

**Role of Dairy Farming in Rural Development:
A Case Study of Janahit Milk Producer Cooperative,
Maipokhari VDC, Ilam District, Nepal**

A Thesis Submitted to
Department of Rural Development,
Mahendra Ratna Multiple Campus, Ilam,
in partial fulfillment of the requirements
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in Rural Development

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Declaration

I hereby declare that the thesis entitled "**Role of Dairy farming in Rural Development: A case study of Janahit Milk Producer Cooperative Maipokhari VDC, Ilam district, Nepal**" submitted to the department of Rural development Mahendra Ratna Multiple Campus, is entirely my original work prepared under the guidance and supervision. I have made due acknowledgement to all ideas and information borrowed from different sources in the course of preparing this thesis. The results of this thesis have not been presented or submitted anywhere else for the award of any degree or for the other proposed. I assure that no part of content of this thesis has been published in any form before.

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Recommendation Letter

The thesis entitled **Role of Dairy Framing in Rural Development: A Case Study of Janahit Milk Producer Cooperative, Maipokhari VDC, Ilam District, Nepal** has been prepared by **Prem Raj Limbu** under my Guidance and supervision. I hereby forward this thesis to the evaluation committee for final evaluation and approval.

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Approval Letter

The thesis entitled **Role of Dairy Framing in Rural Development: A Case Study of Janahit Milk Producer Cooperative, Maipokhari VDC, Ilam District, Nepal** submitted by **Prem Raj Limbu** in the partial fulfillment of the requirement for the Master's Degree(M.A.) in Rural Development has been approved by the evaluation committee.

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Abstract

A thesis Role of Dairy Farming in Rural Development. A Case Study of Janahit Milk Producer Cooperative, Maipokhari VDC, Ilam District, Nepal is conducted to analyzed the contribution of Dairy Farming of Rural Development. It tries to analyze the socio economic impact of dairy farming on Rural life of farmer Janahit Milk Producer Cooperative Maipokhari VDC of Ilam District.

The main objective of the study is to assess the impact of the dairy farming in rural development specially in the poverty reduction and improving the socio-economics life of milk and farmers of Janahit Milk Producer Cooperative, Maipokhari VDC of Ilam District. To find out the role of cooperative in dairy Milk production study area is another important objective of this study. Interview study, key information interview, focus group discussion was conducted in collection priming information. Fifty household were sampled out of total 200 households. This study is based on both exploratory as well as descriptive research design data and information are collected from random sampling method at study area of Janahit Milk Producer Cooperative Maipokhari VDC of Ilam District.

The study describes the role of dairy farming in development of people in the study area. It examines the role of dairy farming in rural in generation of employment opportunities, poverty reduction and all round socio economic condition of rural people. This research also examines the role of dairy farming in woman empowerment conservation. Similarly, this study describes the role of cooperatives in dairy milk production in the study area.

Dairy farming has become an important economic activity proving an independent as well as supplementary of livelihood in rural area. For create of employment opportunities and uplift of socio- economic life of rural people role of dairy farming is much appreciated. It has important condition to landless farmers poor and women for their economics employment and self reliant. Dairy farming plays a significant role to solve the problem of food deficiency, generation of employment and income generation. Dairy farming plays important role of to develop of rural Development.

Likewise, the role of cooperative in dairy milk production is important in the study area. Milk producer cooperative are the important channels for collection and distribution of milk and milk product. Farmers sell milk of milk producer cooperative in the study area. Price of milk is paid by milk producer cooperative on the basis of quality of their milk. The Janahit milk Producer cooperative Maipokhari has a milk inliers machine. It helps to fair check of milk's quality. This the role of cooperative to the promotion of dairy scale of key element in rural dairy farming. Small scale dairy farming contributes significantly to household welfare in a study area and need to be promoted.

Thus, the dairy farming is important source of rural livelihood and it has remarkable contribution for rural and it has remarkable contribution for rural life enhancement. It is important factor to improve of economic level of rural area. Improvement and promoting in this farming rural people can get more benefit in poor country like Nepal. So, to enhance rural life this farming has many more benefits and it should be expanded through the country.

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Acronyms

AI	Artificial Insemination
BMSS	Biratnagar Milk Supply Scheme
BS	Bikram Sambat
CBS	Central Bureau of Statistics
DCO	District Cooperative Office
DDC	Dairy Development Cooperation
DFTQCC	Department of Food Technology and quality Control
DLS	Department of Livestock Service
DLSO	District Livestock Service Office
DoA	Development of Agriculture
DoC	Department of Cooperatives
FAO	Food and Agriculture Organization
GDP	Gross Domestic Product
GoN	Government of Nepal
MoHP	Ministry of Health and population
MPA	Milk Producer's Association
MPC	Milk Producer Cooperative
NCDB	National Cooperative Development Board
NDA	National Dairy Association
NDDB	National Dairy Development Board
KM	Kilometer
Rs	Rupees
VDC	Village Development Committee

CHAPTER- I

INTRODUCTION

1.1. Background

Agriculture in the background of the Nepalese economy and livestock is an essential component of rural economy. Livestock is major source of income and employment for underdeveloped country like Nepal. Dairy farming is one of the major components of animal agriculture in Nepal. It contributes to gross production of agriculture and national production also for the generation of employment opportunity is very important in rural area. Dairy farming is an important occupation for income generation in rural sector of Nepal. Dairy farming has important role for important of socio-economic life of rural people.

Organized dairy development activities in Nepal began in 1952 the establishment of a Yak cheese factory in Lamtang of Rasuwa district under food and Agriculture organization (FAO) assistant in 1953 In 1954 a dairy Development section was established under the Department of agriculture (DAO) and also a small scaled milk processing plant was started in Tusal, a village of Kavre district. In 1955 a Dairy Development commission was converted to the dairy Development Board in 1962. So as to meet the growing demand of milk in Kathmandu corporation (DDC) in 1969 (Sapkota, 2010).

Dairy Farming helps to generate bio-gas from live stock farm. Bio gas is an alternate source of energy and it has great role in rural area for lighting and cooking. Bio gas fulfills the demand of energy for rural area in one hand other hand. It supplies the fertilizer for agriculture sector. which helps organic farming similarly, bio gas is an equally important for good health, time saving and protection of forest resources another importance of dairy farming is educational improvement. Education is very important aspect of human life to access on improved and quality education people needed goal income. Dairy farming helps to people needed good income. Dairy farming helps to people to afford in their children's quality education. Likewise, dairy

farming supports to keep good health of people. Health is most important basis for development and prosperity of human being. Consumption of milk and milk products help people for their better health. Animal fertilizer is equally helpful to produce natural and healthy agricultural production. Likewise, bio-gas from animal dung also contribute to balance of environment. Environment related with the surrounding which exists around man. It is dynamic and ever changing process. Dairy farming has important role for conservation of environment indifferent ways. Agro-products, dung, urine which maintains sustainable positive natural cycle that improves environment by producing and maintaining more greens and control pollution.

It is necessary to adopt any kind of occupation for living. Geographical condition and socio-cultural aspect of any specific area play important role for the selection of any kind of occupation. People select occupation according to their tradition and geographical environment. But in the present situation. It is important to economic development rather than subsistence farming system. People have adopted livestock rearing as well as agriculture for the source of income and employment. Livestock rearing especially dairy farming is one of the important occupation which helps to people for income, employment, poverty reduction, women empowerment, energy generation.

A livelihood is a wide concept because there are different techniques of living and earning strategy of people, farming and society. Livelihood determines access of people on the means of resources, skills and link with the socio-cultural and economic aspect. The same ethnic group may have different adaptive strategies in different places due to environment and availability of resources. People involved in agriculture, animal farm, and cottage industries etc. in rural areas which related with the livelihoods of rural people.

Generally, greater numbers of population live in rural areas in underdeveloped countries. In the content of 83 percent people live in rural area. The people depend on different occupations for living. Majority of the people in rural areas have involved in agriculture and animal husbandry. Agriculture and animal husbandry are interrelated to each other. Animal husbandry is found explained the sub-occupation of agriculture sector but it has own contribution to subsistence farming system of Nepal. Animal

husbandry is a main source of income and employment for Nepalese economy. It creates employment opportunities for every members of the family. Dairy farming is main part of an animal husbandry. Milk product and dairy farming helps to people for their education health and to purchase other goods and services which necessary for their domestic purposes.

Dairy sector has important role to insure social justice amongst the rural poor by providing off farm employment opportunities and income generation. The dairy sector has important contribution to food security to the large number of population as part of their milk production is consumed within the farm households in the form of milk and milk productions which encompass both elements of availability and access to food.

Livestock rearing is the important tools of livelihood in the rural society. It is the main source of income and employment of Nepalese economy. Livestock rearing provides employment to every members of society. Rural people can use income of livestock for their children's education, health and to purchase other necessary materials for household purpose. In Nepalese society many rural families give dairy cattle to their daughter as a dowry at her marriage. Dairy cattle help for their livelihood. The contribution of livestock in social-economic development of Nepal is much appreciated. Agriculture and livestock rearing is the main bases of livelihood of rural people (Giri, 2008).

Modernization of traditional dairy farming sector is necessary to gain more benefit from this sector. Rural farmers produce milk only for themselves. Technology of animal husbandry is traditional in rural sector. Method of making animal shed also traditional. There is majority of local type of dairy animals for produce milk, but they produce little milk. As a result, cost of farmers becomes high but output becomes low. It is difficult to improve the economic condition of rural farmers reading such type of local dairy cattle. There fore for the improvement of socio-economic status of rural poor through dairy farming. It is necessary to rear hybrid type of dairy cattle and proper care and management of them. For the industrialization of traditional farming system farmers needed more capital. They needed more capital for purchase of hybrid type cows and buffaloes. Similarly, for the construction of modern animal shed,

purchase animal feed they needed capital. The government should be managed training and skill oriented knowledge for the milk farmers. It helps them to motivate and profit oriented in their occupation. It is compulsory to improve in traditional type of livestock farming. For this, Formulation of necessary policy and expansion of market is also needed.

There is good relationship between dairy cattle and crop production in rural areas. Rural people use fertilizer of cattle in agricultural field. It is very useful for organic farming. Likewise, crop residues like grass, hay etc. is useful for animal feeding. In the rural areas most of the farmers have adopted mixed type of farming system. Without compost fertilizer from cattle there is no chance of development of crop production and in the lack of crop residues, there is occur scarcity of animal feeding. Applying cattle manure reduces the use of chemical fertilizer, it increases in crop production in one hand and reduces the production cost of crop in other hand. The use of cattle manure is important for growing fertility of agricultural land.

The small scale dairy industry contributes significantly to poverty reduction particularly in rural areas. Poor farmers use their dairy income to purchase agricultural inputs such as fertilizer, seeds, pesticides etc. Income from dairy sector has helped to farmers for capital formation, land purchasing, improved housing and quality education for children. Dairy products like milk, curd, ghee, yoghurt, cream, cheese, chippy, pannier etc. are the very essential food items for daily consumption. Dairy product helps to good health of body and helps t good health of body and helps to maintain physical and mental development. So, regular consumption of fresh and hygienic dairy product is needed for the healthier life.

The climate change has also great impact on dairy farming. It affects to dairy cattle by suffering different kinds of diseases, lack of fodder etc. Due to extreme draught, it affects on the growth of fodder and grass species in pasture and forest fodder. It creates the shortage in diversity and quality of live stock fodder. This has affected livestock fodder. This has affected livestock which has affected on production of milk, milk products and meat. Livestock population is also decreasing due to climate change. Drought affected livestock by drying wetlands, pasture land and water resources, streams and decreasing availability of drinking water to livestock.

Increasing temperature is also affecting livestock having different new born diseases (Dahal, 2011).

