading are to be done more precisely, then it may be done at any stage of marketing.

4.2.2 Different markets for selling

Vegetables are grown not only for family purpose in the commercial farming. Commercial itself indicates that the use of huge capital, large land, more labors and so on. After the vegetables have been harvested, the vegetables are packed and transported to different market for selling for getting its price. The farmer cannot sell it only in the local market so he/she has to send it to outsiders for getting its actual price.

Table 4.10: Sale of Vegetables in different market

Particulars	Number of respondents	Percentage of the total
Local market	20	33.33
Kathmandu	25	41.67
Trishuli	12	20
Rasuwa	3	5
Total	60	100

Source: Field Survey, 2017.

Most of the respondents i.e. 41.67 percent sell their product in Kathmandu and sell their product in Trishuli, Rasuwa and in the local market. Besides, the market for the product depends on the volume of production. The respondents selling their product in the local market alone sometimes make collection from 4-5 farmers and bring it to Kathmandu market (Table 4.10). Therefore, there is no fixed market for the product. Farmers sell the product in whatever market from that they find in the harvesting period of the product. This kind of uncertain market situation discourages farmers to increase their production volume. In most part of the nation where there is farming activities they collect the product and send it either to the market where there is more demand of vegetables.

4.2.3 Farmers Opinion about commercialization

All farmers are in favor of commercialization of production. According to them the pre-requisites to be fulfilled are: insured market condition, easy loan facility with lower interest rate, storage facility and other infrastructures as transport means are required.

According to the respondent's import of product from foreign countries do not have any influence on price level of local product. They believe that their quality of product is far better than that of imported product. So local product is easily marketed. From the farmer's point of view, for efficient market system they need to have good physical infrastructures built ahead of. Storage house and better transportation means certainly encourage farmers to go for bulk production.

4.2.4 Packaging and Transportation

Generally, vegetables are packed in Doko until it is brought from field to the main road. After that, the product is kept open on the Tata mobile and transported up to the final market. In addition, trucks are also being used as transportation means. While comparing the cost of transportation between Tata Mobile and Trucks it is seen that it costs Rs. 1.5 per Kg in Truck and Rs. 2 per Kg in Tata Mobile, this shows that transportation cost is lower in trucks than in Tata Mobile. However, trucks can be used only when there is bulk volume of product.

4.2.5 Transportation and Communication

Jiling has access to the Kachhi road. It is 68 kilometers away from Kathmandu and 12 kilometers distance from Trishuli. The commonly used transportation means are Jeep, Truck, and Mini bus. Local people often carry commodities on their shoulder also. The VDC has communication means as telephone service. Almost all respondents have television, radio in their home.

4.2.6 Different Traders to Buy Vegetables from Producers

Planning for how much to produce and to whom and where to sell is not done beforehand. There is no much mechanism to link both the producers and the traders to agree on a common statement that the product from the particular farmers will be taken by a particular trader. This type of agreement has to be made which not only inspire farmers to produce but also minimize the loss that the traders have to bear.

Generally, farmers sell their product immediately after harvest due to lack of infrastructure facilities. But, sometimes due to unavailability of transport vehicles farmers are forced to sell their product after some days of harvest. During this time, farmers keep their produce spread open in their houses because of lack of storage facilities. Even if the product is sold after sometimes, the price level is not changed.

