CHAPTER-I
INTRODUCTION

1.1 Background of the Study

Dairy co-operative is a business institution which is controlled by dairy farmers, who are the members of organization with equal share capital and produced milk for own co-operative. Dairying activities started since 1952 in Nepal, by the help of FAO. Nepalese farmers formed a co-operative for effective milk business in Tusal village of Kabhre district in 1981, with the encouragement of Dairy Development committee (DDC) named Milk Producers Associations (MPAs). Since that period of time till now 1764 dairy co-operatives are running smoothly with share capital ofRs1649 billion, more than 10 lakh population are engaged on it under the dairy development policy 2064 (MoF, 2073).

To minimize the problem of dairy farmers, it helps through improving in instrumental upgrading, supplying cattle feed and fodder, and improving management capacity of farmers. These co-operatives help poor and small farmers for milk production, income generation, creation of employment, mobilizing rural resources, and upgrading the members' knowledge of entrepreneurship, leadership, way to unite and ideas of solving problems as well as technical aid. It encourages to farmers on empowering and fulfill their needs among group and helps to catch the assess to more assets. Co-operative is a socio-economic system it can fulfill peoples' needs through using local limited means and resources. Co-operative is very useful instrument for rural development of Nepal. It creates employment, generate income, marketing of farmers milk, supplying inputs and output of production, it encourage to commercialized farmers to grape more profits, and we feeling among members. So socio- economic development of rural Nepal is possible through dairy co-operative.

Nepalese agriculture system consists livestock farming and crops farming. But both are subsistence farming. So it is urgently necessary to separate and commercialization of livestock farming from the traditional crop farming. Farmers are used livestock not only for milk but also for other purpose like for labor (Bullock), production, manure production, religious purpose, meat and using the dung for bio-gas and bio-mass energy production. Livestock farming support to supply of meat, milk and its allied

product which is very necessary for humankind till birthing time to old age.

Major dairying animals in Nepal are buffalos and cows. Goat and yak milk also use to make cheese. Dairy farming has potentialities all over the Nepal. According to economic survey 2070, now Nepalese farmers have 72,74,545 no. of cows and 52,42,288 no. of buffalos, among them 10,25,667 cows and 13,17,120 buffalos are milking. The total production of milk was 16,81,000 metric ton. The contribution of cow is 4,92,377 metric ton (29.3%) where as remaining 11,88,716 metric ton was contributed by buffalos (70.7%).Likewise the share of meat production (buffalo and its calves) was 59.3 percent(1,75,145 metric ton) in total production. The government of Nepal provided loan for livestock through 202 co-operatives to the 24,506 farmers an amount equal to Rs1.55 billion. Among the loan 45 percent spend on buffalo farming. Nepal government subsidizes 28,299 livestock's insurance of 70 thousand households (MoF, 2073).

In Nepal dairy co-operative have both opportunities and problems. Dairy sector is playing a crucial role not only reducing imports but also creating employment and generating income to fulfill daily necessity of rural households. So government of Nepal realized rural development is possible through livestock farming. So government is supporting continuously to livestock farming by various way like bank loan, livestock insurance, training, technical support, infrastructure development, seminar, marketing of milk and encourage for the community livestock farming. Dairy development Corporation (DDC)the government agency for supporting dairy co-operatives and farmers by marketing of farmers' milk and helps to pull urban money to the rural village.

Although having the above opportunities dairy sector in Nepal is victim from many problems like small holder are suffering from import of cheap powder milk from aboard, lack of monitoring and subsidy from government and non governments to DDC, increasing the rate of animal feeds, management of barren cattle, marketing and processing of milk and its by product and low rate of return. So it is critical to promote smallholder dairy farming.