Ilam is famous for milk production in Nepal. There is potentiality of milk production due to favorable climate condition for rearing dairy cattle and facilities of marketing, transportation. Similarly, there is good environment for the improved caste of dairy animals. There are many problem of quality of milk, expensive cost of milk transportation and animal feeding, strikes, expensive cost of drugs are the major constraints for the milk farming and management likewise, lack of training, no incentive for milk farmers lack of long term livestock appropriate policy etc. are also the constraints for milk farming. For the solution of problem of milk farming it is necessary to formulate of appropriate long term livestock policy provision of training and encourage to milk farmers, Expansion of technical services in rural sector and reduce the cost of drugs and transportation is needed. Similarly, advanced breeding service is also necessary for the development of dairy farming. In Ilam artificial insemination (AI) is being popular. In the present days, milk farmers of Ilam are attracting towards artificial insemination breeding of their dairy cattle. AI support to increase in milk production, saving of time and reduced the different diseases of dairy, cattle, so the attraction of farmers towards AI has increased (Sandakpur Daily).

Milk production has increased by 4.75 percent in Ilam in the last fiscal year 2071/072 BS as compared to previous fiscal year. The district produces 116,086 metric tones of milk in the last fiscal year against 110,817 metric tones in the fiscal year 2069/070 BS. In total collected milk of Biratnagar Milk Supply Scheme (BMSS), Ilam supplies 75% of milk. There are 49,000 farmers have directly involved in milk production activities in the field of milk collection and processing in Ilam district (DLSO Ilam). According to district livestock service office. Ilam artificial insemination (AI) of cow and buffalo is the main reason behind the increase in milk production. Farmers in the district are rearing improved cows in a commercial manner. A total number of 33,371 are improved cows in the district. Now farmers are getting good income from selling milk.

Dairy farming helps to improve socio-economic life of people through income and employment. Dairy farming helps to provide employment opportunities through

milking, processing of milk, sales and distribution, In the present condition, many educated youths also started rearing dairy cattle applying advanced and modern technology. Youths are returned from foreign employment also being employed and independent by dairy farming. Thus, dairy farming has great role in generation of employment opportunities. Three brothers of a family in Ilam have started a cow farm breaking the concept that one should go for foreign jobs for earning money. They started by taking land on lease at Rs.1,50,000 annually and have planted ginger, tomato and cowli flower besides grass. The cows produce 140 liters of milk dilly now a day and they make Rs 50,000 per month by deducting expenses (Sandakpur Daily). People collect their milk at cooperatives and it pays the price of milk on the quality of milk. Dairy cooperative provides necessary capital to farmers in low cost rate. It supports to promote this farming similarly, dairy cooperatives facilities of medicines for dairy cattle. It has important role in unite to farmers. It creates awareness among rural farmers. Likewise, dairy cooperative provides necessary information to farmers. Dairy cooperative helps for rural people for their socio-economic development. Dairy cooperative helps to promote woman's empowerment program in the society (Chaudhary and Upadhyaya 2013).

Dairy farming helps to people for establish rural industry in the remote area. It supplies necessary raw materials for rural industry. Dairy farming has important role to improve in health, education, women empowerment and increase in purchasing power. It helps to generation of bio-gas from animal farm which is renewable source of energy and helps to good health sanitation and environmental conservation. Income from milk and milk livestock farming have made people culturally changed which can be seen from their good housing, hygienic toilet, bio-plant, education, employment and credit flow, Livestock farming specially dairying is backbone of income for the villagers. Animal and animal by products keep economic value such as animal sale, milk cash, fertilizer and bio-gas.

Milk producer cooperatives are important channels of milk production and supply that leads to generating income source for the rural people. Dairy cooperatives are working as a leading agent for collection of milk, processing and distribution in rural and urban area too. History of dairy cooperatives dates back to the first five-year plan

(1956-61) when the dairy cooperatives were formed in Tusal Village of Kavre district. However, the dairy cooperatives were become more effective only after December 1981, when DDC initiated the milk producers oriented program by encouraging the farmers to form their own Milk Producer's Associations (MPAS) along the lines of cooperative principles. The MPAS operated as single purpose primary cooperatives with milk trade and support to milk production as their main activities. DDC's milk collection network exists in 31 districts where 55 milk chilling centers and about 800 MPCs operating (Sapkota, 2010).

The government should be give necessary subsidy to dairy cooperatives. The government should manage of necessary equipments for dairy cooperatives. The burden of excessive tax should be reduced and necessary skills and training should be provided to cooperatives. Government should provide that type of subsidy focusing to backward, poor, women and landless people of cooperatives. There should pay attention to increase of export of milk and milk products and its product diversification.

Formulation and implementation of appropriate dairy development policy is needed for the development of dairy farming. In Nepal there is great constraint of good policy formulation and its proper implementation. A good policy helps to commercialization of this sector. policy should be formulated in the favor of farmers and consumers. In Nepal there is ample potentiality of reducing poverty through sustainable development of during sector due the country's geographical setting, livestock farming based agricultural system, traditional involvement and experience of the farmers in livestock raising, high potentially of increasing present productivity of the cow, buffalo development of dairy processing industries (Dairy Development Policy 2064).

It is necessary to promote this sector the role of government, cooperatives and private sector is very important. It is equally necessary to coordination among government, cooperatives and private sector for the development of milk farming. Government should provide subsidies, pay attention to provision of market quality control and facilities for milk farmers. Advanced quality type of grass and animal feeding, conservation of community forestry is most necessary for rural farmers. It is

necessary to motivate farmers to rearing hybrid caste of dairy cattle for produce more milk. The government should give priority to commercialization of small scale milk farming. There are different kinds of diseases which attacks dairy animals. There are only traditional techniques to care dairy animals. If the dairy cattle die of the diseases, the farmers have to bear a great loss. There fore, the farmers needed to technical support for the identification and treatment of diseases of cattle.

Besides, many problems Dairy farming has many potentialities to income generating activities of the rural area's people. Nepal can be able to establish the medium and large scale industries to increase the productivity and national income. So, it is an important source of national income of Nepal. In the rural area dairy farming is one of the weapons for the poverty reduction. This study is conducted to analyze the role of dairy farming in rural livelihood of Janahit Milk Producer Cooperative, Maipokhari VDC, Ilam district, Nepal. It is try to analyze the impact of dairy farming in socio-economic life of rural people, role of dairy farming on livelihood activities of people at the study area. This study also examines the role of the cooperative in dairy milk production and distribution at the study area.

1.2 Statement of the Problem

More than 66 percent of people in Nepal depend on agriculture for their livelihood. Because of traditional agriculture system of Nepal there is no modern technology is used. It is difficult to fulfill the demands of food, income and employment through this type of traditional agricultural system. Daily thousands of productive age of youth's force goes to foreign countries for searching employment opportunities in Nepal. There are many probabilities but many forces go out day by day.

Most of the people have engaged agriculture and livestock farming in the study area. People have spent their cost and time in dairy farming for the many years ago. But there is no systematic research about the role of dairy farming in their livelihood. There is no attention towards opportunities, constraints and their solutions of dairy farming in the study area. In this context this study has its own importance to find out the support dairy farming in socio-economic life of rural people in the study area. It is

hoped that this study helps to explore different opportunities, constraints and their creative solutions ideas.

In high rates of poverty has remained in rural areas. There is an absolute type of poverty in the rural area, Poverty means rural and urban area both side. But there are many possibilities of new economic activities in urban areas, so poverty may be reduced in some extent in urban areas. The rural economy mainly depends on agriculture. The contribution of agriculture is very important for income and employment generation in rural area. The agriculture system remains traditional nature in rural area. The agricultural system of Nepal has remained subsistence than commercial. Therefore, people cannot get return compared to their cost and hard labor. There are sufficient natural resources in rural area of Nepal. But there is no proper utilization of such type of natural resources. So, the problem of high rate of poverty, unemployment and lack of resources are remained in rural areas.

Rural area has suffered from malnutrition, food deficiency, shortage of renewable energy, illiteracy, poverty, unemployment etc. People spend large amount of their income for household food purpose. The health condition of rural people is also miserable. People depend on forest for firewood and grass. There is no availability of renewable source of energy for household purpose. Access exploitation of forest creates the environmental crisis in the rural area. It badly affects to whole biodiversity of the rural area. Many youths of productive age go daily to foreign countries for searching employment opportunities. Similarly, many rural people migrate to urban area from rural area for employment opportunities. It disturbs the development of rural area.

There is difficult to operate productive activity due to lack of capital. Rural people have less capital for invest in productive activities. It disturbs to entrepreneurship development in rural areas. Without entrepreneurship development, there is no chance of employment and earning activities in rural sector. The population growth rate is seeming high in rural area. There is lack of economic activities proportion to increased population rate. The increased population finally goes to agriculture for employment and livelihood. But bad ward agricultural system and technology cannot provide sufficient employment opportunities for population increasing.

Usually the rural people have not their own land for agriculture. There is no chance of agricultural production in the lack of sufficient land. In this situation people needed alternative source of income and employment. Rural people are unknown about modern technology and scientific knowledge. People have no sufficient money for their children's higher education and health. People needed much money for purchase chemical fertilizer and medicines to produce more crops. They have no chance care their cattle in the lack of veterinary services. People cannot archive good return from agricultural sector according to their investment.

1.3 Objectives of the Study

The general objective of this study was to examine the changing livelihood strategy of poor people of dairy farming in rural development at the study are. The specific objectives of this study are given below:

- To explain the role of dairy farming on rural livelihood activities of people at the study area.
- To study the role of the cooperative in dairy milk production at the study area.

1.4 Significance of the Study

Dairy farming is a major economic functions providing and independent as well as supplementary way of livelihood to a large section of population in rural area. Dairy farming plays significant role in sustaining the rural livelihoods. This study is conducted to analyze the contribution of dairy farming in rural livelihood. It tries to find out the socio-economic benefits of dairy farming in rural life. Similarly, this study also tries to find out the role of cooperative in dairy milk production in rural area. Following points indicate the significance of this research work.

- This study helps to extend the role of dairy farming in rural livelihood.
- The study finds out the socio-economic life style of.
- The study provides the knowledge about dairy farming and animal husbandry of that area.
- It has important role of to study the current situation of dairy section and contribution to the economy.

- The study gives knowledge about the activities done by people of Maipokhari-7 and 8 area in dairy farming.
- It helps to highlight the different opportunities, feeling and constraints of dairy farmers.
- It provides knowledge of recent needs for successful dairy farming.
- It helps to encourage to farmers in commercial dairy farming and self-dependent activities.
- It helps to know about the role and contribution of cooperative in milk production activities.
- This study has important support to find our problems of dairy farming and present their creative solutions.
- The result of this study is also useful planners, policy makers, researcher and other organizations who are working in the field of dairy farming and related activities.

1.5 Limitations of the Study

Any study has limitations. Due to the limitation of the time, cost and other resources, this study is prepared. limitations of this study are given below.

- This study is concerned only about the subject matter of dairy farming.
- This study is applicable only for the study area.
- This study based on primary and secondary data,
- This study is conducted in Janahit Milk Producer Cooperative, Maipokhari VDC Ilam district and result cannot be generalized to others.
- This study only covers Maipokhari-7 and 8 areas and
- In this study, only 50 households out of 00 had taken for the field study.

1.6 Organization of the Study

This study composes in different five chapters. The first chapter deal introduction. It includes background of the study, statement of problem, objectives, significance and limitation of the study. The second chapter includes with the relevant literatures The third chapter deals with research methodology used in this study. The forth chapter

shows the presentation and analysis of data. And the last fifth chapter presents summary of major points findings, conclusion and recommendations, Necessary references and appendixes also included in the last part of the study.

CHAPTER- II

LITERATURE REVIEW

2.1 Background

Dahal, (2011) in his thesis "Impact of Climate Change on Livelihood and Biodiversity in Rural Communities" explains that livestock also has affected from climate change. Due to extreme draught, there was direct impact on growth of palatable grass species. Regeneration of fodder species in pasture and forest fodder is also decreasing, because of less rainfall. As a result, there is a shortage in diversity and quality of livestock fodder. This has affected livestock which was further affected on production of milk, milk production and meat. Area for livestock rearing, getting grass and fodder is reduced because of drought. Due to the availability of fodder livestock pattern has been changed, resulting reduction of scarcity of fodder, water and grazing land, as a result the income from livestock is decreasing. Increasing temperature is also affecting livestock having different new born diseases.

