

CHAPTER-I

INTRODUCTION

1.1 Background of the Study

Agriculture is the main profession of majority of Nepalese, Who has accounted for more than 80 percent of self-employment. The economy is dominated by agriculture, so that agriculture pays major role in the economy, which contributing 40 percent of the total GDP (CBS, 2011). And it is generally accepted that the key to economic development in agriculture prospectively. Agriculture farming in Nepal is labor intensive. The economically active population lives mostly in rural, people take it as the way of life.

Agriculture is the backbone of Nepalese economy. More than 65% of the Nepalese population engages in agricultural occupation. Agriculture in general is basically rural based occupation. About 85.8% of the population in the country lives in the rural area and agriculture continues to be dominant sector in the Nepalese economy. Agriculture extends employment opportunity (full and partial) to 80 percent of the population. The development and enhancement of the productivity of this sector plays vital role in the productive employment generation and improving economic development of the country (NPC, 2010).

Agriculture is the country's major economic sector, employing about 65 per cent of the economically active population and accounting for about 40 percent of gross domestic product (GDP) in 2005. Forests and farmland together occupy half of Nepal's total land area. Cereals such as rice, maize, wheat and millet account for nearly 90 per cent of crops produced, and for 56 per cent of all agricultural production (MoF, 2008).

The poor performance of agriculture in developing countries is due to the neglecting in the priority. The agricultural production method has changed relatively slow due to the lack of technological and biological innovation, which was restricted by farmers' attitude, values and ability. Todaro flashes the condition of traditional agriculture that, out-put is produced only for family

consumption, the land and labor are principal factors, capital investment is minimal, technological limitation, rigid social institutional, fragmented markets and communication network between rural area and urban center tend to discourage higher level of production (Todaro, 2004).

Rural poverty in Nepal is mainly characterized by lack of access to resources. The poor have low productively land. This is partly as a result of lack of credit and modern inputs, in turn a result of inadequate infrastructure and weak institutions. Lacking usable roads, fanners cannot obtain modern inputs or get their Crops to market. Whatever services the government provides appear to be captured by better- off households because the poor arc not well organized to defend their interests (Devkota, 2008).

Fighting poverty is a difficult task and the task of poverty alleviation is not only accomplished by governmental organizations (NGOs) Especially, International Non- Governmental organization (INGOs), Netherlands Development Organization, Action Aid Nepal, etc, are accelerating the act of poverty reduction through different programs. Among them UNDP is one of the major contributor in the task and file local Governance Program (LGP) is one of its biggest of Nepal, covering the central, eastern, mid- western and for western regions front hill mountain and the Terai regions of Nepal. This is based on social mobilization approach. The holistic social mobilization approach espoused by south Asia Poverty Alleviation has made a critical contribution to enhancing the capacity of people in remote villages to effectively priorities in partnership with the elected local government. It is in this context the government views social mobilization as all-important compliment to decentralization. Furthermore, The National Planning Commission considers social mobilization and decentralization two key pinars to its poverty alleviation strategy (Joshi, 2006).

Throughout much of the developing world, agriculture is still in its subsistence stage. But in spite of the relative backwardness of production technologies and the misguided convictions of some foreigners who attribute the peasants'

resistance to change as a sign of incompetence or irrationality, the fact remains that given the static nature of the peasants environment, the uncertainties that surround them, the need to meet minimum survival levels of output and the rigid social institutions (OJha, 2006). "Subsistence agriculture is a highly risky and uncertain venture. It is made even more so by the fact that human lives are at stake. In regions where farms are extremely small and cultivation is dependent on the uncertainties of variable rainfall, average output will be low, and in poor years the peasant and his family will be exposed to the very real danger of starvation. Accordingly, when risk and uncertainty are high a small farmer may be very reluctant to shift from a traditional technology and crop pattern that over the years come to know and understand to a new one that promises higher yields but may entail greater risks of crop failure" (Todaro, 2004) . There are various factors affecting the transformation process of subsistence farming into commercial farming in Nepal.

Nepal Agricultural Perspective Plan has mentioned the objectives: to accelerate the growth rate in agriculture through increased factor productivity; to alleviate poverty and achieve significant improvement in the standard of living through accelerated growth and expanded employment opportunities; to transform the subsistence-based agriculture into commercial one through diversification and widespread realization of comparative advantage; to expand opportunities for an overall economic transformation by fulfilling the precondition of agricultural development; to identify immediate, short term and long term strategies for implementation, and to provide clear guidelines for preparing periodic plans and programs in the future (Pradhan, 2005).

In Nepal, Agriculture includes various aspects such as of agriculture i.e., livestock rising, cash crop farming, cereal crop farming, horticulture etc. The climatic condition of Nepal is suitable for all types of agricultural activities lying in the sub- tropical to the cool temperate sector of Nepalese agriculture where there are great possibilities for development. The favorable soil and climatic condition of Nepal permit to grow almost all kinds of vegetable

farming crops, which can contribute significantly to the economic development of the country. There are different varieties of vegetables. These vegetables can be divided as green vegetables. Off season vegetable tropical vegetables, subtropical vegetable and temperate vegetable etc. vegetable production in small scale and large scale, small vegetable production is done in kitchen garden, which helps to supply daily required quantity and nutrition requirement for an individual family, and surplus sell in local market as freely distribute to their relatives as well as neighbors. Since several years some farmer families practice commercial vegetable pockets are concentrated specific along with high way and near the town areas. Since the fifth five year plan period, Government has special categorized specific and general programs to promote and supply the fresh vegetable production. Due to specific production program were emphasized to lunch in consolidated pocket area particularly high ways in production potential areas around cities.

In Nepal context, due to available of diverse climatic region during their normal season of production and send the marketable product to other areas as off- seasonal vegetable where those vegetable cannot be grown during that period. Now a day farmers are practice. Off season. Production by creating controlled environmental condition (Shrestha, 2062).

Vegetable production is now slowly getting into commercial phase rather than other agriculture sector. Now a day, the consumers are also conscious with the nutritional value of vegetable. Farmers have considered vegetable farming as their main source of income. The cropping intensity has been increased adopting seasonal and off seasonal vegetable with modernization in agriculture system, the production practice are also being changed. Vegetables and vegetable seed production can export, which help to supply nutritional requirement and “low value high price” crop.

1.2 Statement of the Problem

Economic development is a burning issue of Nepal. The issue exists everywhere but it is crucial and debilitating in developing countries, where

more than one person in five subsists on less than US \$ 1 per day (WDR, 2000). In Nepal, 85.8% people are living in vast rural areas and facing deadly problem of poverty. Developed countries are catching more and more opportunities but in countries like ours we are trapped in the depended ring of poverty our physical and social infrastructures are destroyed day by day and the gap between the haves and have not is also widened. This has led to the frustration of the poor people. They are isolated from society by so called elites. The ability of rural people is so limited that they are not able to meet their hand to month requirement. Lack of basic health is also in frustrating condition (APROSC & JMA, 2000).

Nepal is predominated by vast rural areas only 17 percent of the people living in urban areas. So, the magnitude of poverty is much wide spread in rural areas. However, the recent government data indicates that poverty is 21% incidence in the country declined from 31% (CBS, 2011). Mainly facing the conflict, more than thousand were killed and also thousand are displaced. Rural infrastructure and government service are limited in remote areas. Over 95% of the poor people are still living in rural areas and remaining 5 percent live in urban areas. According to government data, the gap between the haves and have not is widened. As a result of unequal growth in per capita consumption across different income groups and geographic region, inequality increased substantially. The poverty rate remain and much higher in rural areas.

Agriculture holds the main key to alleviation of poverty, which is pervasive and wide spread in Nepal. It is only through the board based agricultural growth that a high and sustainable economic growth and poverty reduction can be possible in Nepal Agriculture Perspective Plan (APP) also focuses this point poverty has been major focal point in all the planned development efforts of Nepal. Two reduce poverty food security has always been a major concern of all development agents and various means and ways to ensure food security has been tried on. The current cereal based cropping pattern is on such effort on the part of the poor farmers .Which passage of time is now clearly evident to all

that this risk aversion attitude of the farmers is not going to help them in improving their standard of living. As the area on the cultivation can't be expanded, it was realized that there is a need to shift the current largely subsistence-oriented agriculture to more commercial and high value agriculture (CEAPRED, 2005).

In the context, vegetable farming is an important and productive sector in agriculture commercial vegetable farming is the effective fighting equipment for mitigating of rural poverty. Vegetable farming both main season as well as off-season offers good opportunity to improve the economic status of the rural poor farmers. It is a good source of income for the farmers to earn in a short period of time and in less investment we can improve economic condition and that leads the overall improvement of their daily livelihood so that commercial vegetable farming is source of income.

The following research questions are set for this study

1. What is situation of vegetable farming in Phakphokthum Rural Municipality Ward no.7 of Ilam district?
2. How is the trend of vegetable farming in the study area ?
3. What are the problems and prospects of vegetable farming in study area?

1.3 Objectives of the Study

The general objective of this research is to study the role of vegetable farming.

The specific objectives are as follows:

- i) To examine the trend of vegetable production in Phakphokthum Rural Municipality Ward no.7 of Ilam district
- ii) To study the role of vegetable farming in the study area,
- iii) To identify the problems of vegetable farming in the study area, and
- iv) To analyze the prospects of vegetable farming in the study area.

1.4 Significance of the Study

The vast ecological diversity in Nepal offers a unique opportunity to grow a wide range of high-value, low-volume commodities and generate high income

from limited farmlands. Commercial vegetable farming has become popular among farming in accessible areas especially in recent year. Increased agriculture production and poverty reduction have been accorded high priorities in the national agenda as stated in the Poverty Reduction Strategy Paper (PRSP) and Agriculture Perspective Plan (APP). The study intends to measure the current status of commercial vegetable farming in the study area. It will also attempt to explore the relation between poverty and commercial vegetable farming. Income generation is the most essential factor economic upliftment of the nation.

This study has great importance at national and local levels at the national level; it will be very helpful to make plan and policies for economic development. This study will also indicate some way to the future researcher also offer information to the people interested in commercial vegetable farming.

1.5 Limitations of the Study

Each and every research work has its own limitation and present study is also not freed exception. The limitation of the study is as follows.

- a) The study is limited to Phakphokthum Rural Municipality ward no. 7 only.
- b) This study focuses only on vegetable farming.
- c) The possible outcome may or may not be generalized in the case of commercial vegetable farming in other areas of Nepal, due to the different in topography available resources and knowledge of the farmers.
- d) Information is obtained from village respondents. So, the accuracy depends upon response of the villagers.