1.2 Statement of the Problem

The practices of dairy farming in Nepal have been long period. It was started with crop production system for compost and self consumption. Bio-diversity and diversity of geographical locations of country, lead livestock farming is only favorable occupation for rural people. The availability of pasture land in hilly region and maximum production of crop and its' by product in tarai region, diversity of climate, disguised employment into crop production and unemployment lead to livestock farming. The livestock farming is basic factor of dairy production. It is an integral part of agriculture. Dairy farming is becoming an important tool for rural development. Now a day c-operatives are supporting and encouraging to farmers and becoming a bridge to pull urban money to village, to create employment, to utilize local resources. Every rural household of Nepali keep animal for their compost. Livestock farming is a component of agriculture and eco-friendly and source of neutrinos food, source of alternative energy, i.e. bio-gas and bio-mass, source of raw materials for food processing factories and liquid food for human. Dairy farming in Nepal is not separated from crop production. Cattle are keeping for the purpose of crop production since land are being cultivated. It led to subsistence agriculture in Nepal. Most of the Nepalese farmers are traditional and lack of dairying knowledge, they do not care of the production cost and selling price of their product. They pose little knowledge on medicine and health care of livestock, shed management, improved seed, marketing of their product, easy loan facility, farm management etc. Output of this sector is very low because of dirty competition among farmer, exploitation of middlemen and excessive investment of resources including human powers, lack of supporting from I\NGOs, low rate of profits, increasing the rate of cattle’s food and fodder, lack of improved and qualitative seed, A.I. lead depression to farmers towards the occupation.

Milk is sensitive agriculture product. It is necessary to manage on time otherwise it will destroy. Expensive and advance tools and equipment are needs to manage it properly. A single farmer cannot pay for these tools and equipment. So, farmers insist to create such dairy co-operatives to protect their common interests. Dairy co-operative have has such instruments to protect farmer’s milk collection in the co-operative. Co-operative managed farmer’s milk by chilling centre and marketing.

Dairy producers' co-operative can be an instrument to socio-economic development of rural Nepal. It is necessary to examine in depth of the functioning of dairy producers' co-operative so as to identify the problems. This present study is only one attempt in this direction with GDPCL as a model of dairy producer's co-operative organizations. This study also focus the condition of dairy farming, farmers' socio-economic condition and problems related to dairy farmers and working pattern of the co-operative and other management system of co-operative. Lack of adequate supports of government dairy co-operatives are not working satisfactorily. On the back drops of their basic problem this study tries to address some research questions.

- What are the dairy production and income earning of GDPCL?
- What is the functions and performance of GDPCL?
- What are the problems of dairy Co-operatives and dairy farmers of the area?

1.3 Objectives of the Study

The main objective of the study is to find out the role of dairy co-operative in rural development of the study area. The specific objectives will be as follows:

- To analyze the dairy production and income earning from dairy cooperative in the study area.
- To assess the functions and performance of Gauriganj Dairy Production Cooperative limited.
- To examine the problems Dairy Cooperative of the study area.

1.4 Significance of the Study

Nepal is predominantly rural with 83 percent population living in the rural area and most of them are engaged in agriculture and livestock farming subsistence. The economic survey 2070, shows that the contribution of agriculture sector is 34.3 person on National GDP. Dairy co-operative is importance for the country like Nepal where the geographical situation helps for livestock farming. Milk is being a tool of cash income for rural farmers which they can use as running money. Rural farmers felt that an organization or co-operative was a good way to work together. It creates employments invest on training, education, health care, technical knowledge of

livestock for their members. The members of dairy co-operative felt secured. It also leads them to make unity in the society of we' feeling among members.

Co-operative had significantly contributed to the mobilization and distribution of financial capital by creating employment and income generation opportunities for both their members and non members. It also helped to reduce inequality and exclusion in the society by enabling those willing to join co-operative to generate income. Now a day co-operative becoming the preferred instruments for mediating peoples approach to means of production that they utilize to participate in business activities.

1.5 Limitations of the Study

This study had budget and time limitation like most others. Because each and every research has its own limitation. The study is very specific like that of the case studies. This study will be covered only on dairy co-operative named "Gauriganj producers' co-operative" and dairy farmers related to the GDPCL of Gauriganj of Chitwan. So, the research is limited to a particular area of Chitwan. The findings and conclusions of this research may not be generalized equally to the other parts of the country due to study is based upon retrospective information.