Baikie, Cameron, and Seddon (2000), "The struggle for basic needs in Nepal" research paper is based on two periods of fieldwork. The purpose of which was to evaluate the social economic impact of road. The paper is about the struggle of poor people to survive under conditions which were not of their own choice. A livelihood is comprised of capabilities, assets and activities required for means of living, livelihoods are said to be sustainable when people can cope with and recover from stress and shocks and maintain or enhance their capabilities and assets both now and in the future without undermining environment resources.

A progress report published by District Livestock Service Office (DLSO), Ilam Status: Milk production has increased by 4.75 percent in Ilam in last fiscal year 2071/072 BS as compared to previous fiscal year. The report states that the district produced 1,16,086 metric tones of milk in the fiscal year 2069/070 BS. There are 49,000 farmers involved in milk production activities in the district. In the total collected milk of Biratnagar Milk Supply Scheme, Ilam supplies 75 percent of milk.

According to the office, artificial insemination (AI) of cow and buffalo is the main reason behind the increase in milk production.

A news report published in Sandakpur Daily Ilam writes that artificial insemination (AI) is being popular among the milk farmers of Ilam. AI helps to increased in milk production, saving of time and reduce the different diseases of dairy cattle. Thus, the attraction of farmers towards artificial insemination (AI) has been increased. For the AI service, farmers attracted to private veterinaries rather than government service center. Private veterinaries provide AI service effectively and according to the demand of farmers. The AI service provider takes fees Rs.500 – Rs.700 for the AI service of a diary cattle.

A journal "Socio-economic Impacts of Dairy Cooperative" published by Balak Chaudhary and Mukul Upadhya status that dairy farming is and integral part of rural livelihood which shows the concept of cooperative approach for gaining common goal of farmers. Dairy cooperative has important role to make society organized, harmonized and helpful. Cooperative provides opportunities to farmers for mutual cooperative on understanding and sharing their socio-economic impact. The journal status that cooperative helps to create awareness in health, sanitation and education to the farmers. As well as it helps to promote women empowerment in the society.

Giri M.(2008) in his book 'cultural and Human factors in rural Development' writes that dairy farming is related to livelihood of rural poplar. He was written that animal husbandry is the secondary important occupation of rural society. Many families in rural areas, gives dairy cattle as her marriage. Dairy farming is a part of animal husbandry.

Animal husbandry has multidisciplinary contribution to socio-economic sector of Nepal. Thus, agriculture and animal husbandry are the main basis of livelihood of rural people.

Dairy Development Policy, 2064 published by Government of Nepal, Ministry of Agriculture states that there is ample potentiality of reducing poverty through sustainable development of dairy sector due the country's geographical settings, livestock farming based agricultural system, traditional involvement and experience of the farmers in livestock raising high potentiality of increasing present productivity

of the cows/buffaloes, development of dairy processing industries. To transform the traditional subsistent livestock occupation to income oriented , competitive and commercial system , lack of awareness about the importance of fresh and good quality milk production among the farmers lack of necessary livestock services, problems of milk holiday due to seasonal flections in milk production problem of milk transportation due to geographical remoteness ,week economic and managerial capacity of the milk producer cooperative societies involved in milk production and collection, lack of physical infrastructure technology and skilled manpower for producing modern diary products, lack of awareness about the consumption of good quality milk and milk products among the consumers are remained as the constraints of dairy development in Nepal.

A news report published in kathmandu post daily (7 feb 2015) writes that Nepal faces milk deficit of 400,000 liters per day. In Nepal there in annual milk output growth stands at 4percent, while the demand is rising by 8 percent. As per NDA estimate, the diary sector contributes 9 percent to the GDP. A total of 950,000 families are expected to depend on this sector. According to the GDP. A total of 950,000 families are expected to depend on this sector. According to the news report the country produces an estimated 4.8 million of milk daily, percent sold to dairies and 35 percent goes to local market. The dairy sector has provided direct employment to 20,000 individuals.

A report "Dairy sector study of Nepal "published by foot and Agriculture Organization prepared by Mahendra Raj Sapkota states that, organized dairy activities in Nepal began in 1952 with the establishment of a Yak chesse factory in Lamtang of Rasawa district. Similarly, the history of dairy cooperatives was formed in Tusal village of kavre district. Dairy sector has been playing a major role in order to ensure social justice amongst the rural poor by providing of farm opportunities for increased employment and income generation. The diary sector has important contribution to food security to the large number of population as part of their milk production is consumed with in the farm house holds in the form of milk and milk products which encompass both elements Of avidity and access to food. The stability of foot security of rural householders because diary animals from on integral part of croup - livestock

integrated form of agriculture system, in which they provide a steady stream of food and revenues for householders, they can be used as collateral for credit, sold for emergency cash needs arising due to an injury or illness of productive family members, they also provide draught power, fertilizer and pest control, contributing to total farm productivity and hence to food security.

2.2 Rational of the Study

There are very few studies regarding role of dairy farming activities of particular place. This study helps to identify the major farming activities and assess the present situation of dairy farming in Maipokhari ward No.7 and 8 areas which helps the dairy farming planner and policy makers to frame appropriate policies and programs in order to improve the dairy farming industries further more. The main purpose of this study is to divulge the existing situation and activities in the dairy farming sector of the study area and gives some recommendations to develop this area as model of the rural dairy farming in future.

The population is going to increase day by day. It effects on demand of food and changing food habits, the demand of milk and milk product has been growing. Nepal is unable to fulfill the demand of consumers with milk and milk products. A huge amount of income is going outside the country to purchase milk and milk products. Here are many chances to fulfill the demands of consumer and helps to increase in national income of the country by producing maximum milk.

Rural area is badly affected by the different problems like unemployment, poverty, food insecurity etc. in present time. In the rural area there is very pitiable living standard of people in the absence of transformation of traditional agriculture. There is unequal distribution of land or on access on land of rural poor farmers. It is impossible to up lift the living standard system. In such situation dairy farming can be an important source of income in rural areas. Dairy farming helps to generate employment opportunities for many rural households. It has greater role to supply of necessary food items for house hold consumption. The dairy income helps to purchase necessary goods and services for the people of rural areas and helps to reduction probity the role of dairy farming in poverty reduction and positive impact

on living standard of rural people. Likewise, this study describes about opportunities and problems of diary farming and measure to solve the problems.

CHAPTER- III

RESEARCH METHODOLOGY

The study shows the contribution of Dairy Farming in rural Development of dairy farmers of Janahit Milk Producer Cooperative Maipokhari VDC Ilam. This chapter includes research, design, rationale of the selection of the study are sampling producer and sampling size, nature, and source of data, data collection tools and techniques.

3.1 Research Design

Research design is a plan of the study regarding how to find answers to the research questions. It serves as a framework of the study guiding the collection and analysis of the data. This study is mainly based upon qualitative data and it is also based on descriptive and exploratory made of primary and secondary data collected from the study area. This study is design to describe the role of dairy farming in rural livelihood of the farmers of Janahit milk Producer Cooperative Maipokhari VDC of Ilam District. To collect all information as well as necessary data from field. a questionnaire sheet was produce and an information check list was also prepared for primary data collection.

3.2 Rationale of the Selection

Rationale of the selection of the study Area Maipokhari VDC is one of the VDC of Ilam. It lies northern part of Ilam district. This study was conducted at Janahit Milk Producer Cooperative Maipokhari VDC of Ilam. Generally, most of the people in this are engaged is dairy farming activities. Although there is no systematic research about the role of dairy farming in rural livelihood. There is no attention towards its constrains. possibilities and its commercialization. This study tries to find out the socio-economics impact of dairy farming of the people in the study area. How the role of dairy farming in socio economics improvement of women, landless and poor

farmers of study area is examining in this study. This study helps to know the role of cooperative in dairy milk production in rural area. This the area is selected to access livelihood impact and overall socio economic impact of dairy farming in the study area.

3.3 Nature and Source of Data

In this study it was very try to present the information both qualitatively and quantitatively. To collect data field visit was conducted and filled up questionnaire in individual household level of milk farmers of the cooperative. At least a 25 percent household to total households of milk farmer of Janahit Milk Producer Cooperative was included in study. Similarly, District Livestock Service Office (DLSO) Ilam, District Cooperative Office (DCO) Ilam and VDC Office of Maipokhari were visited and collected necessary data and information.

3.4 Universe and Sampling

Univers and sample size are most important for the validity and reliability in the syudy . Due to various constraintas whole Universe is imposible to study . There are seven Milk Producer Cooperative in Maipokhari VDC . Among them Janahit Milk Producer Cooperetive was chosen for the Universe in this study . The milk farmers of the Janahit Milk Producer Cooperative were potential respondents in the study . The sample size was 50 . The respondents were taken from Maipokhari VDC Ward No 7 and 8 with respectively .The universe was the total households of Janahit Milk Producers Cooperative in this study . 50 households were sampled out of the total 200 households with random sampling method for interview survey which represent 25 percent of the total for the study .

3.5 Data Collection Techniques and Tools

The study used questionnaire, Interview and observation methods to collection of data. Primary information was acquired though filling questionnaire, interview and observation method. To know the impact of dairy farming in rural development of people in the study area the household survey and observation taken was applied,

secondary data were taken from different journals, repairs, newspapers and related website.

3.6 Data Presentation and Analysis

The data and information was collected by different methods. After editing these data and information they were classified according to their common Characteristics these data were manually tabulated and prepared in an appropriate form to analyze. Qualitative methods were used to analyze the collected information. Simple quantitative tools were used according to the nature of the data. Computer program was also used to present the different issue of the study as well as maps and diagram to make it clear.

CHAPTER - IV

PRESENTATION AND ANALYSIS OF DATA

4.1 Introduction to the Study Area

Nepal is a landlocked sovereign state located in South Asia. It is located in the Himalayas and bordered to the north by the Peoples' Republic of China and to the south, east and west by the Republic of India with an area of 1,47,181 square K.M. and a population of approximately 30 million. Most part of the country covered by the hill and Mountain area. Nepal is divided in to five development regions, 14 zones, 75 districts, 217 municipalities and 3,157 VDCs. Out of total population 82.93 percent people live in rural area (MoHP, 2011)

Ilam district is a Hill district of Mechi zone in Nepal's Eastern Development Region. The district covers 1,703 square Km. The district has divided in to 43 village development committees and 3 municipalities. The district areas politically divided into 11 Ilaka and 3 electoral areas. The district is boarder by Darjeeling District of West Bengal State of India in the east, Morang and Panchthar district in the west. Panchthar district in the north and Jhapa district in the south. Ilam district is famous for its natural beauty, more rotational places and fair weather. The district is geographically gently Slope Mountain, suitable for agriculture area. There are many tourism and religious places in the district. Antudanda, Kanyam, Gajurmukhi, Maipokhari, Seti Devi, Singha Bahini, Panchakanya, Pathivara, Sandakphur are the main tourism and religious destinations in the district Mai, Jogmai, Puwamai and Deumai are main rivers of the district. Ilam Bazar is the district's head quarter of the district about 600 km. far from Kathmandu. The total population of the district is 2,90,254 and total households are 64,502. Out of the total population 1,41,126 are male and 149128 are female. (CBS, 2011)

Ilam is a natural beautiful district of our country Nepal. It is also famous for agriculture and livestock rearing in Nepal. There are many commercial farmers are engaging agriculture and dairy occupation. They are benefited from their business.