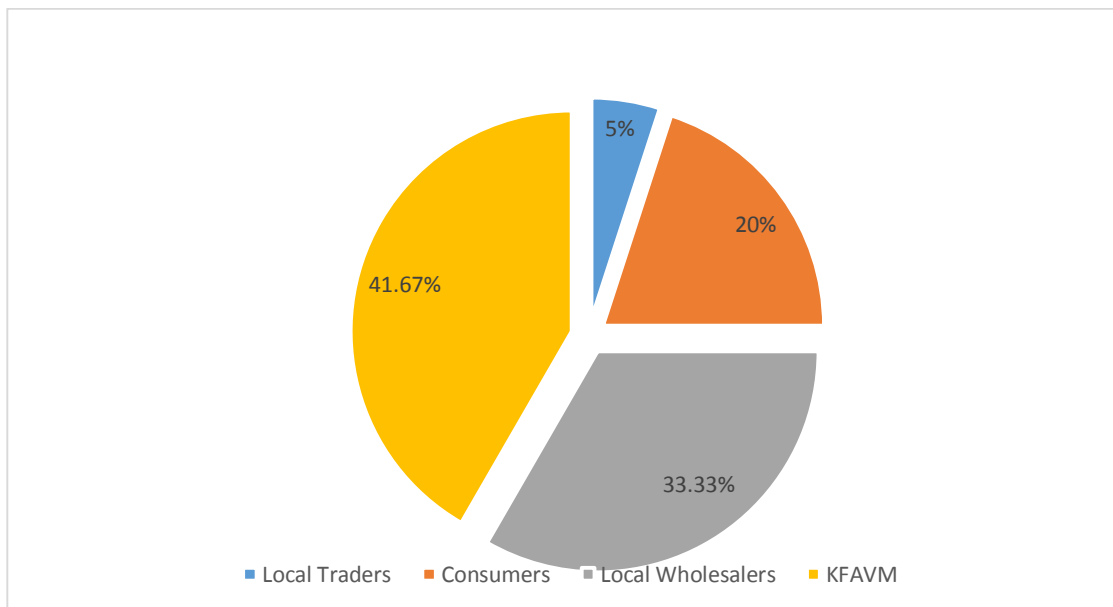


Figure 4.1: Sale of Vegetable to Different Traders

33.33 percent of the respondents sell their produce to the local wholesalers. About 5 percent of farmers sell their produce to the village traders. Likewise, 20 percent of the farmers sell their produce directly to the consumers. Moreover, 41.67 percent of the farmers keep stall in Kalimati Fruit and Vegetables Wholesale Market. So far the trading of vegetables is concerned farmers sometimes find it difficult. The traders to buy the product are not fixed. This does not encourage farmers to expand their area for vegetable production.

4.3 Problem Ranking

Problem ranking is a widely adopted social analysis tool. This tool enjoys with active participation of the needy or stakeholders in the specific study area on the pre-defined issues and events. This is a common tool of Participatory Rural Appraisal (PRA).

Table 4.11: Problem ranking

Problem	Rank
Seed Quality	I
Irrigation	II
Fertilizer	III
Labor	IV
Storage	V
Tax	VI

Note: I- Most Problematic. VI- Least Problematic. Source: Field Survey, 2017.

In the 60 surveyed household, majority of them identified seed quality as the most problematic one. At present farmers use hybrid seed. Duplicate seeds are highly marketed which lower the yield. But farmers are unaware of it and after the yield is lowered they realize it. Therefore, they get to pay badly for it. Irrigation problem has received second rank. Similarly, Fertilizer and labor unavailability has received third and fourth ranks respectively (Table 4.11.). In Terai region of Nepal there is the problem of irrigation in the first whereas in hill region there is problem of seed and in mountain region there is problem of fertilizer, seeds, labor and irrigation respectively.

CHAPTER-V

PROBLEMS AND PROSPECTS

5.1 Problems of Commercial Vegetable Farming System

Vegetable Farming is one of the traditional occupation of the Nepalese people. Till the date this occupation were not systematize. Although it is not systematize commercial vegetable farming were being done in Jiling VDC of Nuwakot District and are facing the following problems:

Lack of large farm land on study area is the main problem. Absence of proper graded seeds during the crop cultivation time near the local market. Use of traditional technologies in cultivation i.e. Kuto, Kodalo, Kodali and so on. And lack of modern technology and technical knowledge about commercial vegetable farming in study area. Due to inaccessible transportation facilities the harvested product cannot be launched in market and cannot get its real price. Lack of storage and cold house near the farm land many vegetables products that are produce in the farm area cannot be store for the future and loss may occur due to damage or rotten of large amount of vegetables. Lack of proper water supply for irrigation facilities makes the vegetables production low. The productivity of the land is being decrease by the use of chemical fertilizer rather than compost manure due to the lacking of it. Due to the shortage of insecticides and pesticides in the local market during the growing periods of vegetables and causes less number of vegetable production. Lack of loan facilitators near around the VDC the farmers or the women cannot grow the vegetables in the large amount thus reduces harvested amount of vegetable. And in case they get the loan from the facilitators (neighbors, banks, cooperatives, others) they have to pay the large amount of interest which cannot be offered by all the farmers due to the lack of the securities. Commercial farming means more invest of capital, labors, land etc. the labors cannot be manage from the own family members so that they have to hire more labors from the outside and have to paid more charges for them.