1.6 Organization of the Study

This study is divided into five chapters the first chapter is introductory which includes background of the study, statement of the problem, objectives of study, significance of study, limitations of study and organization of the study. The second chapter deals with reviews of literature. Third chapter is concerned

with methodology of the study, which included the research design, Rational of the study area .Nature and source of data, Universe and sample, data collection techniques tools and methods of data analysis and interpretation procedure. Description of study area is mentioned in the fourth chapter with data presentation and analysis which includes social economic condition of respondents, Vegetable production and related information, Contribution of commercial Vegetable farming in income generation, level of income people before and after commercial vegetable farming, and problems and prospects of commercial vegetable farming. In the last chapter summery conclusion and recommendation are included.

CHAPTER-II

LITERATURE REVIEW

Review of literature is a critical evaluation, analysis and synthesis of existing knowledge relevant to our own research problem. It is useful to develop new ideas and analytical methods in research. Through this, researcher should gain different kinds of information and experiences of others. To conduct this research some relevant literatures have been reviewed which help researcher to address research issue systematically. For this research study, following relevant studies have been reviewed

2.1 Theoretical Review

Kaini in his articles entitled "Role of ICTs to Alleviate Poverty through Agricultural Development: ICT Initiatives in Agricultural Research and Extension Systems. In: Proceedings of the Regional Workshop on Role of ICT for Poverty Alleviation through Agricultural development in SAARC Countries" has focused some of the prominent agricultural programs that the government has focused to achieve the poverty reduction goal are vegetable and fruit production programs, fishery development program, sericulture and apiculture, goat farming, pig and poultry farming, agricultural training creating self-employment opportunities, and so on. Agricultural and socio-economic development is such development that is people centered, concentrating on improving the human condition, and conservation based, maintaining the variety and productivity of the nature. In this context, new options need to be researched to broaden the non-chemical approach of farming, directed towards ongoing problems of continuous agricultural production (Kaini, 2013).

Devkota (2012) in his article entitled "Measurement of Poverty: Anthrop-economic Perspective" has focused on rural economic and its major challenge to development and principal obstacle for prosperous human life. Poverty and agriculture are interrelated to each other and the percentage of population below poverty line is estimated to be 23 and 44 in urban and rural areas,

respectively. The APP has estimated that it would reduce poverty at a rapid rate to 14% within 20 years and the plan is designed to encourage those activities that skew the income distribution towards the poor, particularly, the poor women. Some of the prominent agricultural programs that the government has focused to achieve the poverty reduction goal are vegetable and fruit production programs, fishery development program, sericulture and apiculture, goat farming, pig and poultry farming, agricultural training creating self-employment opportunities.

Sharma (2009) in his article entitled "Natural Resource Conservation and Sustainable Development" has focused in his dissertation on agriculture and rural development which are intrinsically interrelated elsewhere in the developing countries, especially true for a country like Nepal. It is claimed by the scholars that, for Nepal, agriculture is and will remain a major contributor to the sustenance, employment and development of the poor as well as the better-off sections of the population for a long time. Even in Japan, which is now a well known as an industrialized developed country, the number of people relying on agricultural sector did not reduce during a long period between 1870 and 1940. Such number did not decline even until the 1960s, although non-agric employment grew substantially by that time. In countries and areas such as Taiwan, Kenya, Thailand, Costa Rica, Columbia, and Punjab (India), it was the development of agricultural sector that chiefly led to economic growth and overall prosperity among the people (Sharma, 2009).

In his article entitled "Current Issues of Fruit Crop Protection in Nepal Strategic Perspective" has focused Agricultural and socio-economic development people are centered on improving their income condition. He studied productivity of the nature of agriculture. In this context, new options need to be explored to broaden the non-chemical approach of farming, directed towards ongoing problems of continuous agricultural production (Ghimire, 2005).

The report of World Bank highlights on poverty in Nepal is deep and complex, and only a concerted effort to improve public interventions while mobilizing

community initiative holds hope for a reduction in poverty. The report further highlights on poverty that is more widespread and deeper in more remote areas in the mid- and far- western development regions and mountain belt. Poverty in rural Nepal is too deep and too entrenched to be rapidly or widely alleviated. Still a steady, sensitive effort at combating and reducing it can bring progress in the new century (World Bank, 2005). NPC (2005) reports entitled "Interim Plan" has focused on Nepal's agriculture particularly the hill and mountain subsistence in nature and therefore, availability of food security from their own farm throughout the year is the life goal of the majority of the farmers. This is evident from the fact that the farmers themselves used the factor of 'Food Availability' from their own farm to differentiate their standard of living (NPC, 2002).

Ministry of Agriculture "Report" (2006) highlights with the sharp acceleration in agriculture, farm incomes will rise rapidly. Farmers will then have the purchasing power to boost the demand for high-value agricultural commodities-particularly milk, vegetables, and fruits- and for non agricultural goods and services from the small and medium-scale enterprises of villages and market towns. Over the course of the twenty-year Agriculture Perspective Plan, the rural poor will decline by 5.5 million and the proportion of the rural population in poverty will be only one-quarter that at present. Ecologically fragile lands will revert to forestry and an increased area will be planted to soil-conserving tree fruits and to fodder crops, including fodder trees and legumes. As nonagricultural employment then gathers momentum, it will be diffused throughout the nation's market towns, thus slowing the growth rate of Kathmandu, with salutary environmental effects. The APP states the condition not only of accelerated growth in agriculture but also of employment growth, which is the key to reducing poverty in Nepal (MoA, 1996).

Joshi (2010) in his article "Agrarian Reform and the Livelihood of Rural People in Nepal" has focused on agriculture and its role in evolution of agrarian culture in Nepal from ancient times. It has always been a major sector of

economy of the country from ancient time to date. The total area of land available for agricultural activities is estimated as 25,98,970 ha. This is second biggest type of land use after forest in the country. Gross Domestic Product (GDP) of the nation contributed by the agricultural sector is NRs 1,83,357 million in FY 2060/61. Agriculture sector was contributing 39% of GDP in 2060/61 reducing from 51.22% in 2042/43. This reduction was because of development of other non agricultural sector of production of the country. Despite that the agricultural sector has remained the central concern of policy planner in the kingdom from the beginning of planned development intervention. Government expenditure in this sector has augmented to 8599.6millions of NRs in 2000/01 from 1367.9 NRs in 1974/75. So far total area receiving irrigation facility has been increased to 1001412 ha Agricultural sector provides employment for 65.5 percent work force of the country in2001 reducing from 94.3%in 1971 and 82.44 in 1996/97 (Joshi, 2010).

2.2 Policy Review

According National Planning commission (2002), in course of various discussions held between civil society and people, has identified some major factors of poverty. "The factors included are related to problems such as distribution of lands, debilitated approach of poor in resources, fragmentation of holding and causes related to weak implementation such as incapacity to curb down the leakages and irregularities, political instability, lack of uniformity between policy and programming, ineffective plan formulation, and resource allocation and weak monitoring.' The plan further states,' There are other worth- mentioning.' Socioeconomic causes sash as low rate of economic growth, lack of technical education, unexpectedly low positive response from private; sector and social security problems.

Gautan and Shrestha on their report they focuses on policy of vegetable and fruit production and marketing in Nepal and focus of the following law such as;

1. National Agriculture Policy 2004
2. National Tea Policy 2000

3. National Coffee Policy 2003
4. National Seed Policy 2000
5. National Fertilizer Policy 2002
6. Agri-business Promotion Policy 2006
7. Agri-biodiversity policy 2007
8. Irrigation Policy 2003

Above policy give priority on poverty elevation though vegetable and fruit cultivation in Nepal. It is being accorded to the developmental commercial fruits and vegetable in the specific agro-ecological areas where transport facilities have already been developed (road corridors) or are in the process of development Promotion of high value low volume vegetable crops (e.g. vegetable seeds) is being emphasized in

The remote areas. Kitchen gardens are to be established throughout the country in order to improve the nutritional status of the majority of the people (Gautan & Shrestha, 2011).

The twenty years long term Nepal Agricultural Perspective Plan has mentioned the objectives: to accelerate the growth rate in agriculture through increased factor productivity; to alleviate poverty and achieve significant improvement in the standard of living through accelerated growth and expanded employment opportunities; to transform the subsistence-based agriculture into commercial one through diversification and widespread realization of comparative advantage; to expand opportunities for an overall economic transformation by fulfilling the precondition of agricultural development; to identify immediate, short term and long term strategies for implementation, and to provide clear guidelines for preparing periodic plans and programs in the future.

NPC (2010) highlights on the background of natural resources of Nepal, agriculture and forest resource are the main basis of Nepalese economy, which contribute to rising living standard of the people. Indication of transformation in agriculture towards commercialization and diversification has been noticed

in the areas with the transport, electricity and technology. Now it is a need transform subsistence agricultural development by reducing the pressure of increasing population and generating modern technology with existing utilization pattern and developing transport market mechanism (NPC, 2002).

Observing the APP the researcher has selected the title to analyze the factors affecting the transformation of subsistence farming into commercialization with respect to the mid hill of Nepal.

NPC (2010) focuses on the goals and target set by the Tenth plan is, to reduce the overall poverty rate through the creation of income and employment-generating activities in the key sector like agriculture, an overall GDP growth rate of 6.2 p.a. at factor cost is also envisaged, together with a substantial improvement in agricultural growth to round 4.1 percent per annum. The rural area oriented poverty reduction strategy of Tenth Plan firstly stressed on the economy with strong potential for income and employment growth, the growth strategy will need to broad based and pro-poor, and focus on rural agricultural growth. For the broad based economic growth, prioritizing and refocusing policies and activities in the agriculture, irrigation, forestry, and power (rural electrification) sector are crucial for achieving agricultural growth targets. The major objectives set for the agricultural sector are to increase agricultural production, productivity and income, both to reduce poverty of rural farmers and increase food security. The tenth plan also seeks to promote agrobiodiversity conservation and environment protection, in addition to encouraging to the adaptation of need based technology. Likewise, one of the major objectives is to promote domestic agro-products in local as well as foreign markets. The growth strategies for agriculture to modernize diversify and commercialize crops by expanding the use of technology, and increasing the access of farmers to modern agricultural inputs and credit. Similarly to promoting the participation of private sector and NGO/ INGOs in service delivery, market promotion and infrastructure development, the main activities to implement the APP, includes package programme that promote smooth

supply of fertilizer, provision of irrigation facilities, and expansion of rural agricultural roads, rural electricity and improving the market network. Policies and activities conducive to carrying out research and development will also be adopted (NPC, 2007).