Production of Ilam tea is famous in national and international country. Ilam is famous for its natural beauty, tourism spots, religious destinations and different cash crop production. Ilam is rich in its own diversity, natural landscape, good sanitation agriculture. The main income of source is tea, milk, ginger, cardamom, potato broom, akabare chilly etc. The district has made its own identity by producing the different crops. Similarly, Maipokhari VDC is one VDC of Ilam District. The VDC is situated in the north part of the district. It is 15 K.M. far from the headquarter. It has total 4,348 populations with 2,113 male and 2,235 female (CBS, 2011). The VDC is divided into 9 wards. Majority of the total population are involved in traditional agriculture profession. But nowadays farmers are here being attracting towards commercial farming system. Farmers of this VDC are attracting towards hybrid and cross caste of dairy cattle. Farmers have attracted towards artificial insemination (A.I.) for produce more milk. The VDC has diverse types of ethnic Structure. Rai, Brahmin, Chettri, Gurung, Limbu, Tamang, Sunuwar, Sanyasi, Biswakarma, Magar, Sherpa are main ethnic groups in this VDC. They are united and helpful to each other. The VDC is connected from Mechi Highway and Ilam-Maipokhari way. It makes easily to farmers for carrying agriculture production.

Janahit Milk Producer Cooperative which is taken for the study is located at ward no.7 of Maipokhari VDC. The Janahit Milk Producer Cooperative is established in 2063 B.S. in this VDC. It is registered in District Cooperative Office Ilam. There are 200 milk farmers in this Cooperative farmers of Maipokhari VDC ward No. 7 collect about 500 liters of milk daily. Janahit Milk Producer Cooperative is a little far from the Mechi Highway. It pays the price of milk every 15 days. Price of milk here per liter on the basis of quality of collected milk. There is three persons are employed in this cooperative.

The main occupation of the study area is livestock and agriculture. Main product of agriculture is maize, wheat and paddy as food crop and potato, milk, chiraito, cardamom, broom are as cash crops. Major sources of household energy are firewood for cooking and heating in the study area. The national grid of electricity is available in the study area.

4.2 Demographic and Socio-Economic Information of Respondents

This study shows demography and socio-economic characteristics of the respondents.

4.2.1 Age Distribution of the Respondents

The age of a person has an influence on productivity as well as food consumption. Performance of productivity activities can be influenced by the age of a person. People of old age and children are less active in productive activities than the middle age of people. Middle age of people is more active in productive activities. Age distribution of respondents was considered to be important in this study.

Table No. 4.1: Age of Distribution of Respondents:

S.N.	Age Distribution(years)	population	percent
1	30-40	20	40
2	41-50	15	30
3	51-60	10	20
4	Above 60	5	10
Total		50	100

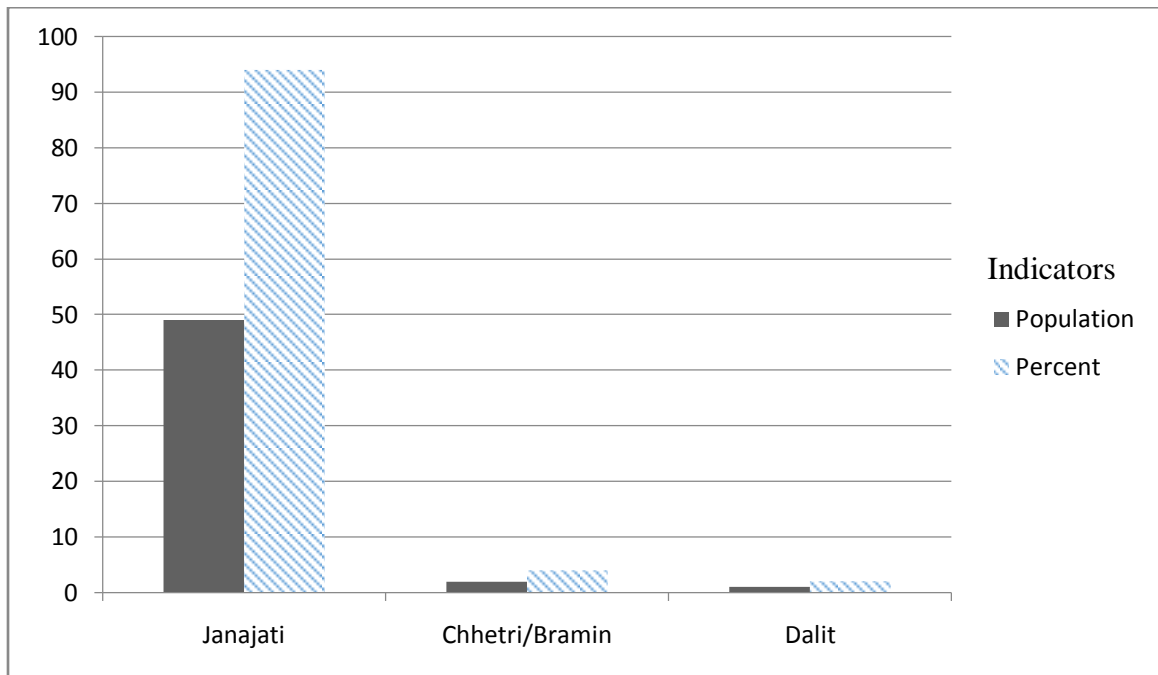
Source: Field Survey, 2017.

Table No. 4.1 explains the age distribution of the respondent. According to data, 40 percent of them were from the age between 30-40years, 30 percent of them were from age between 41-50 years, 20 percent of them were from age between 51-60 years and 10 percent of them were from the age above 60 years. According to the data, majority of the respondents were from the age between 30-40 years in the study area.

4.2.2 Caste wise Representation of the Respondents.

There are different castes of people in the study area. The respondents were from only Janajati and Brahmin, Dalit Community. The majority of the respondents were Rai community. following figure represent the caste wise representation of respondents in the study area.

Figure No. 4.1: Caste wise Respondents' Representation



Source: Field Survey, 2017.

Figure No. 4.1 explains the caste wise representation of the respondents. According to the data 94 percent of respondents were found from Janajati castes, 4 percent from chhettri/Brahmin and 2 percent of them of them were dalit.

4.2.3 Main Economic Activities of Respondents

Dairy farming is the main activity of the respondent in the study area. The respondent seemed to be engaged in crop production. The major crops grown in the study area were maize, wheat, millet etc. Potato, Cardomam, radish, couliflower were also grown in the study area. They use cattle manure crop production and cash organic as compost fertilizer. It has helped to increase chemical fertilizer. It saves cost of farmers and also improves the health of them. Farmers are more benefited from the income in the study area. Dairy farming then crop production in the study area. Dairy farming has helped to them providing regular income than crop production. The sampled respondents were asked to compare their income from agriculture and dairy. Response of farmer is given in following table.

Table No. 4.2: Comparison of Income

S.N.	Comparison of Income	Population	percent
1	More income from agriculture	5	10
2	More income from dairy	40	80
3	Equal	5	10
Total		50	100

Source: Field Survey, 2017.

Table No. 4.2 explains the comparison if income from agriculture and dairy in the study area. According to data 10 percent of respondents were said that income of agriculture is high than income of dairy, 80 percent of them were said that income of dairy is high than income of agriculture and 10 percent of them were said that there is equal income from agriculture and dairy.

4.3 Role of Dairy Farming

Dairy production is a fast payment source of income for farmers in rural areas. Dairy farming has important role for the improvement of socio economics status of rural people. It plays good role to increase in the national economy. Dairy farming is an important sector that redirects money from cities to rural areas.

4.3.1 Role of Dairy Farming in Generation of Employment and Poverty Reduction

Nepal is an agriculture country where about 65 percent of people depend on agriculture for their livelihood. Agriculture is the main source of income and livelihood in Maipokhari VDC, Supplemented by animal husbandry. Generation of employment opportunities is an important role of dairy farming in the rural areas. Dairy farming has generated employment opportunities for several households in the study area. Dairy farming is an important tool for provide self-employment of role olds and youths in in rural area. People get employment in feeding and caring of cattle, construction and cleaning animal shed, milking, transportation of milk

cooperative office in the study area. There are 3 persons have employed accounting managing etc. So that, this farming has created the self employed in each household in the study area.

Dairy farming is an important tool to reduce poverty. Dairy income helps to farmers for fulfillment of their basic needs. It provides cash income to purchase necessary materials for household purpose of rural poor people. Respondent were asked to present the situation of poverty reduction after their involvement in this dairy farming.

Table No. 4.3: Role of Dairy Farming in poverty Reduction

S.N.	Role in Poverty Reduction	population	percent
1	Yes	44	88
2	No	3	6
3	Do not know	3	6
Total		50	100

Source: Field Survey, 2017.

Table no. 4.3 explains the role of dairy farming in poverty reduction in the study area of Maipokhari 7 and 8 wards number. According to the data 88 percent of respondent were said that dairy farming has played a role to reduction of their poverty 6 percent of them were said that it can not reduce poverty and equal 6 percent of them were unknown about the role of dairy farming in poverty reduction. The data shows that; dairy farming has played an important role in poverty reduction after involving this farming.

4.3.2 Role of Dairy Farming in Food Security

Food is the most necessary thing for human life. Food availability and its supply has become problematic because to increase food production. But agriculture land is limited every country. In this position it is impossible to mountain food security. Thus, it is necessary to development modern agricultural system for more production. Dairy farming has great important to supply of household nutritive foods. Livestock play a dominate role in the diet. contributing dietary needs for energy and protein. Animal source foods are particularly for combating malnutrition and a range of

nutritional deficiency which have serve consequence. Milk and milk products also provide high quality protein, micro nutrients and better nutrition for pregnant and breast fitted women. Milk and milk products are highly benefitted to children for their physical and mental development. It reduces the problem malnutrition in the rural areas. Milk and milk products fulfilled the demand of household food materials and also improves the nutrition level of family. Dairy farming is important in achieving food security because it supplies directly household nutritive food production and indirectly through dairy income for purchase foods and others household items. In this way generation of employment also helps to maintain food security in the rural areas. Rural people spend their large amount of income for food, health, energy, education etc. Dairy farming helps to people for saving their income and it provides budget for fulfillment of household needs. The respondents asked to mention the role of dairy farming in food security.

Table No. 4.4: Role of Dairy Farming in Food Security

S.N.	Role of Dairy Farming in food security	population	percent
1	Good Role	45	90
2	No Role	5	10
Total		50	100

Source: Field Survey, 2017.

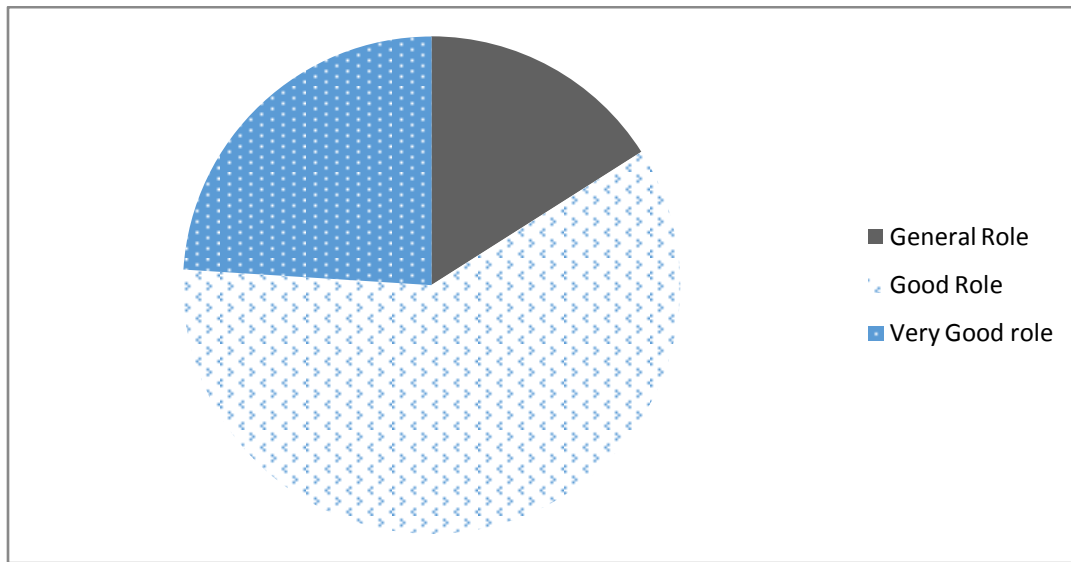
Table No. 4.4 shows the role of dairy farming in food security in the study area. According to data 90 percent respondents were said that there is good role of dairy farming in food security 10 percent of them said that there is no role of dairy farming in food security. Data presents that most the farmers were benefitted by dairy farming in food security.