5.2 Prospects of Commercial Vegetable Farming

Despite of all above mentioned problems there are many prospects of women participation in commercial vegetable farming. Some of them are described below:

Due to the large number of labors mainly women engage in the vegetable production resulting the less number of discrimination between men and women. More and more women are involved in

decision making result in the empowerment of women in the society. Women who are limited in their household activities were get chance to show their performance, ability, capacity through vegetable production as well as earn money to run their family easily through expenditure on daily used household materials and sending their children to boarding school and private college as well. The economic condition of the developing countries like Nepal can be uplifted through commercial vegetable farming. Due to the use of advanced technologies and machineries' for the cultivation, production, and harvesting other crop production can be substituted by commercial vegetable farming in order to earn money.

CHAPTER-VI

SUMMARY OF FINDINGS AND CONCLUSION

6.1 Introduction

This chapter presented summary of the findings, conclusion and recommendation. It also includes the discussion made on the findings in accordance with the modern theory as applied in the study.

6.2 Summary of Findings

Nepal has suitable agro-climatic condition in Hills and Terai to produce vegetables wherever, there is facilities of irrigation and fertile soil.

Agriculture development with the participation of women is a complex process and equally challenging sector where as commercial vegetables have vital role to transform the traditional agriculture farming and raise the living standard of people.

The main objectives of the study were to examine the status of women participation in commercial farming and to identify its problems and prospects.

For this, the study was carried out in Jiling VDC of Nuwakot District of Nepal. From the entire report, we can summarized that there is a great business scope of vegetable farming with the participation of women in Jiling of Nuwakot District. Commercial vegetable farming is economically sound and highly profitable business.

The summary of the findings are described as follows:

The highest age group of respondents who are engaged in commercial vegetable farming is 30-39 whereas the least of the age is 40+. Bahun ethnic group is the highest and Newar is the lowest ethnic group that were participate in commercial vegetable farming. Most of the respondents are literate where moderate has passed intermediate level from where they can applied their modern technology in the field of commercial vegetable farming. Also, one of the respondent who was graduated has participate in the vegetable farming. From the household survey of 60 HH most of the HH has agriculture as the major source of income which is 46.25% of total. Out of 60 respondents around 80% have 8-14 ropani land as 6-8 of 20%. Most of the commercial vegetable farmers grew paddy, wheat, and maize as the major crop before vegetable farming as their

households' income. The cropping pattern of study area were Cauliflower, Cabbage, Potato, Maize and so on in Pakho whereas Paddy, Cauliflower, Cabbage, Potato in Khet. Most of the respondents were organic farmers as they used organic fertilizer and compost manure that are obtained from livestock rearing and also take it as a side business. In the study area, the total allocated land is 768 ropani used for commercial vegetable farming whereas 70 ropani is used for organic farming. 75% of the farmers are engaged in groups, organization, cooperatives for commercial farming in the study area. The major vegetables are grown by the farmers in the study area farm are Cauliflower, Radish, Cabbage, Capsicum, Tomato, Green Chilly, Bitter Gourd, Pumpkin, and Potato. The vegetables that are produced in the study area are mainly goes to the Kathmandu (41.67%), local market (33.33%), Trishuli (20%), and Rasuwa (5%) respectively. The major problems for the commercial farming in descending order are seed quality, irrigation, fertilizers, labors, storage houses, tax etc. respectively. Most of the respondents (65%) were loan taker for commercial farming in large scale from banks, cooperatives, Small Farmers' Cooperatives Bank (SFCB) and neighbor's whereas 35% are self-owner.

6.3 Conclusions

This study of 60 HH in the Jiling VDC in Nuwakot District provides a statistical representation of women's in agricultural operation (i.e. vegetables farming) and household activities by assessing the actual extent of their work. After analyzing the gender division of labor, the study concludes that women's work in agriculture and household activities is significantly higher than men's work.