1.6 Organization of the Study

This dissertation report is divided in to five chapter. The first chapter discusses the introduction of the study. Including the statemnt of the problems, objective, defination of terms signification of study, limitation of the study along with organization of the study.

Literature has been reviewed in chapter two. This chapter deals about theoretical over view co-operative norms' and values of co-operative, historical development co-operative and it's role of development process. The research method used including the rational for the selection of the study, area, the research method use including the rational for the selection of the study area, research design, natural source of data sampling procedure data collection tools and technique. Analysis of data reviewed in chapter three. The four chapter deals' cbout the. Age wise distribution of sampli,

educational status occupational background of dairy farmers, land holding pattern and problems prospect of dairy co-operative and dairy farmers.

The chapter five also examine with summary and major findings of dairy co-operative problems faced by dairy co-operative, conclusion and suggestion recommendation are presented.

CHAPTER-II
LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Conceptual Meaning of Co-operative

Co-operative was founded from Latin world "co-operai" where co' means together and "operai' means working together with another or others. Working together for member is the initial concept of co-operative. The co-operative is a member centered business (Poudel, 2012). In 1995, the international co-operative Alliance (ICA), the apex organization that represents co-operative worldwide, defined co-operatives as an autonomous association on persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprises" (ICA,1950).

Co-operatives are organizations for mutual benefit, where members own control and benefit from the co-operational output. The objectives is first and for most serve members' interests, rather than that of capital invested and to adopt democratic control for socio-economic output to make distinction between co-operatives and other forms of business. Co-operatives are based around the concept of self-help self-responsibility and self organization. Co-operative is community based business. The basic characteristics of co-operative that differentiate it from other types of business are its principle, values and norms (Bharadwaj, 2012).

2.1.2 Values and Principles of Co-operative

Self help, self responsibility democracy, equality, equity, solidarity, honesty, openness, social responsibility and caring for other are the important values of co-operative.

The Rochdale principles are a set of ideals for the operation of co-operatives. They were first set out by the Rochdale society of Equitable Pioneers in Rochdale, England, in 1844, and have formed the basis for the principles on which co-operatives around the world operate to this day. The implementations of the Rochdale principles are a

focus of study in co-operative economics. The original Rachdale principles were official adopted by the International co-operative Alliance (ICA).The Rochdale principles of co-operative according to the 1996 ICA revision are as below:

- Voluntary and open membership
- Democratic member control
- Member economic participation
- Autonomy and independence
- Education, training and information
- Cooperation among co-operatives
- Concern for community (ICA, 1996).

2.1.3 Historical Development of Dairy Co-operative

The dairy co-operatives in the U.S.A. was began in the early 1800s. The Associations that might be called co-operatives were started shortly after the beginning of the nineteenth century. Although these organizations were not properly qualified as co-operatives under modern co-operative but it had distinct character of co-operative. To obtain standardized quality, uniformity of grade, and large quantities of dairy products required co-operative movement among dairymen was the promotional effort that was made by manufactures of creamery equipment to interest farmers in co-operative associations.

It was reported that, the first US co-operative was creamery built at Goshen, Connecticut, in 1810. In 1841 Wisconsin farmers around Rock Lake, Jefferson County made their cheese collectively at the home of farm. Pickett.

In 1851, the so-called ‘American system" of associated manufactures of cheese was evolved at Rome. In 1856, a butter factory was established at Compel Hall, Orange County; New York. The early cheese rings of the Jura Mountain of Europe where the Swiss and French peasants made their well-known cheese collective. Cheese, butter plants and creameries proved popular and successful. Dairy farmers set examples of co-operative activities and had established more than 400 co-operative dairy processing plants by 1867. These were organized as local co-operatives, but in 1913 representatives of cheese factories in Sheboygan County, Wisconsin organized the

first federation of cheese factories. The organization of County creamery association in northwestern Wisconsin and in Minnesota later federated into an interstate unites in 1921.