4.3.3 Role of Dairy Farming in Women Empowerment and Self-reliant

Half of the world's populations are females. They have got different experience like the males in their occupations. Women's participation in economics activities is very less in the backward society. But dairy farming provided opportunity of participation for women in study area. Decision right in economic sector has increased of women in the study area. The income from dairy farming has helped women to earn saving

and expenditure independently. The participation of women in cooperative increased in the study area. The role of dairy farming in women empowerment and self reliant is much appreciated. Women do most of the works in the cattle farm. They get up early in the morning to feed and milk the dairy cattle. The respondents were asked to know about role of dairy farming in women empowerment and self reliant.

Figure No. 4.2: Role in Women Empowerment and Self Reliant



Source: Field Survey, 2017.

Figure No. 4.2 shows the role of dairy farming in empowerment and self reliant of women. According to the data, 16 percent of respondents were found that they feel general role of this farming in women empowerment and self reliant. Similarly, 60 percent of respondents were feel good role and 24 percent of them were feel that there is very good role of dairy farming in empowerment and self reliant of women. Majorly of the farming in women empowerment and their self-reliant.

4.3.4 Role of Dairy Farming in Generation of energy and Environmental Conservation

Dairy farming supports to produce bio-gas, which is alternative source of energy in the rural area. Animal dung and urine can be use in bio-gas plant. Bio-gas helps the balance of land.

Bio-gas is popular among farmer, especially with livestock. It helps in saving time spent in fuel wood collection, cooking and cleaning. The spent time is used in other income generating activities. Bio gas also lessons fuel wood consumed, and reduces burning of biomass that can be used in farms to generate more yield and income. It also improves health and hygiene of individual and community and contributes in saving money used for purchasing fuel. Availability of fuel reduces the pressure on forest, which helps to reduction in deforestation and natural hazards. This provides environmental friendly energy which promotes good health.

Table No. 4.5: Installation of Bio-Gas Plant in the Study Area.

S.N.	Installation of bio gas plant	population	percent
1	Households have installation Bio-gas	5	10
2	Households haven't installation Bio-gas	45	90
Total		50	100

Source: Field Survey, 2017.

Table No. 4.5 shows the installation the bio-gas plant in the study area. According to data 10 percent of respondents have bio gas but stopped now and 90 percent of them have not installation of bio gas plant. The data shows that majority of the household haven't installation of bio gas plant in the study area.

4.3.5 Role of Dairy in Socio-economic Improvement

Dairy Farming is a main source of income in rural area. The income of dairy farming helps to people for provide to their children's education and health. Milk Cooperative have made the milk farmers to unit in a group. It has made them more social. Cooperatives important role to solve farmer's common socio-economics problems by helping each other. Income from their dairy farming has made them socially and culturally changed like these good housing, hygienic toilet, bio plant television, education and participation in social work. It makes the future of people. Dairy income increases the purchasing power and social sense of people.

4.4 Dairy farming and Management

Dairy farming is one of farming in Nepal. It has great contribution to national income. People get good employment in dairy farming. They can raise their socio-economic status with the help of income of this occupation. They can get a profit by this sector. It is necessary to care and management of dairy cattle to get profit from this occupation. Some important ways to caring dairy cattle are given below.

4.4.1 Care of Dairy Cattle

Care of Dairy Cattle is important for improve this dairy farming. Cattle cannot give, more milk without proper care of cattle. Care of dairy cattle includes feeding, management of shed breeding vaccines etc.

4.4.1.1 Feeding of Dairy Cattle

Dairy Cattle should be nutrition food to maintain health and produce hygienic milk. It is necessary to manage of green grass, hay straw for them. They need enough clean water. In the study area farmers use green grass hay and other agricultural residues for cattle feeding. Farmers are attracted towards planting the grass trees for dairy cattle in the study area. They have planted many kinds of nutritious grass in their land.

4.4.1.2 Shed Management

Shed is the place where dairy cattle are kept. A goat shed is necessary for dairy cattle. The cattle shed should clean and proper manage of light, air and water. There should not be insects. mosquitoes and flies. Majority of the farmers are construct traditional sheds for their dairy cattle. in the rural area. farmers are made from local locally available materials like bamboo, wood, etc. It reduces the cost of farmers. The type of cattle sheds in the study area given below

Table No. 4.6: Type of cattle shed in the study area

S.N.	Type of cattle shed	Population	Percent
1	Traditional	35	70

2	Modern	15	30
Total		50	100

Source: Field Survey, 2017.

Table No. 4.6 shows the type of dairy cattle shed in the study area. According to the data 70 percent of respondents were using traditional shed for their dairy cattle and 30 percent of them using modern types of animal shed for their cattle. Therefore, it is found that majority of the population using traditional shed for dairy cattle in he studies area.

4.4.1.3 The Diseases of Dairy Cattle

The dairy animals are attacked by different diseases if they are not regularly cared. In the absence of regular care, the dairy animals may suffer. Sick dairy animals cannot give much milk. Sometimes farmers have to bear less because of death of their dairy animals. Rural Nepalese farmers have not scientific knowledge about different types of diseases of dairy animal. If the diseases attack the cattle die. So, regular care of dairy animals is needed. There is necessary of insurance facility of dairy animal in the remote area. At present the animal health services are inadequate to meet the country massive livestock population. It is necessary to encourage private and para veterinaries to improve in animal health. The government should provide credit facility to produce the initial stock of drugs. vaccines and others essential equipment in the rural area. There is lack of veterinaries center and veterinary doctors in the study area.

4.4.2 Breeding of Dairy Cattle

Most of the farmers have adapted indigenous breeds of their cattle in rural areas of Nepal. The farmers rear traditional types of dairy cattle. But traditional dairy cattle give less milk than modern hybrid type of dairy cattle. Nowadays farmers in rural areas have attracted towards artificial insemination (AI) for their cattle breeding. AI helps to produce more milk and it reduces different kinds of transmitted diseases of dairy cattle. AI supports to improve breed of cattle. But in rural area, there is shortage of technicians and necessary materials for modern breeding. The modern breeding services should be cheap and easily available. It is necessary to increase awareness

among rural area's farmers about effectiveness of modern breeding of dairy cattle. In the study area, the breeding practices of dairy cattle is given below:

Table No. 4.7: Breeding of Dairy Cattle in the Study Area

SN	Breeding of Dairy Cattle	Population	Percent
1	Artificial Insemination (AI)	15	30
2	Local	35	70
Total		50	100

Source: Field Survey, 2017.

Table No. 4.7 shows the breeding of dairy cattle in the study area. According to data 30 percent of respondents were used to artificial insemination (AI) and 70 percent of respondents were used to local breeding of their dairy animals. Data implies that, farmers are not motivated with artificial insemination (AI). They said that AI practice cannot successful in this area. But they have been trying to apply artificial insemination (AI) in the study area.

4.4.3 Role of Cooperative

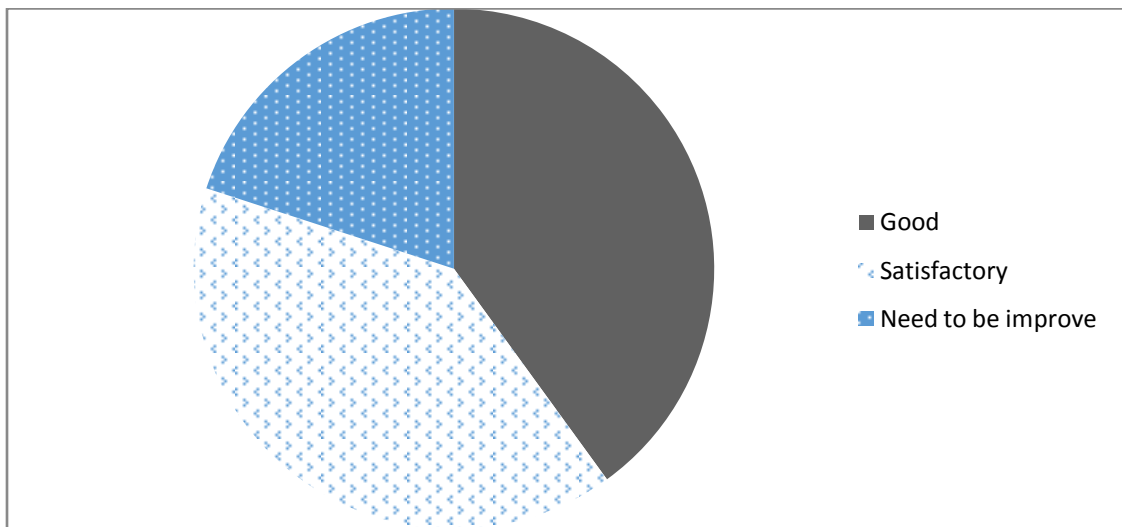
Nepal is agricultural and landlocked country of the world. There are huge number of small and poor farmers. They have not enough resources to move their transactions. It is difficult to fulfill their needs. cooperative is a collection and distribution process. It has important role to solution of socio-economic problems in rural areas. In the case of dairy farming, the roles of cooperative are given below.

- Cooperative helps to collection of milk from the village and pays price of milk according to quality of milk in the fixed time.
- It provides training for rural farmers, which is important and supportive tool for promotion of dairy farming.
- It helps to farmers to farmers for capital and provides loan in low interest rate. People can take loan from cooperative and use in growth of their dairy farming.

- It creates co-action environment in the society. It encourages to members of society for working together and solving their common socio-economic problems helps each other.
- It manages the facilities of medicines for daily cattle and pesticides for the agricultural productions.
- Cooperative has significant role to make farmers organized and unite.
- It helps to marketing of milk and dairy products produced from farmers.
- It provides necessary information about market price to all the farmers in the rural area.

Cooperative has important role in milk collection, processing and marketing in rural areas. It supports to poverty reduction through different economic activities in the rural area. The respondents were asked to comment on the role of cooperative in study area for dairy milk production. In the view of respondents, the role of cooperative in dairy milk production is presented in figure No 4.3 below:

Figure No. 4.3: Role of Cooperative



Source: Field Survey, 2017.

Figure No. 4.3 explains about the role of cooperative in the view of respondents of the study area. According to data 40 percent of respondents were said that their is good role of cooperatives, 40 percent also satisfactory role of cooperative and 20 percent of them were said that the role of cooperatives is needed to be improve.

4.4.4 Supporting Sector in Dairy Farming

All industries or farming most have supporting sectors. Without supporting, any farmer can not improve. For the proper development of dairy farming the role of supporting sector is very important. Different kinds of supporting sector are very important. Different kinds of supporting sector like extension delivery services, marketing, policy helps to promote this farming. There is necessary of an appropriate policy formulation and its proper implementation for dairy development. Marketing facilities and commercialization is an equally important for the dairy development. Farmers most needed training and incentives to uplift this farming. Appropriate milk pricing is also needed. It encourages to farmers and help to make their economic environment to empower in rural areas.

4.4.4.1 Transportation

Transportation facility I most necessary to transport of milk and other dairy product. If there is not transportation facility it is very difficult to collect raw milk from remote area. In this study, here is presented about the means of transportation in the study area.

Table No. 4.8: Means of Milk Transportation

SN	Means of milk Transportation	Population	Percent
1	On foot	50	100
2	By Bicycle	0	0
3	Others	0	0
Total		50	100

Source: Field Survey, 2017.

Table No. 4.8 explains the means of milk from potation in the study area. According to data, 100 percent of respondents were used their foot for milk transportation. None of them were used any other means of transportation to collection of milk in the study area.