Finally, it is clear that there lies a great scope of commercial vegetable farming in Jiling VDC of Nuwakot District. The vegetable production in Jiling VDC for market point of view is gaining popularities these days. In the recent years farmers engaged in vegetable production has also increased rapidly. Besides, pocket area, farmers from other adjoining areas are also attracted in this enterprise. This is not only because Jiling has appropriate climate condition for the production of aforementioned commodity but also because farmers are now more concerned about quality and quantity oriented production for market disposal. Now it is clear that the farmers are well aware of the market potentialities for vegetable farming but since they have been utilizing the same old techniques for production market oriented production is not successful.

The study has shown that the area allocated for vegetable production is comparatively low. Though farmers have changed from traditional ways to modern technology, this change has not been very radical. From the interview, we came to know that they utilize hybrid seeds. This shows that they have slightly moved for technological innovation. But at the same time they don't use other inputs as fertilizer, irrigation, crop geometry and other management practices as been recommended for greater yield from that particular hybrid seeds. Consequently, production is low and productivity is low.

The job opportunity in Nepal is very less. Many people go abroad each year in search of job. Furthermore, people are illiterate and cannot contribute to be efficient manpower for other industrial works. Therefore, vegetables enterprise has become a main door that engage all those, either literate or illiterate and provides them a source of income.

Besides, there is tremendous scope to export vegetables to other nations. Since, Nepal has that beneficiary advantage of producing vegetables both on and off season in its different location, it can be of great potential to exploit this advantage and make use of it.

REFERENCES

- Adhikari, M. (2010). Resource Allocation in Agriculture Sector in Nepal: An Impact Analysis of Agricultural Policy, Ph.D. Thesis, JLU, Giessen, Germany
- CBS, (2012). Statistical Pocket Book Nepal, Kathmandu: Central Bureau of Statistics
- Chapagain, P.S. (2006). Involution of Evolution? Conceptualizing the Changes in Farming System of Eastern Nepal, Central Department of Geography, T.U., Kirtipur, and Kathmandu.
- Gautam R.S. (2010). Agricultural Mechanization Needs of Women Farmers in Nepal, Winrock Policy Outlook Series No.4, Kathmandu, Nepal
- Gurung, J.B. (2005). Vegetable Farming as a Base of Livelihood in Basantapur VDC of Tehrathum District, unpublished Thesis, submitted to Central Department of Geography: T.U., Kirtipur, and Kathmandu.
- Kari, M. (2010), Inseparable: The Crucial Role of Women in Food Security Revisited. Kathmandu: IIDS
- Lamming, G.N. (1983). Women in Agricultural Cooperatives., New York: Food and Agriculture Organization of the United Nations.
- Paris, T. (2012). Women's Role and Needs in Changing Rural Asia with Emphasis on Rice-Based Agriculture, Israel: IRRI.
- Phulara, N.P. (2010). Changing Livelihood Patterns of Vegetable Farmers: A case Study of Charghare Settlement of Kirtipur Municipality, Central Department of Geography, T.U., Kirtipur, and Kathmandu.
- Rao. D. B and Lata D.P. (2005). International Encyclopedia of women, New Delhi: Discovery Publishong House
- Sapkota, K. (2009). Farmer's Choice and Farmer's Voice on the Use of Local versus Mordern Inputs in Peri-urban Agriculture in Kathmandu Valley, Nepal, In. Khanal, N.R., Koirala, H.L. (eds.) The Geographical Journal of Nepal, Vol. 7.

Sapkota, K.R and Pokharel. N .R (2002). Sociology of Agriculture and Environment. Kathmandu: Khitiz Publication

UNICEF, (2006). Situation of Children and Women in Nepal, Kathmandu: United Nation Children for Emergency Fund

Sharma, R. (2005). Peoples' Participation in Natural Resource Management- A case study of Panchakanya Mai Community Forest User group of Chapali- Bhadrakali VDC in Kathmandu district of Nepal". Purbanchal University

Sharma, S. (2010). Situation Analysis of Agricultural laborers in Nepal. (In Nepali), Kathmandu: National Labour Academy- Nepal

Annex

Questionnaire

**WOMEN'S PARTICIPATION IN COMMERCIAL AGRICULTURE
FARMING**

(A Case Study of Jilling VDC of Nuwakot District)

Section A

General Information

1. Demographic Details

Name of Respondent.....

Caste..... Age.....

Sex.....Religion.....

Education.....

Occupation..... Permanent Address

District.....

Municipality/VDC.....Ward.....