Three Years Interim Plan (2007-2010)

In order to revitalize national economy, investment will be increased in physical infrastructures supporting agriculture. The agriculture is gradually transforming toward commercialization from subsistence system due to past development efforts. There has been an increase in production and consumption of cash crops. There is also coordinated mobilization of research, extension services, market, vocational development, food technology and quality control, supply of production inputs and rural infrastructure development and promotion work. There is an effective emergence of cooperative, private and community organizations and corresponding decrease in involvement of government sector in the flow of services. The production of consumer goods is increasing more than expected. At the policy level, Agricultural Policy, 2004, and National Agricultural Vocation Policy, 2006 have been promulgated for the development of agricultural sector. In the agriculture and cooperative sector, the per person food consumption was 275 kg. while the target for the first year was to increase from 264 kg. to 286 kg., vegetable production (including non seasonal) was 80 kg. while the target was to increase from 66.74 to 79.15 kg., fruit production remained 21.63 kg. while the target was to increase from 16.17 kg. to 17.89 kg., fish production was 1.87 kg. while the target was to increase from 1.5 kg. to 1.87 kg., meat production was 8.6 kg. while the target was to increase from 8.5 kg. to 9.94 kg., milk production was 51 kg. while the target was to increase from 47.05 liters to 50.85 liters. The increase has been more than expected. Similarly, there has been diversification of production technology of herbs like chiraito, allo, and keshar. In addition, there has been development of farming technology of varieties of high-value agricultural production. Similarly, efforts are underway

for diversification and modernization in the agricultural sector (<<http://www.npc.np>>).

2.3 Empirical Review

Basnet (2012) highlights in his article "Policy Issues in Urban-rural Linkage in Rural Development in Nepal: Empirical Study of two Medium Sized Towns" has focused the situation of Nepalese farmer and its market position. Many brokers are benefited by the present marketing system, it should be stopped and farmers are promoted by the decentralization of selling and collection centers. In 1952, USAID funded Tribhuvan Development was established. This was regarded as the beginning of planned agricultural extension service with "block development" approach. Rural youth program was launched and 4-H clubs were organized at village level that was mandated to carry out agricultural extension activities also. Structural adjustment i.e. establishment of testing farms and extension offices were started. Agriculture development has getting top priority in all the five-years plans. Different theoretical model have been employed as if Nepal is one of the experimental sites to verify the models whether they actually work. Nepal is established as a heavily aid receiving developing country. Thousands of foreign experts and Nepalese elites have exercised for agriculture development. Donors have supported us in Generating technologies and extending them widely in rural communities. Their interest also has been shaping our development in many ways. Different approaches and strategies were employed for manpower and technology development and for wider research and extension.

Bhattarai (2012) in his book "The Nature of Underdevelopment and Regional Structure of Nepal" has described the issues in agriculture development in terms of four law motion in agriculture as- (i) the questions of 'Prime mover' in agricultural development (Lenin seems to use the term 'carries of technical process' interchangeably for 'prime mover'); (ii) the operation of the law of socialization in agriculture; (iii) characterization of 'peasant proprietorship'; and (iv) differentiation of the peasantry. As described by him, land (the basic

material element of agricultural production) and labor (the principal source of value in all production are the basic conditions of factors of agricultural production. Besides, irrigation and modern inputs are the other factors of agricultural production. The absolute measure of level and growth of agricultural production is of crucial significance for a society dominated by use-value production.

Pokhrel (2011) in his report "Utilization of Sources of Information by the Farmers in the Adoption of Improved Agricultural Practices of Paddy Cultivation in Chitwan" has described Nepal's resource base for agriculture is severely limited by the nature of the terrain. Only 3.1 million hectares or 21% of the total land area is cultivated and there is no significant potential for expansion, Due to high population pressure, the average landholding is declining over the years. Poverty, food insecurity, social and economic inclusions are the major problems, especially in the rural areas of Nepal. The mountain agriculture is traditionally composed of elements of self-sufficiency. Nepalese hill farming includes the field crops, livestock; horticulture, forest and beekeeping cover the risk against famine and other natural disaster.

Ojha (2009) focuses on his thesis "Agriculture and Development Interrelations" has described Agriculture sector in Nepal has remained as the main basis of food security, rural employment, poverty level reduction and national income. As a landlocked underdeveloped country with basically an agro-based economy, Nepal has to choose a road that fits own sustainable situation. As a member of world Trade Organization (WTO), Nepal is to fulfill obligations and commitments required by WTO agreements latest January 1, 2007. Agriculture and rural development are intrinsically interrelated elsewhere in the developing countries, especially true for a country like Nepal. It is claimed by the scholars that, of Nepal, agriculture is and will remain a major contributor to the sustenance, employment and development of the poor as well as the better-off sections of the population developed country, the number of people relying on agriculture sector did not reduce during a long period between 1870 and 1940.

Such number did not decline even until the 1960s, although non-agric employment grew substantially by that time. In countries and areas such as Taiwan, Kenya, Thailand, Costa Rica, Columbia, and Punjab (India), it was the development of agriculture sector that chiefly led to economic growth and overall prosperity among the people.

Sharma (2009) in his book "Natural Resource Conservation and Sustainable Development" has highlighted lack of national market, lack of infrastructure, loss in distribution, small transaction, inability of delivery, lack of coordination are the key feature of Nepalese agricultural market. And difficulties of transport and collection, lack of market information, lack of storage facility, lack of institutional credit, presence of middle man, lack of grading and standardization, adulteration lack of farmer's organization are the major problem of agricultural market in Nepal. The Nepalese agricultural market is affected by import of Indian production. In order to improve Nepalese agricultural system, import of Indian yield should be checked and ensure the transportation of yield of small farmers, systematized agricultural market should be established in every district.

According to the APROSC and J.M Association report, "Nepal Agriculture Perspective Plan" the potential and existing practice of agriculture in the nation are very much heterogeneous in terms of the variation in agro ecological and physiographic characteristics. High Himalayas is feasible for cattle and sheep rearing whereas hills carry potentiality in horticulture development. Tarai is feasible for various type of grain vegetable, and cash crops. Nevertheless, the fragmented land holding and household based farmland operation practice constrained mechanization of the sector in the country. Whatever be the potential and comparative advantages in this sector, Nepalese farmers are operating their small holdings land for their subsistence purpose. Almost mixed farming practice s of vegetable, grains and fruits production combine with a small number of livestock raising are the prevalent pattern in Nepalese farm regardless of the different agro-ecological region (APP Monitoring and

Evaluation System (APROSC and J.M Association, 2008)). UNDP report "Urban Agriculture: Food, Jobs and Sustainable Cities" has highlighted Nepal is small but extremely diverse country with more than 24.8 million people at present. Agriculture in Nepal is contributing 65% employment of the economically active population. The share of agriculture in GDP is about 38%; more than 80% of the rural population depends heavily on agriculture sector for their employment and about 65% of the total income of rural households comes from agriculture. As more than 80% rural population depending on agriculture and they are mostly fall below poverty line, poverty alleviation without agricultural development is not possible in Nepal. Realizing this fact, the government of Nepal has set a principal development objective of poverty reduction through agricultural development for the Tenth Plan (2002-2007). Poverty reduction is one of the principal objectives of the 20 years Agriculture Perspective Plan (APP, 1995-2015). To achieve the objectives, APP has identified livestock, high value crops, agribusiness and forestry as its priority outputs. Commercialization of agriculture is essential for alleviating poverty in Nepal and it is realized that agriculture can only be commercialized by effective uses of information and communication technologies, giving the farmers a commercial orientation (UNDP, 2008).

Thapa (2007) in his article "Re-strengthening Horticulture Institutions in Enhancement of Horticulture Industry in Nepal" has described Agriculture development in Nepal has passed through various models of development. In each model, horticulture and livestock sector have got the priority. With a view to put agriculture into a high growth path, APP was implemented. However, it failed to relate the development activities with the institutions responsible to implement them.

Adhikari (2006) on his dissertation "Women in Commercial Vegetable Farming" has focused chemical fertilizer use in Nepalese agriculture, and he finds the traditional production in Nepal is labor intensive with small field sparsely planted with seeds of mixed genetic type. Plants grown are also under

tillage system of traditional agriculture. Even most of the big farmers of the country have not applied capital intensive technique. Now the big farmers of the Tarai area are going to use capital intensive technique also such as tractor, chemical fertilizer, improved seeds and plant protection materials etc. In modernization agricultural animals' power and machinery are substituted for human labor than mechanical power replaced animal power. The increased use of agricultural inputs also modernized also substitute both land and labor.

According to the MoA (1996) in its report has described Agricultural economics of rural Asia has always been centered on small farms that include maintenance and use of livestock. In this sense, almost all farmers in Asia are mixed farms. In Nepal, particularly in the mountain and hill areas, reliance on livestock had traditionally been even higher. Livestock has provided a sort of famine insurance and has been important form of asset accumulation for the poor. Nepalese agricultural market is traditional. The organizations which are working on agricultural market are also being neutral. Some participatory organization (like Shajha) are busy for selling salt, sugar, seeds, manure etc. rather than to promote the farmers saving. Some organizations are buying milk, sugarcane, jute, tobacco, tea, coffee etc. But here is the lack of organized market for crops production, so that the farmers are deprived of getting fixed price. The production and productivity is less because of less output in agriculture. Actually Nepalese agriculture market can be found in different forms like daily, weekly, monthly, or in hatbazar. But now a day's market is being enlarged in some of the cities. People are running some systematize vegetables and fruits collection center to promote the agricultural market smoothly.

Devkota (2004) on his article "Agriculture and Sustainable Development: Conceptual Approach" has focused Agriculture sector in Nepal has remained as the main basis of food security, rural employment, poverty level reduction and national income . As a landlocked underdeveloped country with basically an agro-based economy, Nepal has to choose a road that fits own sustainable

situation. As a member of World Trade Organization (WTO), Nepal is to fulfill obligations and commitments required by WTO/SPS agreements latest by January 1, 2007. Nepal's economy is vulnerable with rugged topography and limited croplands. Of total 147000 Sq. km, land area limits to 17.0 percent, which is not all time suitable for cultivation of food and cash crops throughout the kingdom, except in the Tarai. Mid hill is especially appropriate only for tropical products.