4.4.4.2 Policy

There is necessary of policy formulation and its implementation for the development of dairy farming. A good policy contributes to the dairy sector and helps to its commercialization. The policy should be in the favor of farmers as well as consumers. Policy has important role to increase milk production in the rural areas. In the study are, the information of farmers about dairy policy of government is given below:

Table No. 4.9: Information about Dairy Policy

SN	Information of Dairy Policy	Population	Percent
1	Informed to policy	10	20
2	No informed to policy	40	80
Total		50	100

Source: Field Survey, 2017.

Table No. 4.9 shows the information of farmers about the dairy policy of the government. According to data, 20 percent of them were informed about dairy policy of government and 80 percent of them were no informed about dairy policy of government.

4.4.4.3 Marketing

Marketing facilities is necessary for the purchase and selling of milk product. There is lack of proper marketing facilities in rural areas. Rural dairy farmers are unknown about market price of their product. The sampled households were asked to information about market price.

Table No. 4.10: Information about Market Price

SN	Information about Market Price	Population	Percent
1	Information about Market Price	15	30
2	Not information about Market Price	35	70
Total		50	100

Source: Field Survey, 2017.

Table No. 4.10 shows the information about market price of the study area. According to data 30 percent of respondents were informed about market price of their product and 70 percent of them were not informed about market price in the study area. It is found that, most of the farmers are not informed about market price in the study.

4.4.4.4 Milk Pricing

Pricing policy is one of the important determinants of the development of dairy sector. Proper milk pricing policy is needed for the success of dairy sector. It is necessary to pay appropriate price of milk to the farmers on the basis of cost and quality of milk. The price of milk is very low compared to its productions cost in Nepal. Payment of row milk should be related to its quality and cost of milk production. Farmers are not satisfied with the price of milk in the study area. The respondents were asked to comment on price of milk.

Table No. 4.11: Comment on Price of Milk

SN	Comment on Price of Milk	Population	Percent
1	Satisfied	15	30
2	Dis Satisfied	35	70
Total		50	100

Source: Field Survey, 2017.

Table No. 4.11 shows the comment of farmers towards price of milk in the area. According to data, 30 percent of respondents were satisfied toward the price of milk and 70 percent of them were dissatisfied towards the price of milk in the study area. It is informed that, most of the farmers were dissatisfied towards the price of milk in the study area.

4.4.4.5 Expenditure of Dairy Income

Dairy income is a main source of income in the area. People use dairy income in different sectors. The pattern of expenditure of dairy income has given below:

Table No. 4.12: Expenditure of Dairy Income

SN	Expenditure of Dairy Income	Population	Percent
1	Education	10	20
2	Food	30	60
3	Health	5	10
4	Saving	5	10
Total		50	100

Source: Field Survey, 2017.

Table No. 4.12 shows the expenditure of dairy income of the respondents. According to data 20 percent of respondents were used their income for the education, 60 percent of them were used mainly for food and equal percent (10 percent) were used their income for health and saving.

4.4.4.6 Extension Service Delivery

Extension service delivery helps to farmers for commercialization and profit oriented. Training, transformations of scientific knowledge, skills and incentives are very

important tools for the success of dairy business. Some of the farmers have trained by cooperative in the study area. It is necessary to trained all of the dairy farmers to make this farming more commercial and profit oriented. Similarly, most of the farmers have no knowledge about technical knowledge about their occupation. So transformation of technical knowledge is most necessary in the study area. There for extension service delivery is very important factor of development in dairy sector and to uplift this dairy occupation.

4.4.4.7 Dairy Related Institutions

There are many organized institutions are working for the development of dairy sector in Nepal. Dairy related institutions have their own role of commercialization of dairy sector. Registration of dairy industries, development of cooperative sector dairies monitoring and evaluation of dairy development programs, maintain coordination among the public and private sector etc. are the main functions of these institutions. some of the important dairy related institutions in Nepal are given bellow:

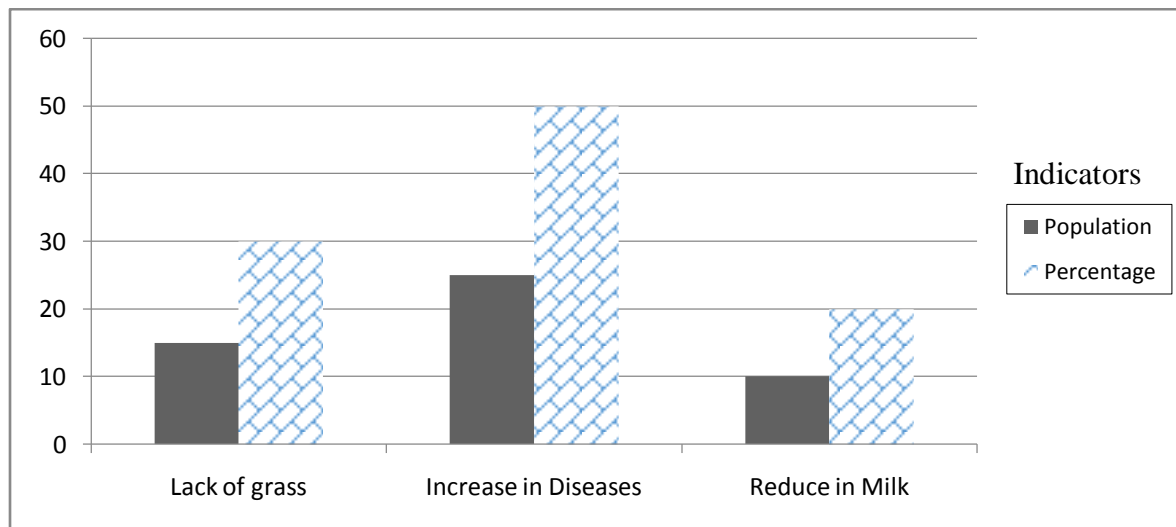
- Dairy Cooperatives
- Dairy Development Cooperation (DDC)
- National Dairy Development Board (NDDB)
- Department of Livestock Services (DLS)
- Department of food Technology and Quality Control (DFTQC)
- Department of Cooperatives (DOC)
- National Cooperative Development Board (NCDB)
- Private Sector

4.4.5 Climate Change and its Impact on Dairy Farming Nowadays

Climate change is threating issue for human and animal in the world. It creates different kind of problems on diversity, agriculture, health of human being and animals. The impact of climate change is increasing in Nepal also. Increasing temperature effects on health of Livestock and expended different kinds of transmitted diseases. There is lack of grass due to high temperature. Because of

extreme temperature there has been change in weather conditions. Climate change effects fodder species of dairy cattle and as some result dairy cattle give less milk. Dairy cattle owners were asked about impact of Climate Change on their farming. Impact of Climate change on dairy farming in the study area which faced by farmers have been presented below:

Figure No. 4.4: Impact of Climate Change



Source: Field Survey, 2017.

Figure No. 4.4 shows impact of Climate change on dairy farming in the study area. According to dairy 30 percent of respondent were felt that there is lack of grass, 50 percent of them were felt that there increase; in diseases and 20 percent of them were felt that that there is reduce in milk production in the study area due to impact of Climate change.

4.5 Milk Production in Ilam

Ilam district lies eastern part of Nepal. It is green and hilly area. The climate of Ilam is very suitable for livestock. Ilam district is famous for milk production in Nepal. There are many commercial milk farmers in the Ilam district. Milk production has increased by 4.75 percent in Ilam in the last fiscal year 2071/072 BS a compared to previous fiscal year.

The district produces 116,086 metric tones of milk in the last fiscal year against 110,817 metric tons in the fiscal year 2069/070 BS (DLSO Ilam). According to the District Livestock Service Office, Ilam artificial Insemination (AI) of cow and buffalo

is the main reason behind the increase in milk production. Farmers in the district are rearing improved cows in a commercial manner. A total of 33,371 improved cows in the district. Now farmers are getting good income from selling milk. There are laborious and commercial milk farmer in the Ilam district. People have changed their socio-economic life after involving in milk production activities. The total milk production of Ilam district is given below in VDC wise.

Table No.4.13: VDC wise yearly Milk Production in Ilam

SN	VDC	Milk Production (in Litres)		
		Cow	Buffalo	Total
1.	Amchok	2,70,561	3,43,167	6,13,728
2.	Ibhang	6,76,320	3,54,873	10,31,194
3.	Irautar	7,45,768	2,91,289	10,37,058
4.	Ilam Municipality	2,96,790	43,430	3,40,220
5.	Ekatappa	8,82,240	3,92,559	12,74,799
6.	Kanyam	34,43,987	1,00,191	35,44,178
7.	Kolbung	28,80,117	99,989	29,80,106
8.	Gajurmukhi	10,42,246	2,21,388	12,63,634
9.	Gorkhe	28,44,955	1,18,955	29,63,910
10.	Godak	29,51,694	93,425	30,45,119
11.	Shree Antu	29,21,046	20,877	29,41,923
12.	Chamaita	23,04,978	3,27,040	26,32,018
13.	Chisapani	10,10,205	1,64,030	11,74,235
14.	Chulachuli	20,72,739	3,58,495	24,31,234
15.	Jamuna	26,14,345	83,820	26,98,165
16.	Jitpur	32,70,317	3,14,957	35,85,274
17.	Jirmale	3,38,622	99,180	4,37,803
18.	Jogmai	15,51,313	1,22,808	16,74,121
19.	Danabari	9,03,658	3,24,795	12,28,453
20.	Dhuseni	26,57,013	3,29,871	29,86,884

21.	Nayabazar	15,42,367	2,17,790	17,60,157
22.	Namsaling	18,60,248	2,56,566	21,16,814
23.	Panchakanya	34,16,886	87,561	35,04,447
24.	Pashupatinagar	32,16,341	42,314	32,52,655
25.	Puwamajhuwa	24,41,410	1,04,750	25,46,159
26.	Pyang	20,78,257	2,25,050	23,03,307
27.	Phakphok	16,57,806	2,58,538	19,16,344
28.	Phikkal	35,00,061	22,647	35,22,708
29.	Phuyatappa	15,41,328	1,54,597	16,95,925
30.	Barbote	28,15,353	1,77,549	29,92,902
31.	Bajho	2,82,861	2,54,362	5,37,224
32.	Mahamai	14,50,103	1,84,252	16,34,355
33.	Maipokhari	37,94,903	1,06,165	39,01,068
34.	Maimajhuwa	16,01,351	1,12,798	17,14,149
35.	Mabu	20,84,708	1,24,377	22,09,085
36.	Mangalbare	31,64,557	3,61,400	35,25,957
37.	Laxmipur	37,21,486	93,526	38,15,012
38.	Lumde	14,11,091	2,14,237	16,25,328
39.	Samalbung	18,17,443	1,17,590	19,35,033
40.	Sakphara	13,27,432	3,72,438	16,99,870
41.	Sakhejung	35,83,197	1,41,652	37,24,849
42.	Shantidanda	27,24,524	2,67,436	29,91,959
43.	Shantipur	13,32,118	2,49,236	15,81,354
44.	Siddhithumka	18,21,700	3,52,590	21,74,290
45.	Sangrumba	23,01,306	3,05,992	26,07,298
46.	Sumbek	29,90,793	1,12,747	31,03,540
47.	Sulubung	35,33,533	2,31,218	37,64,751
48.	Soyak	11,14,022	3,16,583	14,30,605
49.	Soyang	10,11,520	3,35,245	13,46,765
	Total	10,08,11,622	1,00,06,370	1,10,81,799

(Source: DLSO, Ilam 2016)

4.6 Benefits of Dairy Farming

Dairy farming helps to minimize the problem of food deficiency in the rural area. It provides household food items to consume at household level. It gives regular cash income to farmers. For the generation of self-employment, the role of dairy farming is much appreciated. Rural people can change their living standard with the help of dairy income. Dairy farming supports to increase income generation activities in rural areas. The increased income supports to poverty reduction. Dairy farming helps to people for self employment. It creates employment opportunities for every member of family so, Dairy farming is an important source of livelihood in the rural area.