Among the producers of fluid milk for city consumption purposes where there main types of co-operative efforts

- Co-operative retail distribution started around 1822.
- Co-operative whole seller distribution of milk started in 1899
- Collective bargaining between farmers and private distributors began in 1909.

The first important attempt by dairy farmers at bargaining for higher milk price was in Chicago market. The milk shippers central union the Northwest (1887-1891) proposed to monopolize milk suppliers. Dairy co-operative saw the need to become more politically active. Dairy co-operatives across the U.S. organized the National milk Producers Federation in 191(CroppandGraf, 2001).

The Nepalese co-operative concept is the form of Guthi, Parma, Dhikuri, Dharmabhakari etc has been used from a very beginning in Nepalese societies. Characteristics of these historical social institutions are almost resembled with primary form of co-operatives. For the institutional development of such societies, the then government aimed to adopt co-operative system as a means for economic social and cultural development of the people as well as an appropriate and effective tool for rural development. The then government established the Department of Co-operative under the Ministry of planning, development and agriculture in 1953 A.D. The modern co-operative movement initiated from Rapti Valley (Chitwan District) as a part of flood relief and resettlement program. At the first time 13 credit co-operative societies established in 2013B.S. were provisionally registered under the executive order of the then government which got legal recognition after the enactment of Co-operative Societies Act 2016 B.S. The first Co-operative Societies Act was revised several times and it was replaced by the Sajha Societies Act in 2041B.S. After the restoration of multiparty democracy the Sajha Societies Act was replaced again by the Co-operative Act 1992. The Department of Co-operative has provided the authority for registration and regulations of co-operative societies/unions/federations under the Acts (GoN/Co-operative Department, n.d.).

Co-operatives are based on the values of self –help, self-responsibility, democracy and equality. In the tradition of their founders co-operative members believe in the ethical values of honesty, openness, social responsibility and caring for others. Such legal entities have a range of unique social characters. Membership is open, meaning that anyone who satisfies certain non discriminatory conditions may join. Economic benefits are distributed proportionally according to each member's level of participation in the co-operative, for instance by a dividend on sales or purchases, rather than divided according to capital invested. Co-operative may be generally classified as either consumer co-operative or producer co-operatives. Co-operatives are closely related to collectives, which differ only in that profitmaking or economic stability is placed secondary to adherence to social-justice principles (Poudel,2008).

2.1.4 Role of Co-operatives in Rural Development

Co-operative is community business. Co-operative in Nepalese rural context can potentially support breaking down the vicious cycle of poverty. Co-operative mean for income, social, and perception based poverty reduction. Upcoming challenges are result of weak legal institutional arrangements with weak monitoring. A rupee in co-operative means different from a rupee in commercial bank from poverty reduction perspective. Government should be sincere regarding the sum of money in co-operatives and also the value of services in most trust worthy and easiest way in those areas where private areas don't feel comfortable. Co-operative movement also meant poverty reduction before tragedy of collapse down, it is better we manage co-operative in principle and norms. This the most important challenge in turning co-operative towards poverty reduction sector. A lot can be expected from ethical and domestically institutionalized co-operatives in rural Nepal (Bharadwaj, 2012).

While farmers" co-operatives of various types play a useful role in promoting rural development. Dairy co-operative have special attributes that make them particularly suitable. Among these they can facilitate the development of remote rural economics, thus up grading the standard of living of the poor. The main constraint that milk producers seek to overcome by acting collectively is the marketing of their product the need to be assured of a secure market is a real one. It can be met by dairy farmers co-operatively establishing their own collection system and milk treatment facility in order to cover their perishable primary products with longer keeping quality for

marketing purpose.