NARC (1996), report highlight on Accessing of various parameters of the commercial vegetable farming is quite useful for sustainable production. It helps point out the slacks and to take corrective measure.

The formal labor hiring practices in Nepal are quite limited, small holding and subsistence farming are characteristics of family based agricultural activities. The unequal distribution of land in the tarai has probably led to move labor to force work wage. There in the hills, where there is less disparity in land holding less than 2 percent of work force are wage works. Labor exchange on to one labor exchanges between farm house hold is a Common practice in the hills too supplements the farm labor. Wage payments don't occur in this system of labor contact. Mutual relationships within the community are the basis for labor exchange. In ensure the timely supply of the labor at the peak labor requirement. These types of mutual labor arrangement system are named as 'parma' whereas casual labor arrangement is none know as 'Jyala'. Vegetable production is more management required crop then cereals. The labor management system of different landowner is viewed as important factors of this study.

Hossain (1997) on his book "Role of ICTs to Alleviate Poverty through Agricultural Development: ICT Initiatives in Agricultural Research and Extension Systems. In: Proceedings of the Regional Workshop on Role of ICT for Poverty Alleviation through Agricultural Development in SAARC Countries" has described the characteristics of the developed commercial farming (a) High degree of specialization, full market orientation ,(b) Capital

intensive, developed land resources, (c) facilities for machinery keeping, maintenance and storage,(d) low labor inputs, (e) high technology, high input level, qualities seeds, (f) Sophisticated management, proper timing of activities, few constraints due tradition or taboos, (g) High output per area per labor high a and quick returns to cash outlays, (h) High quality and uniform outputs, (i) Industrial type of collecting, transport and processing, well developed marketing channel, (j) Efficient agri-business network, (k) well developed credit and banking facilities, (l) existence of extension advisory service, farmers organization associations (m) well developed research back up and training facilities, developed early warning system (weather, diseases outbreak), (n) Efficient communication net work, easy access to market information, good roads and developed transport net work, (o) Relatively easy access to input and their fast delivery, (p) Protected prices subsidies, tax reduction facilities for investment,(q) Access to water, electricity, sanitary facilities and (r) access to medical care, education facilities.

According to the article Kurita (1978) Nepal is predominantly agricultural country there are many literatures available regarding the agriculture production, cultural practices, marketing, different sector of agriculture and policy in national level. In Nepal, systematic research and development started only after the establishment of government horticulture farms in sixties. In 1972, the vegetable development division in the National Agriculture Research Council (NARC) was established to coordinate research, seed production and development of vegetable crops. In 1987, NARC was given the mandate for all agricultural research including vegetable crops (AVRDC, 1992). Kurita has done the illustrate work in the field. This is the result of his long staying visits to different ecological belts of Nepal. In the study, starting from the general survey of Nepalese agriculture, he has also explained some of the socio-economic condition, vegetable farming techniques, marketing aspects and consumption of vegetable production in country and also studied about the possibility of introducing some suitable Japanese vegetable in different ecological belts of Nepal. Agriculture development policy of GoN is based on

the agriculture perspective plan (APP). APP has identified Agriculture as a lead sector for poverty alleviation and for increasing as a backward linkage. To promote vegetable production, the ninth five- year plan has the commercial vegetable production will be launched in pocket areas with consideration to economic of scale in production of market oriented vegetable in the pocket areas in and around the North South Highways. The program includes formation of horticulture trade promotion and linking with wholesale market centers.

Pyakuryal (1997), in his dissertation "Utilization of Sources of Information by the Farmers in the Adoption of Improved Agricultural Practices of Paddy Cultivation in Chitwan" has highlighted Traditional agriculture in Nepal essentially a cultural characterization where traditional cultivation practices are being practiced from generation to generation and have been prevalent and customary usage. Since the beginning of the ancient history agriculture alone is considered as productive one, for it yields so they believed the subsistence its works, the earning of its entrepreneur and surplus, while industry and trade would be sterilize. Nepalese agriculture are natured with traditional because of low capital, unskilled labor and lack of incentives towards environment on agriculture related works. Despite the unchanged of traditional agriculture there is necessities towards modernization if the country spends more of its resource on productive new plants and then proceeds spending more on education. To divert agricultural modernization there is equally need to developed new productive plants and trained manpower as well. Beside there are so many conditional factors that has to adopted for the modernization. These factors are physical; as well as institutional infrastructure expansion of agriculture, the use of science and technologies, extension program as well as experimental research policy should be laid down in the number of village's farms. Relevant research findings and its implementations program should be carried out towards he specified area. In general integration is higher in mid hills than in the Tarai. Hill and Tarai crops, livestock, trees pasture farming households and market are integral component of farming system. Nepalese farming system is

enormous and diverse, different farming systems are followed by different ethnic groups. Family and non family labor are the major source of human labor in both hills and Terai. Bullocks are important in both Terai and hills, but are still important in the hills because modern machinery can't be used in hills. Small farmers live in various intensities of marginal and fragile environment and follow traditional farming system (i.e. subsistence farming system). According to Pyakural, in Nepal there are four types of farming system in practice. They are crop dominated farming system, horticulture dominated farming system, and livestock dominated farming system and integrated farming system. Nepalese farming system are small farm based, and are highly intensified, diversified and complex. In recent years non-traditional crops such as flowers, fruits and vegetable have been included into diversified agricultural programs to enhance the earning of foreign exchange.

The above reviewed literatures show that government investment in agricultural sector is high but it gives low output. In this study it analyzes the situation of vegetable farming in Ilam district where more than 80% people are involved in farming. Vegetable is one of the cash crops of Nepal. From vegetable farming farmers enhance their economic situation. This study also analyzes problems and prospects of vegetable in the study area and provides suggestions for the improvement of the situation. Periodic plan began in Nepal Since 2013 and government highlights on agriculture sectors including vegetable farming though but no attempt has been done so far in Phakphokthum Rural Municipality Ward no.7 and the focus of the study justifies the present works.

In Nepal, different researchers related to agriculture crops such as paddy, maize, wheat, etc. have done personally and instructionally have done but in this study area nobody has done till now. For the further study related to agriculture product this study helps who are interested about it.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology is an important component of the study. It involves decision about the research design, sources of data information, sampling design if primary data is to be collected and survey tools for data collection.

3.1 Rational of the Selection of Study Area

The present study was carried out in Phakphokthum Rural Municipality Ward no.7 of Ilam district, which is located in the Eastern Part of province 1 of Nepal. The economic status of this district is normal. Agriculture is the main occupation of this area. The study area was selected for this study because it is accessible for the researcher and such kind of research has not been done in this area before.

3.2 Research Design

Research design followed in the study is exploratory and descriptive. This study is a socio-economic study and the objectives of the study have been fulfilled by using exploratory and descriptive research design.

3.3 Sources of Data

The study is based on both primary and secondary sources of data. Secondary data have been used to present the background of the study and supplement and complement the findings of the study.

a) Primary Data

Primary data were collected by using structured questionnaire, interview and observation from the selected household.

b) Secondary Data

Secondary data were collected from various sources such as books, journals, previous theses on the subject and government publications.

3.4 Sample Size

Phakphokthum Rural Municipality Ward no.7 of Ilam district was selected for the study where there were 450 households consisting of 3000 population. 100 households have been commercially engaged on vegetable farming, which was considered as the population of study. Among them 30 households were selected, as sample, by using simple sampling method. From each household one respondent was selected. The entire respondents were participated in cooperative. Personal interview has been taken from the selected household. From each household one respondent was selected for interview.

3.5 Methods of Data Collection

Structured questionnaire, FGD, key informant interview and observation were used for collecting data from the selected households. The field survey was conducted after the proposal was passed.

3.5.1 Household Survey

The household survey has been conducted using structured questionnaire in order to collect qualitative and quantitative facts about socio-economic status of people living in the study, poverty situation and the role of agriculture in upliftment of economic condition.

3.5.2 Observation

Certain information has been collected observation method. Researcher observe agriculture activities such as farming, selling goods, house pattern etc and guess the situation of economic status. Observation also helps to check the information provided in the interview.

3.5.3 Key Informant Interview

Key informant interview is also used using checklist. The key informants of this study were local leader, cooperative manager, ward secretary.

3.5.4 Focus Group Discussion (FGD)

An FGD was conducted in the study area with key informants to collect the information required for the study.

3.6 Methods of Data Analysis

The study follows proper method of data analysis according to the nature of data and information. Collected data and information were presented and analyzed by using simple mathematical and statistical tools such as table, graph and percentage.

CHAPTER IV

ANALYSIS AND PRESENTATION OF DATA

4.1 Description of the Study Area

The study area is located in the western part of Ilam district.

Introduction of Ilam District

Ilam attracts many researchers who come to study rare birds and the Red Panda. Ilam stretches from the Terai belt to the upper hilly belt of this Himalayan nation.

The name Ilam is derived from the Limbu language in which "Ii" means twisted and "Lam" means road. Illam was one of the ten self ruling states of Limbuwan before the reunification of Nepal. Its ruler King Hangshu Phuba Lingdom of Lingdom dynasty ruled Illam as a confederate state of Limbuwan until 1813 AD. The treaty between the other Limbuwan states and the King of Gorkha (Gorkha-Limbuwan Treaty of 1774 AD) and the conflict of Gorkha and Sikkim led to the unification of Illam with Gorkha. Ilam was the last of the ten kingdoms of Limbuwan to be reunified into Nepal. The King of Gorkha gave the ruler of Illam full autonomy to rule and the right of Kipat. Illam was an independent Limbu kingdom until 1813/1869 BS.

Ilam is today one of the most developed places in Nepal. Its ILAM TEA is very famous and is exported to many parts of Europe. The main source of income in this district is tea, cardamom, milk, ginger, potato, orlon, and broom production on a large scale.

This place also has a religious importance. The devi temples have a great importance attached to them and many people come here just for pilgrimage.

The major attraction of Ilam is the 9-cornered Mai Pokharilake. Also known as the abode of the goddess lots of tourists as well as Nepalese people come to visit this place. Similarly, Gajurmukhi is also the religious spot for pilgrimages from Nepal and India. Mai river and its four tributaries also emerge in Ilam

district. The famous Mane Bhanjyang (Mane pass) connects Ilam with Darjeeling district of West Bengal, India. Antu Pond, reflecting the color of its surroundings.