Dairy farming helps for the economic empowerment and self-reliant of women, landless and poor farmers who have no or less opportunity to engage in other activities. It supports to increase rural production and productivity. Dairy sector has important. It helps to reduce the problem of malnutrition. It has great important to supply of house hold nutritive food. It supports to sustain the rural economy. Dairy farming helps to supply of necessary raw materials for rural industry it has important role to promote rural entrepreneurship development Dairy farming has important contribution to increase. Gross Domestic Production (GDP) of the nation. It solves the problem of energy though bio-gas in the rural area. Bio-gas is an important for health saving of time and conservation of environment. It has important contribution to minimize the problem of migration for rural to urban area. Dairy farming helps to promote rural urban linkage. In this study. It is tries to present different types of benefits of dairy farming related to the study area.

a. Employment Generation

- Dairy farming creates employment in feeding for dairy cattle, earning of animal sheds milking and transportation of milk and milk products
- It provides employment for making dairy products like cream, yoghurt, paneer, cheese, kuruni, Chhurpi.
- It has important role to create employment opportunities for youth and supports for their self-reliant.
- It helps to generate employment for making of dairy products.

- management and accounting in cooperative and dairy shops also create employment.
- b. Source of Income**
- sale of milk and milk products increasing the income level of rural farmers
 - animal sale also the source of in the rural area
- c. Generation of Energy**
- Animal dung and urine is useful for Bio-gas generation. It reduces the cost for other energy fuels
 - Bio-gas helps to create good environment for household health and sanitation.
 - Bio-gas supplies the slurry for agriculture. It helps to organic agricultural production and reduce the cost of industrialization fertilizer.
- d. Household Food Supply**
- Dairy sector supplies nutritive foods and reduces the problem of malnutrition in rural area.
 - Milk is useful food item for the all age of people.
 - It improves the health conditions and fitness of body.
- e. Poverty Reduction**
- Dairy income helps to reduce poverty in rural area.
 - It saves the cost of chemical fertilizer and households energy fuels.
 - It supplies necessary foods for household purposes.
 - It helps to develop necessary skills and trainings for rural people.
 - It supports to rural entrepreneurship, which help to increase income of rural people and helps to poverty reduction.

Dairy farming is a major contributor for rural economy. It has important contribution to growth in national income. It is necessary to diversification and commercialization of dairy sector to promote an income oriented and respected occupation. There is no chance for gain profit from this sector without commercialization and diversification of this sector. Dairy farming has remarkable contribution for rural poor people, women, backwards and landless persons.

4.7 Opportunities and Constraints in Dairy Farming

There are many opportunities of dairy farming for rural development. Dairy farming provides income and employment opportunities to rural people. It supplies necessary of household consumption people can get good income from these constraints in the field of dairy farming which are given below:

4.7.1 Opportunities

Dairy farming has many opportunities to the rural people. Some of the important opportunities are presented below:

- Opportunities of utilization of local resources.
- opportunities o employment generation
- solutions of food deficiency problem of malnutrition in the rural area.
- Increasing demand of milk products is good opportunities for dairy farming.
- Growing tourism industries create more demand of milk and milk products.
- Donation of government has made favorable environment to this sector.
- Dairy sector helps to generate bio-gas from animal dung and urine. It reduces the dependency on forest for household energy and also saves the cost of industrial gasses.
- It has an opportunity of problem of rural-urban linkage.
- Dairy sector provides organic fertilizer to agriculture sectors. It helps on organic production.
- Possibility of increasing productivity.
- Establishment of dairy cooperatives in rural and urban sector. Dairy cooperatives are important channels for the production and supply of milk and dairy products.
- participation of private sector and coordination among government, cooperatives and private sector helps to development of dairy farming.
- Favorable climatic condition is another opportunity for dairy farming. It helps to growth of dairy cattle and its productivity.
- Utilization of traditional knowledge and skills.
- Source of livelihood.

4.7.2 Constraints

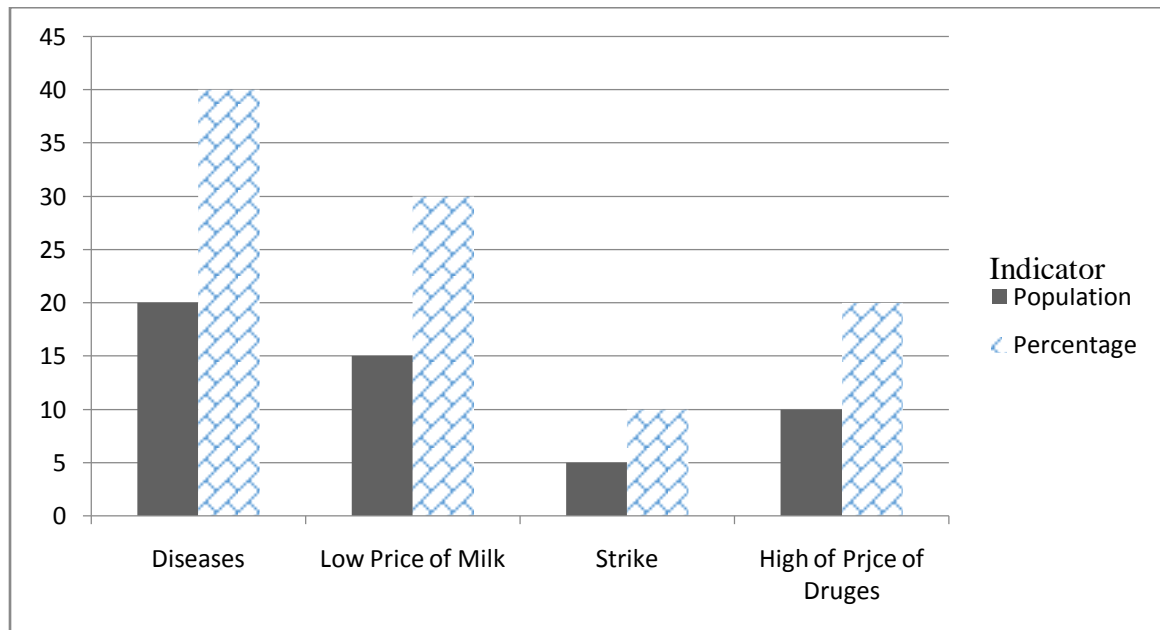
There are several constraints relating to dairy farming and livestock development in spite of the different opportunities. There is insufficient supply of appropriate inputs such as drugs, vaccines, pasture seeds and other fodder planting material, equipment, technical knowledge and improved dairy stock to support development of dairy farming in rural areas. Some of the constraint are given below:

- Expensive cost of transportation.
- Expensive cost of labor.
- Expensive cost of dairy equipment and burden of government tax system.
- Lack of long-term livestock development policy and no research attention to ward dairy farming.
- High price rate of cattle feeding and drugs.
- A regular strike creates challenge for collecting and supply of milk and dairy products.
- Lack of capital invest in this farming. No attraction of bank and financial institutions to invest in the rural area.
- Lack of trained veterinary doctors for treatment of dairy cattle and expensive service charge.
- Low quality of milk is constraint for this sector.
- Low price of milk and dairy products compared to its production cost.
- Majority of local breed of dairy cattle. It gives less milk but cost of farmers becomes high.
- Lack of human resources and technology supports in private sector.
- Inadequate fodder resources for dairy cattle.
- Milk holiday and poor marketing facilities.
- Problems of middle man.
- Lack of information market price.
- Lack of regulation by the responsible body or agency of the government.

4.7.3 Constraints faced by Dairy Farmers in the Study Area

Everything has both sides good and bad. Dairy farming has opportunities and benefits. There are also different kinds of constraints in this farming. In the study area, respondents were asked to mention the problems they perceived to constraint them in dairy farming. Constraints faced by the dairy farmers presented in the following figure of the study area.

Figure No. 4.5: Constraint Faced by Dairy Farmers in the Study Area



Source: Field Survey, 2017.

Figure No. 4.5 shows the different constraints faced by the dairy farmers in the study area. According to data, 40 percent of respondents were facing the constraints of diseases, 30 percent of respondents were facing constraints of low price of milk, 10 percent of them were facing the problem of strikes, and 20 percent of respondents were facing the problem of high price of drugs.

CHAPTER – V

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

Summary is a gist points of the study. In this study tries to estimate and evaluate the role of dairy farming in rural area livelihood of dairy farmers of Janahit Milk Producer Cooperative, Maipokhari VDC of Ilam district. All of the farmers have benefitted from dairy farming in the study area. The objective of this study is to find out the role of dairy farming in rural area's livelihood and to complete the course of Master Degree of Rural Development under Tribhuwan University. In this study, interview, survey and observation methods were used to collect primary data. For the secondary data, relevant publications news papers, journals and other related reports were studied.

Dairy farming is an important rising factor of the rural areas people's living standard. Many farmers have improved their socio-economic living standard after involving this farming. It has helped to farmers for increase income and creation of employment opportunities. Dairy sector is important source of income and means of poverty reduction. It has important role to increase purchasing power of people. Dairy farming has great role in supply of household items and helps to minimize the problems of malnutrition. It makes easily to farmers. Expenditure in education, health and food. Bio-gas farm also helps to supply energy for household purposes. Dairy farming supplies organic fertilizer for agriculture sector. The following major findings are included as summary in this study.

- There are 200 households are involved in dairy farming at the study area. Among the total households only 25 percent 50 households are selected for the study.
- There are most of traditional animal sheds. They are made from local materials.
- People sell their milk at milk producer cooperative and they get payment twice in a month on the basis of the quality of milk.

- In the study area, dairy farmers are facing different kinds of impacts of climate change. Like; lack of animal feeding, increase diseases of dairy cattle.
- There is majority is he households have not installed of bio-gas plant in their house. It is necessary to explain the important of bio-gas plant in the study area.
- Farmers are involved in livestock and agriculture sector in the study area. They produce crops and livestock as an integrated approach so farmers can success to grow organic production.
- Dairy farming is very helpful occupation for rural poor people, women and those people who have less land for other agriculture practices. It has well contribution for economic empowerment and self-reliant of women and other resource poor community.
- The role of cooperative is found much appreciated for the improvement of socio-economic life of rural people. It has helped to rural people for employment, income generation, poverty reduction, education, health and credit flow.
- People have get employment opportunities for feeding of dairy cattle, cleaning of animal sheds, making dairy products, marketing and transportation of milk and milk products in the study area.
- Farmers are benefited from cooperative from different ways in the study area. Cooperative has provided training and credit facilities to the rural farmers in the study area.
- No any one of the farmers in the study area, have insurance their dairy cattle, If there is dies their dairy cattle, farmers will bear great loss.
- In the view of dairy farmers, they are more benefitted from the income of dairy than the income of agriculture in the study area.
- In the view of farmers, poverty has been reduced with the help of dairy income. Dairy farming has contributed to solve the problem of food deficiency, most of the households are success to improve their socio-economic condition with the help of dairy income most of they use their dairy income for food purpose in the study area.

- Most of the farmers have not technical knowledge about their occupation. They have not knowledge of market price. So, there should be provided knowledge about dairy farming.
- Dairy farmers are suffering different kinds of constraints in the study area. Like, they are facing the problem of low price of milk, attacks different diseases to cattle, high price of drugs.
- Dairy farmer has raised different kinds of views for the successful of dairy farming. According to their views, there should be increased the milk price, establishment of veterinary centers, management of training and marketing useful policy formulation providing incentives.

5.2 Conclusion

Dairy farming is an important factor to uplift livelihood for the rural development in the study area. It creates different kinds of opportunities. There are employment opportunities income generation and poverty reduction etc. in the study area with the help of this farming rural people have changed their living standard. The role of dairy farming in poverty reduction and to create employment opportunities is much appreciated. In the lack of employment, dairy farming has provided employment opportunities for every members of the family. The people who have less land or no land or poor for other agriculture activities dairy farming is very important income oriented occupation for them. Dairy farming is achievement contributor for economic empowerment and self-reliant of women, backward and poor communities in that area.