2. Information of Family Members: Family Size

S N	Family Member	Relation to Respondent	Sex	Age	Education	Occupation	Religion	Land Owned by
1								
2								
3								
4								

Section B

Status of Women Participation

1. Do you have land in the name of your family members in this area?

a) Yes

b) No

If yes, what type of land?

a) Paddy Land

- b) Marginal Land
 - c) Bush Land
 - d) Others
2. What is the size of your field?
- a) Less than 5 ropani
 - b) 5-7 ropani
 - c) 6-8 ropani
 - d) 10-13 ropani
 - e) More than 14 ropani
3. What type of crops do you cultivate in your field?
- a) Food Crops
 - b) Cash Crops
 - c) Vegetables
 - d) Fruits
 - e) Others
4. Do you grow vegetables in the field?
- a) Yes
 - b) No
- If yes, What is the size of your farming land?
- a) 0-14 Ropani
 - b) 6-8 Ropani
5. When did you start your Vegetable Farming?
-
6. Do you sell the vegetables in the market or is it only for your family?
- a) Yes
 - b) No
7. How frequent do you engage in the farming activities?
- a) All year round
 - b) Some time
 - c) Just vegetable garden
8. What is the structure of your farm?

- a) Personal
 - b) Group
9. What types of vegetables do you grow in your farming land?
- a) Cauliflower
 - b) Cabbage
 - c) Potato
 - d) Capsicum
 - e) Chilly
 - f) Others
10. Do you have more than one farm land?
- a) Yes
 - b) No
11. From where do you collect the seeds for vegetable cultivation?
- a) From neighbors
 - b) Self
 - c) From market
12. How much amount of seed is required for the production of seedlings to cultivate vegetables in your farm land?
- a) Not Fixed
 - b) Fixed (depend upon the size of land)
13. Which manure is mostly used in the agriculture farming?
- a) Compost
 - b) Chemical.....
 - c) Both.....
14. What amount of Chemical fertilizers is used in your farming land (i.e. ropani)?
- a) 2 bags
 - b) 4 bags
 - c) More than 4 bags
15. Who will bring and use the fertilizer and insecticides from the market?
- a) Man
 - b) Woman

- c) Both
16. Is it easily available in the local market or you have to go far away from your home?
 - a) Locally available
 - b) Travel long distance
 17. How do you harvest your vegetables from your farm land?.....
 18. How much vegetables do you harvest from your farm land? (yearly)
 - a) Less than 1 tonne
 - b) More than 1 tonne
 19. What farming system do you normally use?
 - a) Labor Intensive
 - b) Capital Intensive
 - c) Mixed
 20. Do you hire extra labors other than your family members?
 - a) Yes
 - b) No
 21. Who will hire the extra labor from outside if needed?
 - a) Self
 - b) Husband
 - c) Other members of family
 22. What is the means to carry vegetables into the market?
 - a) Family member.....
 - b) Vehicle.....

Section C

Problems of Vegetables Farming

1. Do you have easy access to land for farming?
 - a) Yes
 - b) No

If no, what is the problem?

2. How do you acquire land for your farming activities?
 - a) Family land

- b) Hire
 - c) Lease
 - d) Government allocation
 - e) Others
3. Do you have enough capital for your farming activities?
- a) Yes
 - b) No
4. Do you have access to credit facilities in your area?
- a) Yes
 - b) No
5. If yes, what is the source?
- a) Family/Friends
 - b) Governments
 - c) Banks
 - d) Others
6. What sources of machines do you use in your farm?
- a) Personal
 - b) Government
 - c) Cooperatives
 - d) Commercials
7. Do you have access to fertilizers and seedlings in your area easily?
- a) Yes
 - b) No
8. Do you have access to chemical in your area?
- a) Yes
 - b) No

Section D

Prospects of Vegetable Farming

1. Are you happy in agricultural sector?
- a) Yes
 - b) No

2. How would you describe the income you generated from the farm produce?
 - a) Very Small
 - b) Moderate
 - c) High
3. Would increase in your farm output increase your income?
 - a) Yes
 - b) No
4. If your income improves from agricultural activities, would you prefer working in another sector of the economy?
 - a) Yes
 - b) No
5. Would you prefer any of your children to engage in vegetable farming, if the conditions improved?
 - a) Yes
 - b) No