Ilam district is located in Eastern part of province 1 of Nepal. It is well known as "Hill Queen" of Nepal. It is a naturally gifted district. Different hills, forests and rivers add the natural beauty of Ilam. Ilam is one of the most important touristic destination of Nepal. Gajurmukhi, Maipokhari, Sandakpur, Shree Antu, Mini Pathibhara, Mansebung and different tea gardens are the main places for tourists. Ilam district is not only famous for its natural beauty but also for its agricultural products. Tea, potato, zinger, cardamom, Aakabare Khursani, milk and milk products are the main agricultural products of this district. These productions are sold in different parts of our country and to the different parts of India like Darjeeling, Sikkim, Bihar as well. So Ilam is a highly potential district for both tourism and agriculture. Having such potentiality, Ilam has not developed up to the required level in both tourism and agricultural fields.

The Damak-Rabi Phagunanda Highway connects the municipality through shortest way with the southern plains. The span of the highway is about 45 km. The highway usually obstructs during the rainy season.

The major occupation of the people in this municipality is Agriculture. Nowadays many of the youths are in foreign employment, due to which there is scarcity of labor force.

Ilam is one of the most potential districts for different kinds of agri-business and tourism. Recently, many young entrepreneurs are highly motivated to get involved in vegetable farming. like; goat farming, cow farming, chicken farm, fish farm, pig farm etc...out of these livestock, goat farming is one of the oldest business in Phakphokthum Rural Municipality Ward No.7 of Ilam district. Even the history of big goat farm in Ilam district is not so long, people used to cultivate vegetable for the purpose of personal use or bussinessial point of view since many years. We can see the direct impact of such farming in their

economic activities. So that, there are many people who are running their families with the help of money which they used to get from such farming.

The main crops cultivated in Ilam are rice, maize, wheat, millet, and potatoes. Livestock constitutes an integral part of the agriculture system and the majority of farming households keep cattle, goats, and buffalo.

It is analyzed the collected data regarding the objectives. Vegetable is one of the important cash crops and it plays vital role for the enhancement of economic status of the people living in rural area . For that it analyzes the socio economic characteristics of the respondents, the issue of poverty and its causes and strategy for poverty alleviation of people living in the study area.

4.2 Socio-economic Characteristics of the Respondents (Vegetable Farmers)

In this sub chapter it analyzes the socio economic characteristics of the respondents such as caste composition, education status, sex, age etc. One respondent from each sampled household has been selected.

4.2.1 Caste-wise Composition of the Respondents

Caste composition is one of the important social characteristics of the respondents because it plays vital role on commercial vegetable farming in the study area. The following table shows the caste composition of the respondents.

Table No: 4.1

Caste-wise Composition of the Respondents

Castes	No of Households	Percentage
Limbu	12	40
Rai	7	23.33
Chhetri	5	16.67
Magar	3	10

Dalit	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.1 shows caste-wise compositions of the respondents. Data shows that 40% are Limbu. In this way, 23.33% are Rai, 16.67% respondents are Chhetri, 10% are Magar and 10% are Dalit. Among them caste and ethnicity Limbu are highest than other caste and Magar and Dalit are less participation in the vegetable farming.

4.2.2 Sex-wise Classification of Respondents

Sex is one of the social characteristics of the respondents because it determines gender based involvement of the respondents. The following table highlights the sex composition of the respondents.

Table: 4.2

Sex-wise Classification of Respondents

Sex	Number	Percentage
Male	12	40
Female	18	60
Total	30	100

Source: Field Survey, 2018

The table 4.2 shows sex composition of the respondents. Data shows 40% of the respondents are male and 60% are female respondents in this study. Majority of the respondents are female in this study.

4.2.3 Age-wise Classification of Respondents

Age plays vital role on different activities of the respondents. It is one of the main characteristics of the respondents. The following table shows the age composition of the respondents.

Table: 4.3
Age-wise Classification of Respondents

Age Group	Number	Percentage
15-25	2	6.67
25-35	6	20
35-45	9	30
45-55	6	20
55-65	6	20
Above 65	1	3.33
Total	30	100

Source: Field Survey, 2018

Table 4.3 shows that the age composition of the respondents. Data shows that the age above 65 people involvement 3.33% and the age of 35-45 people are active. It means maximum active people is the age of 35-45 and minimum active people is the age of above 65.

4.2.4 Marital Status-wise Composition of Respondents

Marital status of the respondents play important role on business. It is one of the important social characteristics. The following table shows the marital status of the respondents.

Table 4.4
Marital status of Respondents

Marital status	Number	Percentage
Married	20	66.67
Unmarried	10	33.33
total	30	100

Source: Field Survey, 2018

Table 4.4 indicates the marital situation of the respondents. It shows that 66.67% are married and 33.33% are unmarried. This means large number of people who are involved in vegetable farming are married.

4.2.5 Educational Status of Respondents

Education status of the respondents determined the occupational activities of the respondents. The following table shows the educational status of the respondents.

Table 4.5
Educational Status of Respondents

Education	Number	Percentage
Below Primary	3	10
Primary	12	40
Lower secondary	6	20
Secondary	6	20
Higher	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.5 shows the educational status of the respondents. Data shows that 10% respondents are below primary; similarly 40% passed primary. In the same way, 20% passed lower secondary level and 20% are passed secondary levels and remaining 10% passed higher secondary level. Among them primary level passed respondents are higher than other level.

4.2.6 Occupational Classification of Respondents

Occupation is one of the important economic characteristics of the respondents. In this study it analyzes the situation of vegetable farmer in study area. Following table shows the educational composition of the respondents.

Table: 4.6

Occupational Classification of Respondents Occupation

Occupation	Number	Percentage
Agriculture	18	60
Service	6	20
Business	3	10
Other	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.6 shows the occupation of the respondents. Data shows that 60% of the respondents are involve in agriculture and 20% are made service sector as occupation, In the same way 10% involve in business and 10% are involve in other occupation like labor and work both near area and abroad.

4.2.7 Family Size Classification of Respondents

Family size is one of the important markers of occupation because big family size is fall into the crisis of unemployment. The following table shows the family size of the respondents.

Table: 4.7

Family Size Classification of Respondents Family size

Family size	Number	Percentage
0-5	20	66.67
5-10	9	30
10 Above	1	3.33
Total	30	100

Source: Field Survey, 2018

Table 4.7 explains family size of the respondents. Data show the 66.67% respondents have 0-5 to family members; similarly 30% respondents have 5 to 10 family members, and 3.33% have above 10 family members. High respondents have 0 to 5 numbers of family members.

4.2.8 Size of Landholding

Land is important for vegetable farmers. If someone have more land he/she can grow more vegetable than the people who have less land. The following table shows the land holding size of the respondents.

Table: 4.8

Size of Landholding

Landholding Size (Ropani)	Number	Percentage
0-10	2	6.67
10-20	8	26.67
20-30	10	33.33
30 Above	10	33.33
Total	30	100

Source: Field Survey, 2018

Table 4.8 shows the respondents by land holding size, data show that 6.67% have 0 to 10 Ropani land and 26.67% have 10 to 20 Ropani. In the same way, 33.33% have 20 to 30 Ropani land, and 33.33% have more than 30 Ropani. It shows that most of the respondents have 20 Ropani land.

4.2.9 Status of Vegetables Farming

Most of the people living in study area are involve in vegetable farming because the area is pocket area of vegetable farming. The following table indicates the situation of vegetable farming of the respondents.

Table: 4.9
Vegetable Cultivated by Respondents

Vegetable Cultivated by Respondents	Number	Percentage
Having Cultivated	30	100
Not having cultivated	0	0
Total	30	100

Source: Field Survey, 2018

Table 4.9 shows the status of vegetable farming in study area. In study area all the farmers are involved in vegetable farming. It is due to developed of different infrastructures as road, irrigation facility, vegetable collection center (house) from NGOs, INGOs, government office, developed market size, provided new knowledge and technology and creditor facilities by various providers and donors.

4.2.10 Types of Vegetable Cultivated by Respondents

In the study area farmers cultivated various types of vegetables such as Zinger, Cauli, Garlic, Potato and other. Ilam, in particular Phakphokthum Rural Municipality ward no. 6 is famous for zinger although farmer cultivated potatoes and other types of vegetables. The following table shows types of vegetable farming in the study area.

Table: 4.10
Types of Vegetable Cultivated by Respondents

Types	Number of household	Percentage
Zinger	20	33.33
Garlic	7	11.67
Cauli	8	13.33
Tomato	10	16.67
Potato	15	25.00

Source: Field Survey, 2018

Table 4.10 shows the types of vegetable cultivated by respondents in the study area. Most of the respondents living in this area cultivate 33.33% zinger and 25% potato. So the area is famous for potatoes and zinger farming. In the same way 25.92% cauli, 14.81% tomato and 11.11% garlic. One household cultivate more than one vegetable.

4.2.11 Period of Commercial Vegetable Farming

Main occupation of the people living in study area is agriculture. In Phakphokthum Rural Municipality Ward no.7 people began vegetable farming since long time though in this study it has questioned to the respondents about commercial vegetable farming.

Table no. 4.11

Period of Commercial Vegetable Farming by Respondents

Time of commercial vegetable farming by respondents	Number	Percentage
2 years ago	10	33.33
3 years ago	15	50
More than 5 years ago	5	16.67
Total	30	100

Source: Field Survey, 2018

Table 4.11 shows the time of farmers began vegetable farming in the study area. Data shows that 33.33% began two years ago and 50% started before 3 years. 16.67% started vegetable farming five years ago.

4.2.12 Credit Facility

Most of the respondents of study area have taken loan for vegetable farming. They use loan to purchase seed of vegetable and other necessary chemical fertilizer and other things. The table 4.12 shows the loan taking trends of respondents

Table: 4.12
Respondents by Credit Facility

Sources of lone	Number	Percentage
Local money lender	14	46.67
Finance & cooperative	3	10
Bank	7	23.33
Relative	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.12 shows the respondents by sources of loan. Out of the 30 respondents 46.67% are taking loan from local money lender, 10% are taking loan from finance and cooperative. Likewise 23.33% are taking from bank and only 20% respondents are taking loan from their relatives. Most of the respondents are taking loan from local money lender and least of respondents are taking loan from Finance & cooperative.

4.3 Contribution of Vegetable Farming in Income Generation

Nepalese economy is based on agriculture. 38% GDP is occupied by agriculture (CBS, 2011). Among them vegetables covers 12% GDP including cash crops. People can easily sell their production in Ilam Bazar. By selling the green vegetable people living in study area enhance their economic situation. Vegetable become the main source of income of the study area which describes detail as follows;

4.3.1 Respondents by Annual Income

Annual income is one of the important indicators of economic upliftment. The table 4.13 shows the annual income of the respondents.