Dairy farming has helped to reduce the problem of food deficiency and problems of malnutrition in the study area. It has supplied the necessary food items. Milk and dairy products is very useful for the people to maintain their physical and mental development. It has helped to increase the purchasing power of people in the study area. People can use the dairy income for their food, education, health construction of house. and animal sheds, land purchase and saving. Dairy farming and agriculture are interrelated sectors. Dairy farming supplies compost fertilizer to agriculture and agriculture sector provides necessary crop residues for doing cattle. The role of

cooperative is the most important for the production, collection, processing and marketing in the study area.

Dairy farming is a helpful occupation to uplift living standard in the rural areas. It has great role to socio-economic improvement of rural people in the study area. The dairy farming has important contribution to rise the economic condition of women, landless and poor in the rural areas. The income from dairy farming, it is necessary to transformation of traditional farming system. Commercialization and diversification is needed for the proper development of dairy farming. Likewise marketing facilities is also important indicator for the development of dairy sector. Therefore, management of marketing facilities, available of technical knowledge, establishment of veterinary loan facilities are need to gain more income from dairy farming.

5.3 Recommendations

Maipokhari VDC's ward numbers 7 and 8 have been selected to study role of dairy farming in the rural area. Many kinds of role of dairy farming have been studied in the study area. Dairy farming has important role to fulfill the basic needs of rural people. It is necessary to improve this occupation as a profit oriented rather than subsistence farming system. To orient the dairy farming for commercial occupation some of the recommendation are prepared as follow.

- There is necessary to insurance of dairy cattle in the study area. It helps to compensate the milk farmers economically in some extent if their dairy cattle die.
- The loan mechanism of banks and other financial institutions should be simplified and made to the rural and far remote area. Without more capital farmers cannot establish and operate dairy farm.
- The government should pay attention for promote this sector and provide different subsidies for the dairy equipments and other charges. The tax of government for dairy instrument should be discounted.
- There should be fixed the scientific price rate of milk products on the basis of its production cost. It is necessary to increase the price of dairy product with changing price of dairy of dairy inputs.

- There should be pay on market orientation and commercialization. Without market facilities, there is impossible to proper development of dairy sector.
- There should be started village road development programs early as possible. It helps to collect milk from the remote area.
- There is necessary to pay research attention on dairy farming. The result of research helps to find out the problems and solving measures of dairy farming.
- There should be given training to dairy farmers about scientific knowledge and new technology. For the handover of knowledge and technology for improvement farmer's livestock.
- There should be established veterinary service centers in the study area. In the lack of for treatment of their cattle.
- It is necessary to encourage the farmers towards artificial insemination for breeding of dairy cattle. AI helps to farmers to produce more milk, improve in cattle breed and reduce from different kind of transmitted diseases.
- It is recommended that, there should be planted different type of hybrid grasses in barren and to fulfill lack of green grass.
- There should be managed of community forest. It provides feed for dairy cattle. There should be proper utilization of local resources and people's knowledge.
- There should be constructed modern type of animal sheds for their dairy cattle. Modern type of shed helps to prevent dairy cattle from diseases. It is also easy to clean than traditional type of animal shed.
- There should be installed bio-gas plant in the study area. Bio-gas plant reduces the dependency on forest for household energy consumption and it has great contribution to health, sanitation and environment conservation.
- The government should be managing of capital and other necessary materials for the farmers to establish home dairy. Home dairy helps to farmers to get actual price of their dairy products.
- It is necessary to establishment of milk chilling centers in he study area. It helps the farmers to protect their milk and dairy product for many days without damages.

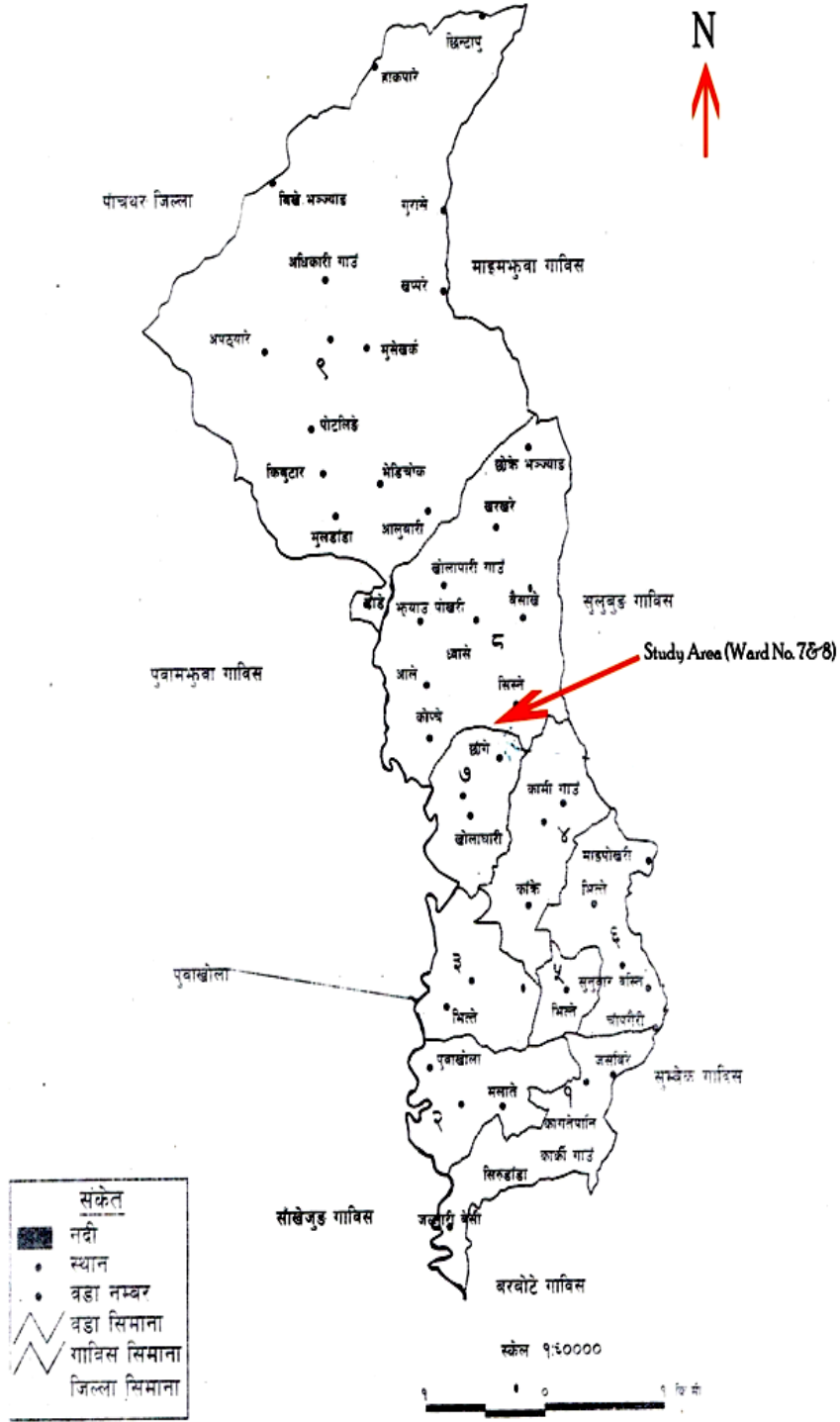
- It is recommended that, there is appropriate coordination between farmers and cooperative is needed. It helps them for more commercialization and profit oriented in their business.
- It is necessary to diversification of dairy product according to the demands of the consumers. Successful business depends on satisfaction of its consumers as well as dairy producer should be produced hygienic dairy product for the consumer.

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Maipokhari VDC Map



Annex - I

Questionnaire

Role of Dairy Farming in Rural Area.

(A Case Study of Janahit Milk Producer Cooperative, Maipokhari)

Intrduction:

Collection Date:

General Information

1. Name of interview:
2. Total Numbers of family:
3. Education: Age:
4. How many years consumed that your family involved in Dairy farming?
.....
5. How many dairy cattle you have?
.....
6. How much milk sell you daily?
.....
7. How much price you have of milk per litter?
.....
8. Are you satisfied with the price of milk? (A) Yes (B) No
9. Monthly average income?
10. Have your own land for farming? (A) Yes (B) No
11. Have your own grassland?
12. Have your installation bio-gas from animal farm?
(A) Yes (B) No
13. What is the means of transportation of milk?
(A) Bicycle (B) On foot (C) Others
14. Have you any technical knowledge about dairy cattle?
(A) Yes (B) No
15. What types of disease attacks your cattle?
16. There is available of veterinary services in your village?

17. Have you any information about livestock policy of government?

(A) Yes (B) No

18. What types of shed for dairy animal you have? (A) Traditional (B) Modern

.....
21. Is the income from this occupation enough to meet of your families need?

(A) Yes (B) No

22. Have your knowledge about market price? (A) Yes (B) No

23. Do you think poverty has been reduced by involving in this family?

(A) Yes (B) No (C) Do not know

24. Mainly for what purpose do you use of dairy income?

(A) Food (B) Education (C) Health (D) Saving

25. How do you spend your income?

(A) Independently self (B) Depending others

26. Your village is connected by the road? (A) Yes (B) No

27. Do you sell your agriculture products? (A) Yes (B) No

28. In crops and dairy which gives more income?

(A) Crops (B) Dairy (C) Equal

29. How far the forest from your village? (A) Far (B) Near

30. What types of feeding do you give your dairy cattle?

.....
31. How many members of your family are employed ion this occupation?

.....
32. Are you satisfied with your occupation? (A) Yes (B) No

33. How many collection centers in your village?

.....
34. Dairy farming has helped to reduction the problems of food shortage?

(A) Yes (B) No

35. What are the benefits have you gained from the area farming?

36. After involving this sector what type of improvement seen on your family?
37. General improvement (B) Good improvement (C) No anything improvement
38. Do you see cattle manure? (A) Yes (B) No
39. If cattle manure is used, have you realized increased in crop production?
(A) Yes (B) No
41. Have you get loan facilities from Co-operative? (A) Yes (B) No
42. Do you use crop reduce for cattle feeding? (A) Yes (B) No
43. Have you got any kinds of training from Co-operative?
(A) Yes (B) No
44. What types of role of Co-operative are you found?
(A) general (B) good (C) Better (D) Excellent
45. Is there any facilities of medicines and services of dairy cattle in Co-operative?
(A) Yes (B) No
46. What types of constraint have you faced in this occupation?
47. low price of milk (B) Diseases (C) Strikes (D) High price of Drugs
48. Mainly what types of that impact of climate change have you felt in your farming?
(A) Lack of grass (B) Increase in diseases (C) Reduce in milk
49. What types of role of this occupation are you found to woman empowerment and self - reliant?
(A) General (B) Good (C) Very good

Annex - II

Checklists

Date:

Respondents Name:

Position:

Age:

Sex:

1. What is the impact of Dairy farming in improving economic conditions of farmers?
2. What is the role of this occupation to solve the problem of food deficiency?
.....
3. What is the role of this farming to solve the problem of unemployment?
.....
4. Dairy farming has support to economic empowerment of women?
(A) Yes (B) No
5. Is here, mainly which breeds dairy cattle are reared by the farmers?
(A) Local (B) Hybrid
6. Is here what type of sheds are constructed for cattle?
(A) Traditional (B) Modern
7. What are the constraints are facing by the farmers?
.....
8. There is good quality of dairy products?
(A) Yes (B) No
9. Are farmers satisfied with the return of their products?
(A) Yes (B) No
10. What is the role of Co-operative?
(A) Good (B) Satisfactory
11. What are your comments for the betterment of dairy farming in this area?

Research related photographs



Data Collection with Respondents



Respondents are collecting Milk in their cooperative