In developing countries in Asia and Pacific Region the dairy co-operative has been recognized as an important means of organizing the supply of agriculture inputs, processing and marketing agricultural produce and providing agricultural credit, among other related activities. It has proved to be a strong economic institution and vehicle for improving the condition of the impoverished rural population. Co-operatives provide farmers with an organizational arrangement at the grass roots level to assist them in planning decision making and implementing schemes that involve them and their families and that area designed raise their socio-economic standards. The common need of milk producers is to obtain a fair price for their milk and this is fulfilled through collective marketing. Milk is considered to be one of the most sensitive agricultural commodities, requiring special and timely care and this can be provided conveniently as well through the collective operation of co-operative dairy societies. Apart from the collection and marketing of milk. Other services, such as dairy inputs, extension services, veterinary health care, artificial-inseminations services, provision of animal feed, fodder, seed planting materials, fertilizers and credit and training and education, can also be providing through co-operatives. These would act as business associations owned operated by members for their entire benefit (Votila and Dhanapala, n.d.)

2.1.5 Overview of the Dairy Industry

Processing and marketing of milk are important levels of dairy development and growth of the industry. Kenya has one of the largest dairy industries in sub-Saharan Africa with a milk market share of 24 percent in the region (Karanja, 2003). Smallholder farmers are the major suppliers of raw milk to the dairy cooperative societies in the country and especially in the high potential areas (Karanja, 2003). According to Falvey et.al. (1999), the future for smallholder dairy development will rely on continued research and education of smallholders themselves. Research needs to challenge existing assumptions and acknowledge integrated systems and the central role of smallholders while focusing on technical parameters of breeding systems, herd recording, feeding systems, production of breeds, management of reproduction and health, multiple uses of animals and milk harvesting systems. The strong social research requirement of smallholder dairying in the tropics contrasts

with that of dairy research in more developed countries while the technical elements share common scientific bases. The future for individual countries in smallholder dairy production is likely to vary according to the stage of development of a country, the relative levels of market protection, and an understanding of smallholder dairying by international development agencies.

There is a great deal of variation in the pattern of dairy production worldwide. Many countries which are large milk producers consume most of this internally, while others for example, New Zealand, export a large percentage of their milk. Internal consumption is often in the form of liquid milk while the bulk of international trade is in processed dairy products such as powder. Most milk-consuming countries have a local dairy farming industry and most producing countries maintain significant tariffs to protect domestic producers from foreign competition. According to Food and Agriculture Organization (2009), the largest worldwide milk producer is the European Union. By country comparison, the largest milk producer is India while the largest exporter is New Zealand, and the largest importer is China.

The quantity of milk (yield) produced in a year by an animal varies enormously according to breed, feed and management practices. The world average of 2,300 kg/year per cow is somewhat meaningless because it is influenced heavily by the large numbers of poor-yielding animals in less developed countries across the globe. In many developed dairying countries, yields are typically 4,000–5,000 kg/head and exceptionally reach 6,000–8,000 kg/head in particular intensively managed enterprises. In such systems, cows will be selected on the basis of yield and the calving interval. The world milk production after stagnating in 2009 rebounded in 2010 and is expected to grow initially in excess of 2% annually for the next three years, causing prices to decline. As prices adjust downward, the growth in milk production after 2013 is expected to be less vigorous (Food and Agriculture Organization, 2010). The average dairy industry annual growth for the next ten years is projected at 1.9%, compared with the 2.1% average annual growth experienced in the past decade. Between 2010 and 2020, world milk production is projected to increase by 153 metric tonnes. The majority, 73%, of the additional milk production is anticipated to come from developing countries. India and China alone account for 38% of global gains. The global milk production share of developed countries is expected to fall below 50% while the milking animals share drops below 10% by

2020. In contrast, the share of Least Developed Countries (LDCs) in global milk production will remain at only 4% while their share in global animal inventories is nearly 30%. The large disparity between the share of milk production and inventories between developing and developed countries is, to a large extent, a consequence of an enormous gap in milk yields, but also the reliance on sheep, goats and camels as milk animals, which have inherently lower yields than milk cows. New Zealand and Australia (Oceania) presence on the international dairy markets has increased considerably after the elimination of domestic support and deregulation, but also after reduced market participation of some traditional exporters (notably from the European Union). The global export market share of Oceania has risen from 20% in the 1980s to more than 40% today. The region has become an important driver of global dairy markets with milk production predominantly based on lower cost pasture systems that are less influenced by movements in feedstock prices but more dependent on weather conditions.