Table: 4.13
Respondents by Annual Income

Annual income in (000)	Number	Percentage
Less than 25	4	13.33
25-50	7	23.33
50-75	10	33.33
75-100	5	16.68
More than 100	4	13.33
Total	30	100

Source: Field Survey, 2018

Table 4.13 explains the annual income of the respondents. Data shows that 13.33% earn less than 25 thousand and 23.33% earn more than 25-50 thousands. In the same way, 33.33 earn 50 to 75 thousand. In the same way, 16.68% earn 75-100 thousands. 13.33% earn more than one Lakha.

4.3.2 Annual Income from Vegetable Farming

Vegetable farming is one of the important sources of income. The table 4.14 shows the annual income by getting respondents from vegetable.

Table: 4.14
Respondents by Annual Income from Vegetable

Annual Income from Vegetable(000)	Number	Percentage
Less than 5	3	10
5-10	6	20
10-15	10	33.33
15-20	5	16.67
More than 20	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.14 indicates the annual income of respondents by vegetable. Data shows that 10% earn less than 25 thousands and 20% earn 25 to 50 thousands. In the same way, 33.33% earn 50 to 75 thousand and 20% earn 75 to 100 thousand. Only 20% earn more than one lakha . It shows the income is very low.

4.3.3 Annual Expenditure of Respondents in different Sectors Earning by Vegetable Selling

Respondents fulfill various necessary by selling vegetable. The table 4.15 shows the situation of respondents' earning from vegetable.

Table: 4.15
Respondents' Expenditure on Health

Expenditure in health	Number	Percentage
2000-4000	6	20
4000-6000	3	10
6000-8000	9	30
8000-10000	6	20
More than 10000	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.15 shows the annual expenditure of the respondents in health. Data shows that 20% spend in health 2 to 4 thousands and 10% spend 4 to 6 thousands. In the same way, 30% spend 6 to 8 thousands and 20% spend 8 to 10 thousands and more than 10 thousands

4.3.3.2 Respondents' Expenditure on Consumers Goods

Respondents spend their income in various consumer goods. The table 4.16 shows the situation of respondents' expenditure.

Table: 4.16
Respondents' Expenditure on Consumers Goods

Expenditure in Consumers Goods	Number of Respondents	Percentage
1000-2000	12	40
2000-3000	6	20
3000-4000	3	10
4000-5000	6	20
More than 5000	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.16 presents the respondents expenditure in consumer's goods. Data shows that 40% spend 5 to 10 thousand and 20% spend 10 to 15 thousands. In the same way 20% spend 20 to 25 thousands and 10% spend more than 25 thousands.

4.3.3.3 Respondents' Expenditure on Education

Education is one of the main sources of expenditure. Most of the respondents spend in education. The table4.17 shows the situation of expenditure that spends by respondents.

Table: 4.17
Respondents' Expenditure on Education

Expenditure in Education	Number	Percentage
5000-10000	12	40
10000-15000	6	20
15000-20000	3	10
20000-25000	6	20

More than 25000	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.17 shows that 40% spend 5 to 10 thousand and 20% spend 10 to 20 thousand. In the same way, same 10% spend 15 to 20 thousand and 20% spend 20 to 25 thousands. Only 10% spend more than 25 thousands.

4.3.3.4 Respondents' Expenditure on Staple Food

In the study area people use to purchase food for some times. So, they also spend on food. The table 4.18 shows the situation expenditure that respondents have done in food.

Table: 4.18
Respondents' Expenditure on Staple Food

expenditure in staple food (Rs.)	Number	Percentage
5000-10000	6	20
10000-15000	3	10
15000-20000	3	10
20000-25000	12	40
More than 25000	6	20
Total	30	100

Source: Field Survey, 2018

The table 4.18 shows that 20% spend 5 to 10 thousand and 10% spend 10 to 15 thousand. In the same way, 10% spend 15 to 20 thousand. Similarly 40% spend 20 to 25 thousands and 20% spend more than 25 thousand.

4.3.3.5 Respondents' Expenditure on Fuel

Some of income earned by respondents spends in fuel also. The table 4.19 shows the situation of respondents by spending in fuel such as petrol, Deisel, Kerosene.

Table: 4.19
Respondents' Expenditure on Fuel

Expenditure in fuel	Number	Percentage
1000-2000	12	40
2000-3000	9	30
3000-4000	3	10
4000-5000	3	10
More than 5000	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.19 shows the respondents expenditure in fuel. Data shows that 40% spend 1 to 2 thousand and 30% spend 2 to 3 thousand. In the same way, 10% spend 3 to 4 thousand and 10% spend 4 to 5 thousand. Only 10% spend more than 5 thousand.

4.3.3.6 Other Title of Expenditure

Except major titles, respondents also spend on other titles that are mentions as below.

Table: 4.20
Other Title of Expenditure

Title	Number	Percentage
Social activities	6	20
Housing repairs & improvement	6	20
Productive investment	9	30
Repay of loan	9	30
Total	30	100

Source: Field Survey, 2018

Table presents the other expenditure of the respondents. Data shows that 20% spend in social activities and 20% spend in house repairs and improvement. In the same way, 30% spend productive investment and 30% use loan repay.

4.3.4 Respondents' Knowledge and Skill

Farmers have traditional skill of farming though it needs training for vegetable production. The table 4.21 shows the situation of having training.

Table: 4.21
Respondents' Knowledge and Skill

Having Knowledge and Skill	Number	Percentage
Government office	6	20
Private Sectors	3	10
Own experience	15	50
Other	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.21 shows the respondents by having training. Data shows that 20% get training support by Nepal government 10% get private sector, 50% are get knowledge their own experiences and another 20% are get training other sector.

4.4 Trend of Vegetable Production in Phakphokthum Rural Municipality Ward No.7

Before few years, commercial vegetable farming started in the study area. Before establish collection centre the area is famous potato. People cultivate potato is famous last two decade before. Now 70% people of the village involved in commercial vegetable farming in the study area. The table shows the situation of commercial vegetable farming in the study area.

4.4.1 Respondents' by Quantity of Vegetable Production

Respondents of the study area farmers produced various types of vegetable in different time period such as potato, cauli, tomato, ginzer and garlic. The table 4.22 shows the quantity of vegetable production follow by respondents.

Table: 4.22
Respondents' by Quantity of Vegetable Production

Ye ars	Types of vegetable production														
	Zinger			Potato			Cauli			Tomato			Garlic		
	Area in Ropa ni	Product ion in Kg	%	Area in Ropa ni	Product ion in Kg	%	Area in Ropa ni	Product ion in Kg	%	Area in Ropa ni	Product ion in Kg	%	Area in Ropa ni	Product ion in Kg	%
2017	250	42000	14.89	25	2000	13.79	20	2500	17.01	15	2500	12.5	7	500	21.7
2018	200	56000	19.87	32	2500	17.24	25	2700	18.36	30	4000	20	10	700	30.44
Total	1145	282000	100	178	14500	100	150	14700	100	130	20000	100	35	2300	100

Source: Field Survey, 2018

Table 4.22 shows the quantity of vegetable production in different time period in the study area. Data indicate 282000 kg zinger in 1145 ropani, 14500 kg potato in 178 ropani, 14700 kg cauli in 150 ropani, 20000 kg tomato in 130 ropani and 2300 kg Garlic in 35 ropani produced during 2013 to 2018 respectively. According to data the quantity of vegetable production is fluctuated due to change in weather environment, change in labor supply etc.

4.4.2 Source of Labor Supply for Vegetable Cultivation

In the study area farmers received labor supply from various sources as hired labor, exchange labor, family member. The table 4.23 shows the various source of labor supply.

Table: 4.23

Source of Labor Supply for Vegetable Cultivation

Sources	Number	Percentage
Family members	15	50
Hired labor	5	16.67
Exchange labor	10	33.33
Total	30	100

Source: Field Survey, 2018

Table 4.23 shows the sources of labor supply in vegetable farming. Data shows that 50% use family members as labour and 16.67% hired from market. In the same way, 33.33% provide labor by exchange

4.4.3 Season-wise Vegetable Farming

Respondents' of the study area have been grown vegetable in different season. The table 4.24 shows the season of vegetable farming follow by respondents.

Table: 4.24

Season-wise Vegetable Farming

Season	Number	Percentage
Normal season	18	60
Off season	9	30
Green house	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.24 shows the vegetable farming season of respondents. Data shows that 60 % grow in normal season and 30% grow in off season. Only 10% grow by using greenhouse. It shows that most of the farmer grow vegetable during normal season.

4.4.4 Status of the Vegetable Farming in Study Area

Phakphokthum is famous for vegetable farming, people usually involved in vegetable farming. The table 4.25 shows the ongoing trend of vegetable farming in the study area.

Table: 4.25
Status of the Vegetable Farming in Study Area

Situation	Number	Percentage
Increasing	18	60
Decreasing	6	20
Constant	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.25 shows the situation of vegetable farming in the study area. Data shows that 60% give increasing and 20% give answer 'decreasing'. Also 20% give answer constant. it shows that it is in increasing trend.

4.4.5 Availability of Irrigational

Irrigation is important for vegetable farming. The table 4.26 shows the situation of getting irrigation facilities by respondents.

Table: 4.26
Availability of Irrigational

Respondents by Getting Irrigation Facility	Number	Percentage
Having irrigational facility	18	60
Not having irrigation facility	12	40
Total	30	100

Source: Field Survey, 2018

Table 4.26 shows that 60% get irrigational facility and 40% do not get irrigation facility.

4.4.6 Agent of Providing Support to Respondents

In study area various INGOs and NGOs are working for various activities related to income generating work including farming. The table 4.27 indicates the support providing situation.

Table: 4.27

Agent Providing Support to Respondents

Agent of providing support to identify and supply improved input such as seeds, fertilizers, pesticide and other	Number	Percentage
Government sector	12	40
NGO/INGO	3	10
Private sector	6	20
Relatives /friends	9	30
Total	30	100

Source: Field Survey, 2018

Table 4.27 shows the agent of providing support to respondents. Data shows that 20% from government sector and 40% from NGO sectors. In the same way 10% from private sector and 30% from relatives and friend. NGO sector support is high in commercial vegetable farming.

4.4.7 Center of Selling Vegetables

Selling is one of the important factors of vegetable farming. Without proper selling system it is impossible for earning. The table 4.28 shows the selling of vegetable in study area.

Table: 4.28

Center of Selling Vegetables

Place by selling vegetable	Number	Percentage
At own farm	3	10
Local market	18	60
Vegetable collection center	6	20
Other	3	10
Total	30	100

Source: Field Survey, 2018

Table 4.28 shows the place where respondents sell the vegetable. Data show that 10% sell from farm and 60% sell from local market. In the same way 20% sell from vegetable collection centre and 10% sell in other places.

4.5 Problems and prospects of vegetable farming in the study area

In this section it analyzes problems and prospects of vegetable farming in study area.

4.5.1 Problems being faced by Vegetable Farmers

There are various problems that respondents faced in day to day life while cultivating vegetable. The table 4.29 shows the respondents opinion about ongoing problems.

Table: 4.29

Problems being Faced by Vegetable Farmers

Faced problem regarding vegetable farming	Number	Percentage
Number of faced problem regarding vegetable	24	80
Number of non-faced problem regarding vegetable	6	20
Total	30	100

Source: Field Survey, 2018

Table 4.29 shows having problems of respondents regarding vegetable farming. Data shows that 80% have faced problem and 20% have not problem. It shows that majority have problems.

4.5.1.1 Type of Problems Regarding Vegetable Farming

There are various problems faced by farmers while they involve in vegetable farming. The table 4.30 shows the problems faced by farmers while cultivating vegetable.

Table: 4.30

Type of Problems Regarding Vegetable Farming

Problem	Number	Percentage
Irrigation	12	40
Capital/financial	9	30
Technology	15	50
Marketing/price	18	60
Transportation	18	60
Other	6	20

Source: Field Survey, 2018

Table 4.30 shows the problems faced by farming regarding vegetable farming. Data shows that 40% faced irrigation and 30% faced capital. In the same way, 50% faced technology and 60% faced problem of getting reliable price and 60% faced the problem of transportation. Similarly, 20% faced other problem like disease.

4.5.2 Other Problems

There are various problems in farming in study area which are as follows.

1. There is no plain land in the study area so it is impossible to use tractor so production cost is high

2. There is lack of irrigation because most of the land is dry and steep. only rainy season it is possible to cultivate commercial vegetable
3. There is problem of fertilizer and other pesticide because without using it is impossible for commercial vegetable farming.
4. Labor cost is high so production cost is also high so it is difficult to refund cost.
5. Sometimes the price of vegetable is very low because in Terai farm production cost is low. At that time most of the farmers go in loss.

4.5.3 Prospects of Vegetable Farming in the Study Area

Above analysis shows there is great opportunity of vegetable farming in the study area. Some of the prospects are mention as follows;

1. Market

Mangalbare Bazar, Ranke Bazar and Ilam Bazar are near to the study area and there are facilities road so, market and transportation is easy.

2. Facilities of collection center

There are collection center is village such as potato, zinger, onion, garlic collection center so there is not problem of collection center.

3. Supporter in vegetable farming

Government and non-government sectors support in vegetable farming in the study area such as District Agriculture Development Office, different co-operatives, NGOs/INGOs.

4. Prospect of vegetable farming

People show interest in vegetable farming because of new method and technology. It became the main income source and alleviates poverty from the village.

CHAPTER V

SUMMARY, FINDINGS AND CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The general objective of the study is to examine and analyze the role of commercial vegetable farming for economic enhancement. It identifies the socio economic characteristics of the respondents explore the contribution of commercial vegetable farming in income generation and identify the problems and prospects of commercial vegetable farming in the study area. This study has great importance at national and local levels, at the national level; it will be very helpful to make plan and policies for economic development. This study will also indicate some way to the future researcher also offer information to the people interested in commercial vegetable farming.

The present study was carried out in Phakphokthum Rural Municipality Ward no.7 of Ilam district, which is located in the Province No.1 in Mechi Zone. The economic status of this district is normal. Agriculture is the main occupation of this study area. The study area was selected for this study because it is accessible for the researcher and such kind of research has been done in this area before. The study is used exploratory and descriptive research design. This study is a socio-economic study of the objectives of the study has been fulfilled by using exploratory and descriptive research design. The study has been based on both secondary and primary data and information. Secondary data were used to present the background of the study and supplement and complement the findings of the study. Secondary data were collected from various sources such as books, journals, previous theses on the subject and government publications.

Phakphokthum Rural Municipality Ward no.7 of Ilam district was selected for the study where there were about 100 households. Among them 30 household were selected by using purposive sampling techniques. From each households one respondents were selected. The entire respondent was participated in

cooperative. Personal interview has been taken from the selected household. From each household hold one respondent was selected from interview. Structured questionnaire, Focus on Group Discussion (FGD), key informant interview and observation were used for collecting data from the selected households. The field survey was conducted after passed this proposal. The household survey has been conducted in order to collect qualitative and quantitative facts about socio-economic status of people living in the study area, poverty situation and the role of agriculture in upliftment of economic condition. Certain information has been collected by observation method. Researcher observe agriculture activities such as farming, selling goods, house pattern etc and guess the situation of economic status. Observation also helps to check the information provided in the interview. Key informant interview is also used using checklist. The key informants of this study were local leader, cooperative manager, Ward secretary etc. Researcher obtained proper method of data analysis according to the nature of data and information. Collected data and information were presented and analysis by using simple mathematical and statistical tools.

5.2 Findings and Conclusion

On the basis of primary data, following conclusions have been drawn in this study which is as follows.

1. It has founds as, 40% are Limbu. In this way, 23.33% are Rai, 16.67% respondents are Chhetri, 10% are Magar and 10% respondents are Dalit. Among them caste and ethnicity Limbu are highest than other caste and Magar and Dalit are less participation in the vegetable farming.
2. About 40% of the respondents are male and 60% are female respondents in this study. Majority of the respondents are female in this study area. 6.67% are between 15- 25 years and 20% are between age group 25-35. Similarly, 30% are between 35-45, 20% are between age group 45 -55 years and similarly 20% are between age group 55 to 65 and remaining

- 3.33% are above 65. It shows that majority of the respondents are between age group 35 to 45 and minority on age group lies above 65.
3. There are 66.67% of respondents are married and remaining 33.33% are unmarried. Among those respondents married respondents are highly involved in vegetable farming.
 4. About 10% respondents lie under the category of below primary, 40% lie under the category of primary, in the same way, 20% are passed lower secondary level and 20% are passed secondary levels and remaining 10% are passed higher secondary level. Among them respondents who have passed primary level are the highest in number.
 5. About 59.25% of the respondents are involve in agriculture and 7.41% are made service sector as occupation, In the same way 14.82% involve in business and 18.52% are involved in other occupation like labor and work both near area and abroad. 66.67% respondents have 0 to 5 family members, and 30% have family members between 5 to 10 and 3.33% respondents have members above 10. High respondents have 0 to 5 numbers of family members.
 6. About 16.67% of respondents started vegetable farming five years ago while 50% started vegetable farming three years ago and 33.33% started vegetable farming two years ago.
 7. All respondents have taken loan for vegetable framing. 46.67% of respondents have taken loan from local money lender, 10% from finance and cooperatives, 23.33% from bank and 20% from relatives.
 8. About 13.33% earn less than 25 thousand and 23.33% earn more than 25-50 thousands. In the same way, 33.33% earn 50 to 75 thousand. In the same way, 16.68% earn 75-100 thousands. And 13.33% earn more than one Lakha.
 9. Annually 10% earn less than 5 thousands from vegetable, 20% earn 5 to 10 thousands, 33.33 earn 10 to 15 thousands, 16.67 earn 15 to 20 thousands and 20 % earn more than 20 thousands.

10. It shows the income is very low. 20% spend in health 2 to 4 thousands and 10% spend 4 to 6 thousands. In the same way, 30% spend 6 to 8 thousands and 20% spend 8 to 10 thousands. 20% spend more than 10 thousands.
11. For the consumer goods, 40% spend 1 to 2 thousand and 10% spend 3 to 4 and more than 5 thousands also.
12. In the same way 40% spend 5-10 thousands on education, 10% spend 15-20 and above 25 thousands on education.
13. For stable food, 20% spend 5 to 10 thousands and 40% spend 20-25 thousands and 10% spend 10-15 thousands and 15-20 thousands each.
14. For fuel, 40% spend 1000 to 2000, 30% spend 2000 to 3000 and remaining respondents spend in the range between 3000 to 5000 and above 5000.
15. About 50% of respondents are own experienced, 20% have got knowledge and skill from government office and by other and 10% get knowledge from private sector.
16. About 60% respondents do farming in normal season, 30% in off season and 10% through green house.
17. About 60% of respondents said vegetable farming is increasing, 20% said decreasing and remaining 20% said constant.
18. About 60% of respondents have irrigation facility while 40% have not.
19. Vegetable farming get supported by government sector to 40%. NGOs/INGOs to 10%, private sector 20%, 30% from relatives and friend.
20. About 10% sells from farm and 60% sells from local market. In the same way 20% sell from vegetable collection centre and 10% sell in other places. 80% have faced problem and 20% have not problem.
21. It shows that majority have problems. 40% faced irrigation and 30% faced capital. In the same way, 50% faced technology and 60% faced problem of getting reliable price and 60% faced the problem of transportation. Similarly, 20% faced other problem like disease.

22. There is no plain land in the study area so it is impossible to use tractor so production cost is high. There is lack of irrigation because most of the lands are dry and steep. Only in rainy season it is possible to cultivate commercial vegetable.
23. There is problem of fertilizer and other pesticide because without using it is impossible for commercial vegetable farming. Labor cost is high so production cost also becomes high so it is difficult to refund cost. Sometimes the price of vegetable is very low because in terai farm production cost is low. At that time most of the farmer go in loss.
24. No problem of market: Jhapa is near to the study area and there are facilities of road so market and transportation is easy of collection centre there is collection centre in village so there is no problem of collection centre. Government and non government sector support in vegetable farming in the study area. People show interest in commercial vegetable farming. It became the main income source and alleviates poverty.

5.3 Recommendations

Before starting commercial vegetable farming in study area, life of people was difficult. It brings in changes in income though it needs to be improved. For the improvement the followings things need to do which are as follows; Government and non government sector concerted resources in commercial vegetable farming by proving loan facilities

1. Irrigation system is weak so government allocate budget in irrigation. If government provided irrigation that will increase vegetable farming in the study area.
2. In steeply land there is necessary to plan fruit because there is difficult to cultivate commercial vegetable. It is better to make plain by using land reform.
3. Government give subside in commercial vegetable framing such as fertilizer, technology (tractor). If these things are provided by government then farmer will grow more vegetable than before.