According to Food and Agriculture Organization (2009), New Zealand accounts for only two per cent of world milk output but is the second largest seller of manufactured milk products on the world market, exporting 80 per cent of its production and accounting for around one quarter of export sales on a milk equivalent basis. Australia produces less than two per cent of world milk, exports 45 per cent of total production and accounts for around ten per cent of export sales. The major exporter is the European Union which provides 47 per cent of all export sales. During the 1990s the United States increased exports following the 1990 Farm Bill's export enhancement provisions and supplies eight per cent of world exports. The European Union, New Zealand, Australia and the United States account for 90 per cent of total world exports with the remaining 10 per cent of exports coming from other exporters such as Canada, non European Union countries of Western and Eastern Europe, Argentina and Uruguay. In recent times, Poland and the Czech Republic are increasing exports of milk powders, and the Baltic States are also playing an increasingly active role in world trade. Dairy products from these newer exporters go mainly to the Middle East, Central and South America, North Africa and South East Asia.

2.1.6 Milk Cold Chain

Milk being a highly perishable commodity that deteriorates quickly under ambient temperature, cold storage is the best method for its preservation (Grimaud et.al. 2007). Milk quality across the value chain could be improved through changing milking practices to ensure better hygienic conditions and improvement of milk handling and storage conditions maintaining the cold chain. Once the cows are milked, tropical environmental conditions make it difficult to keep milk without refrigeration, so milk is usually delivered soon after milking because it has a short self life if left to stay in the natural environment. It is then boiled before use or converted to other products such as ghee, cheese, fermented, and concentrated products.

An unbroken cold chain is an uninterrupted series of storage and distribution activities which maintain a given temperature range. It is used to help extend and ensure the shelf-life of products such as fresh agricultural produce, seafood, frozen food, photographic film, chemicals and pharmaceutical drugs. According to Cameron L.(2008) raw milk is approximately 99-102 degrees Fahrenheit (37.2-38.9 Degree Celsius) as it comes from the cow, and needs to be chilled to 40°F (4.4 Degree Celsius) as fast as possible, preferably within an hour of milking since bacteria count doubles every 20 minutes at body temperature. Chilling the milk fast ensures a longer shelf life and it just tastes better. Milk will have less off flavors if it is chilled quickly and stays cool. If milk does not stay cool, it will sour and separate. Rapid cooling inhibits the lacticacid bacteria which causes milk to sour and will also inhibit the growth of bacteria. The bulk tank at the farm is the beginning of the ―cold chain‖. For optimal preservation of the milk quality, the milk should be cooled as quickly as possible and kept cool during transportation, storage and us .

According to the Singapore Standard (2002, the establishment and sustaining of the Cold Chain are essential ingredients for upholding the safety of consumers and the protection of public health while preserving the nutritional and sensory qualities of perishable food products such as milk and dairy products. Furthermore, the Cold Chain adds on an additional dimension in extending the much desired shelf-life of

food products without increasing health risks, by holding back microbial spoilage while maintaining the original intrinsic characteristics and qualities of the product.

According to Kisaalita W. S. (2010), the dairy market in sub-Saharan African countries is separated into two main channels namely an informal channel and a formal channel. The formal channel includes milk collected from the farmers, cooled at a collection center and then transported to central processing facilities which may be private or public, where it is processed, packaged and marketed locally or exported to neighboring countries. The informal channel includes milk that is marketed directly from the farms, usually without any processing. In the informal channel, most of the morning milk collected on the farm is either sold to local or periurban markets or private collection centers that in turn sell directly to the urban public. Transportation to collection centers or urban markets is often done on foot, on the back of a bicycle and by public means. Once the milk reaches the market, it is sold as is to the consumer. The morning milk can be taken to markets because it is daytime and people can safely travel on roads. Since traveling at night might be unsafe and milk is highly perishable and cannot be kept till the next day without preservation, the evening milk is used for the farmers' families and the surplus is either sold where a local market exists, processed into low value products like ghee, or wasted. The refrigeration option is not available to most smallholders, as they do not have access to grid electricity and kerosene refrigerators are not economical and difficult to maintain. The high postharvest losses, especially during the rainy season present an opportunity. The advent of sophisticated modern technologies which are employed in food processing, manufacturing and packaging have revolutionized the whole concept of food preparation and delivery. These have a significant impact on the perception and expectations of consumers towards food safety and quality. Twining of sophisticated food production techniques with attendant proper management of the Cold Chain for perishable food products is an inseparable and natural outgrowth of recent advances in sciences and technologies. Proper management of every link of the Cold Chain constitutes an integral part in the production and delivery of wholesome milk and dairy products to the consumers. Complementing this is the careful management of the temperature profile of the supply chain, starting from the dairy farm and dairy plant, to the warehouse and points of sale at stores and supermarkets, and ending in consumers' homes.

2.1.7 Milk Marketing

According to Fafchamps (2004) and Poulton (1998), a well-integrated market system is necessary for an efficient allocation of productive resources, which contributes to regional food security and a reduction of price risks by preventing unnecessary price volatility. It has been widely believed that markets do not function effectively in Sub-Saharan Africa due to high transportation costs, high transaction costs, and imperfect contract enforcements which provided rationale for governments to intervene in markets actively since the independence. The dairy industry globalization, together with domestic and trade policy reforms, have shifted international dairy markets from a supply driven paradigm, characterized by excess production and depressed world prices, to a more demand driven paradigm, responsive to market signals and changing consumer preferences. The sector is increasingly shaped by the prospects of sustained high prices for dairy products. Higher international prices are creating incentives for investment, expansion and restructuring in local dairy industries. Higher prices and a correspondingly higher value of milk production have also set the dairy sector among the highest gross value sectors in agriculture. However, high prices can also have negative consequences for the dairy industry. Under very high prices, demand may retreat and dairy ingredients can be replaced by cheaper substitutes in food manufacturing (Food and Agriculture Organization, 2010). Changing production formulas and recipes can have along lasting impact as there would be a certain resistance to reverse the process.

The higher price out look for dairy may also mask that the global dairy sector is increasingly confronted with higher production costs and what appears to be more unstable market environment; more extreme weather patterns, rapidly changing macroeconomic situation, input prices and, consequently, increased price variability. Nearly all world milk production takes place in countries which protect dairy farmers from competition and heavily subsidize their production to pay higher than world export prices for milk equivalents. Only New Zealand and Australia have low protection of dairy production that results in domestic surpluses which are exported. The prices dairy farmers receive for producing milk around the world vary considerably.

2.1.8 History of Cooperative Movement

The roots of the cooperative movement can be traced to multiple influences and extend worldwide. In the Anglo sphere, post-feudal forms of cooperation between workers and owners, that are expressed today as "profit-sharing" and "surplus sharing" arrangements, existed as far back as 1795. The key ideological influence on the Anglo sphere branch of the cooperative movement, however, was a *rejection* of the charity principles that underpinned welfare reforms when the British government radically revised its Poor Laws in 1834. As both state and church institutions began to routinely distinguish between the 'deserving' and 'undeserving' poor, a movement of friendly societies grew throughout the British Empire based on the principle of mutuality, committed to self-help in the welfare of working people .

Friendly Societies established forums through which one member; one vote was practiced in organisation decision-making. The principles challenged the idea that a person should be an owner of property before being granted a political voice. Throughout the second half of the nineteenth century (and then repeatedly every 20 years or so) there has been a surge in the number of cooperative organisations, both in commercial practice and civil society, operating to advance democracy and universal suffrage as a political principle. Friendly Societies and consumer cooperatives became the dominant form of organization amongst working people in Anglosphere industrial societies prior to the rise of trade unions and industrial factories. Weinberg reports that by the end of the 19th century, over 80% of British working age men and 90% of Australian working age men were members of one or more Friendly Society.