4. Banda and hadtal should be stopped. If there is no Banda and Hadtal farmer can sale vegetable in anytime.
5. Make cool store and sell vegetable off season. If cool store make in village there will be store and sale off season
6. Provide loan in lower interest for farmer. It helps to increase the volume of production.
7. Give facilities to poor people by identifying them and purchase these poor people production by government during season.
8. Organic farming, including market oriented organic vegetable farming should be promoted in study area to attract the urban consumers and the agro-tourists. Farmers need to be trained in organic practices, such as composting, vermi- composting, and green manuring.
9. Fruit farming practice is very low in study area. Fruits such as lemon, pear, peach, plum, straw berry, etc. can be kept product in dry land.
10. Agro-processing and storage facilities are lacking in that area. Considering farmers' needs and possibilities, studies are needed towards establishment of agro-product processing and storage structures.
11. Agricultural Service Center and Livestock Service Center in study area with appropriate group and cooperative mobilization, co-ordination with other institutions involved in agriculture and financial supports. Access to improved agricultural inputs, such as quality seed, should be improved as needed to the local farmers.
12. Local Governmental Institutions should also implement policies and programs for promoting sustainable urban farming towards market oriented organic production systems in coordination with concerned institutions.
13. Further policy research and developmental studies are requested to alleviate poverty through the development of commercialized urban agriculture in study area.

References

- Adhikari, R. (2006). *Women in Commercial Vegetable Farming*. An unpublished MA thesis submitted to Department of Sociology and Anthropology. Pokhara: PN Campus.
- APP (2005). *Monitoring and Evaluation System Report*. Kathmandu: Gaurav Integrated Development Associates.
- APROSC & J.M Association (2008). *Nepal Agriculture Perspective Plan*. Kathmandu: National Planning Commission.
- ARK (2012). *Ilam ko Parichaya*. Ilam : District Development Committee.
- Basnet, P.K. (2012). "*Policy Issues in Urban-rural Linkage in Rural Development in Nepal: Empirical Study of two Medium Sized Towns*". Nepalese Journal of Development and Rural Studies. Vol. 2, No. 1.
- Bhattarai, B.R. (2012). *The Nature of Underdevelopment and Regional Structure of Nepal*. Delhi: Adroit publishers.
- Devkota, F.R. (2004). "*Agriculture and Sustainable Development: Conceptual Approach*". Nepalese Journal of Development and Rural Studies. Vol. 1, No. 2 (Jul-Dec, 2004).
- Devkota, F.R. (2012). "*Measurement of Poverty: Anthropol-economic Perspective*". Nepalese Journal of Development and Rural Studies. Vol. 9, No. 1 (Jan-June, 2012).
- Gautam & Shrestha (2011). *Natural Resource Conservation and Sustainable Development*. Kathmandu: Kshitiz Publication.
- Ghimire, K.D. (2005). "*Current Issues of Fruit Crop Protection in Nepal: Strategic Perspective*". IPM and Plant Protection Strategy Development in Nepal. (Proceedings of a National Workshop), PPSN/FAO/PPD, Nepal.
- Hossain, R. (1997). "*Role of ICTs to Alleviate Poverty through Agricultural Development: ICT Initiatives in Agricultural Research and Extension Systems*. In: *Proceedings of the Regional Workshop on Role of ICT for Poverty Alleviation through Agricultural Development in SAARC Countries*". SAIC, BARC Complex, Dhaka: Farmgate,

- Joshi, S. (2010). *Nepalese Economy, Statistics and Mathematics*. Kathmandu: Nabin Publication.
- Joshi, G.R. (2010). "Agrarian Reform and the Livelihood of Rural People in Nepal". *Agricultural Development Journal*. Vol. 3, No. 3, June 2010,
- Kaini, B.R., (2013). "Role of ICTs to Alleviate Poverty through Agricultural Development: ICT Initiatives in Agricultural Research and Extension Systems. In: *Proceedings of the Regional Workshop on Role of ICT for Poverty Alleviation through Agricultural development in SAARC Countries*". SAIC, BARC Complex. : Farmgate.
- MoA (1996). Report. Kathmandu: Ministry of Agriculture (MoA).
- MoA (2006). Report. Kathmandu: Ministry of Agriculture (MoA).
- NPC (2002). Interim Plan. Kathmandu: National Planning Secretariat (NPS).
- NPC (2002-2007). Tenth Plan. Kathmandu: National Planning Commission (NPC).
- NPC (2007-2010). National Planning Secretariat, NPC/HMG-Nep NPC/GoN .
- NPC (2008-2010). The Interim Plan. <<http://www.npc.org.np>> [2009 January 1]
- Ojha, E.R. (2009). *Agriculture and Development Interrelations*. Lectures in M.A. Rural Development in the CDRD/TU, Kathmandu.
- Pokhrel, R. (2011). *Utilization of Sources of Information by the Farmers in the Adoption of Improved Agricultural Practices of Paddy Cultivation in Chitwan*. J. Inst. Kathmandu: Agric. Anim. Sci.
- Pradhan, P.K. (2003). *A Manual for Rural Urban Linkage and Rural Development Analysis*. Kathmandu : New Hira Books Enterprises
- Pradhan, P.K. (2010). "Policy Issues in Urban-rural Linkage in Rural Development in Nepal Coempirical Study of two Medium Sized Towns". *Nepalese Journal of Development and Rural Studies*. Vol. 2, No. 1.
- Sharma, R. (2009). *Natural Resource Conservation and Sustainable Development*. Kathmandu: Kshitiz Publication, Kirtipur, Nepal.

Shrestha, S.S. (2004). *Foreword in Agricultural Marketing Information Bulletin* (Special Issue -2004). Kathmandu: Marketing Development Directorate, DOA/MOAC, Government of Nepal.

Shrestha, S.S. (2002). *Agricultural Marketing Information Bulletin*. Kathmandu: Marketing Development Directorate, DOA/MOAC, Government of Nepal.

Thapa, P.K. (2007). "Re-strengthening Horticulture Institutions in Enhancement of Horticulture Industry in Nepal". *Proceedings of the Second National Horticulture Workshop*. Kathmandu: NARC

Todaro, M.P. (2004). *Economic Development*. Singapore: Pearson Education, Indian Branch, Delhi, India.

UNDP (2008). *Urban Agriculture: Food, Jobs and Sustainable Cities. Volume 1*. Habitat II Publication series. New York: UNDP.

Appendix I

PROBLEMS AND PROSPECTS OF VEGETABLE FARMING

QUESTIONNAIRE

Mark the Respondent's answer with circle in it.

Name of Interviewer:

Date of Interview:

Name of Respondent:.....

1. Ward No: 2. Age:
3. Ethnicity: a. Rai b. Chhetri c. Magar d. Dalit e. Limbu
4. Sex: a. Male b. Female
5. Marital Status: a. Married b. Unmarried
6. Educational Status: a. Below Primary b. Primary
c. Lower secondary d. Secondary e. Higher level
7. Do you cultivate vegetable? a. yes b. No
8. When did you begin commercial vegetable farming?
a. 2 years b. 5 years c. more than 5 years
9. What is your family size? a) 0-5 b) 5-10 c) 10 above

Information on the contribution of vegetable farming in income generation situation

1. How much your total annual income?
a) Less than 25 thousands b) 25 to 50 thousands c) 50 to 75 thousands
d) 75 thousands to 1 Lakh e) More than 1 Lakh
2. How much money do you earn from your vegetable farming? (yearly)
a) Less than 5 thousands b) 5 to 10 thousands c) 10 to 15 thousands
d) 15 thousands to 20 thousands e) More than 20 thousands

3. What is the area of your expenditure?

4. Are you satisfied from this income?
 a. Yes b. No
5. Where did you get knowledge and skills about the vegetable farming?
 a. Government office b. NGOs/INGOs/Private sectors
 c. Relatives d. Own experience. e. If others please specify
6. Have you ever got training opportunity for vegetable farming/cultivation?
 a) Yes b. No If yes, please specifies.
7. Who gave the training?
 a. Government b. Cooperatives c. NGOs/INGOs
 d. Private sectors e. if others please specify
8. How many kg. vegetables do you have produced in differences year ?
 a. 25 kg. b. 50 kg. c. 75 kg.
 d. 100 kg. e. more than 100 k.g
9. What are the sources of labor supply for vegetable cultivation?
 a. Family member's b. Hired labor
 c. Exchange labor d. If others specify
10. Generally in which season do you have grown vegetable?
 a. Normal season b. Off season c. if others please specify
11. In which season do you get more benefit ?
 a. Normal season b. Off season c. if others please specify
12. Additional Occupation of the respondent despite agriculture:
 a. Services b. Business c. If others specify
13. Where did you sell your production ?
 a. local market b. collection centre c. other place

14. Do you satisfied with present market price of your production?
 - a. yes
 - b. No
15. Do you get loan for vegetable farming?
 - a. yes
 - b. No
16. If yes, where do you get loan?
 - a. bank
 - b. sahakari
 - c. local money lender
17. What is the trend of vegetable farming?
 - a. Increasing
 - b. Decreasing
 - c. Constant
 - d. if others specify
18. Do you have irrigation facility in your field?
 - a. Yes
 - b. No
19. Do you increase your income from vegetable ?
 - a. yes
 - b. No
20. In which purpose do you invest money get from vegetable?
 - a. Household expenditure
 - b. child education
 - c. to purchase land
21. Do you feel any change in your social status after vegetable farming?
 - a. yes
 - b. No
22. If yes, what change do you feel?
 - a. Change in using household animates
 - b. change in celebrating festival
 - c. change in dressing pattern
 - d. other

Problems and prospects of commercial vegetable in the study area

1. Do you have face any problems regarding vegetable farming?
 - a. Yes
 - b. No If yes;
2. Which types or problems do you face?
 - a. Irrigation
 - b. Capital/financial
 - c. Technology
 - d. Marketing
 - e. Transportation
 - f. If others please specify

3. Who really support to identify and supply improved inputs such as seed, fertilizers, pesticide and others?

- a. Government sector
- b. NGO/INGO
- c. Private sector
- d. Relatives/friends
- e. If others please specify

4. Where do you often go to sell your vegetable farm product?

- a. At own farm
- b. Local Market
- c. Vegetable collection center
- d. if others please specify