From the mid-nineteenth century, mutual organizations embraced these ideas in economic enterprises, firstly amongst trades people, and later in cooperative stores, educational institutes, financial institutions and industrial enterprises. The common thread (enacted in different ways, and subject to the constraints of various systems of national law) is the principle that an enterprise or association should be owned and controlled by the people it serves, and share any surpluses on the basis of each members' cooperative contribution (as a producer, labourer or consumer) rather than their capacity to invest financial capital.

The cooperative movement has been fuelled globally by ideas of economic democracy. Economic democracy is a socioeconomic philosophy that suggests an expansion of decision-making power from a small minority of corporate shareholders to a larger majority of public stakeholders. There are many different approaches to thinking about and building economic democracy. Both Marxism and anarchism, for example, have been influenced by utopian socialism, which was based on voluntary cooperation, *without* recognition of class conflict. Anarchists are committed to libertarian socialism and they have focused on local organization, including locally managed cooperatives, linked through confederations of unions, cooperatives and communities. Marxists, who as socialists have likewise held and worked for the goal of democratizing productive and reproductive relationships, often placed a greater strategic emphasis on confronting the larger scales of human organization. As they viewed the capitalist class to be politically, militarily and culturally mobilized for the purpose of maintaining an exploitable working class, they fought in the early 20th century to appropriate from the capitalist class the society's collective political capacity in the form of the state, either through democratic socialism, or through what came to be known as Leninism. Though they regard the state as an unnecessarily oppressive institution, Marxists considered appropriating national and international-scale capitalist institutions and resources (such as the state) to be an important first pillar in creating conditions favourable to solidarity economies With the declining influence of the USSR after the 1960s, socialist strategies pluralized, though economic democratizes have not as yet established a fundamental challenge to the hegemony of global neoliberal capitalism (Kamat, 2015).

2.1.9 History of Cooperative in Nepal

The term cooperative is mint by a group work of member who wants to enhance their economic and social condition with the mutual effort and cooperative among each other. Basically, it is known as a form of business which is operated to provide to commercial goods and services to the member and manage by the members themselves with the democratic control system. In the course of reviewing the historical background of cooperative sector we don’t have to forget Parma custom, Dikuri custom and Guthi custom of Nepal which have been exited in Nepalese society from so many year. Parma is traditional infor cooperative for exchange of labor. It is

related to the agriculture field where the member of the society does their farming like planting and harvesting of the crops with the mutual cooperative among each other.

Dhikuri is an institution operated by the Thakali community of Nepal through time immerial to provide credit to their member for the financial upliftment. The original resident of Takali community being Thakkhola of Mustang. Nowdays it is more popular among business all over the district of Nepal.

Guthi vibrated with the operation of religious a with mutual help of the member of the particular society. There are different types of Guthi – Rajguthi, Amalaguthi, Oliguthi and Devguthi or Temple/ Monasteryguthi. These Guthi are created with the contribution of grain by the community member in equal basis during the time of harvesting.

Although these customs have been existed in Nepal in from the ancient age and are based on mutual co-operation, they are not in the formal structure of co-operative institutions. The evolution of modern co-operatives in Nepal had been commenced from 1953 with the establishment of Co-operative Department. After the three years of the establishment of Co-operative Department, the first co-operative institution had registered formally in 1956. That was the formal commencement of the co-operative movement in Nepal. After the commencement, Nepalese co-operative movement has been faced so many fluctuations according to the various provisions in laws and policies related to this sector. Concisely, we can evaluate the co-operative movement of Nepal basically in two phases- first is related with the period from 1956 to 1990 and the second phase is related with the period from 1990 to till now Paudel (2013).

a) First Phase

First phase of the evolution of co-operative movement in Nepal is related to the period between the starting phase of co-operative movement (i.e. 1956) to 1990 at which co-operative institutions in Nepal were registered and operated by the government itself. Co-operative institutions were fully controlled by the government and no autonomy was provided to the institutions and there was not a freedom to the members of the community to organize and operate co-operative institutions. Co-operative institutions in that period were the means of the government to provide the agricultural inputs and

other goods as a sole dealer of the government enterprises. Due to the controlled situation and not freedom to organize such types of co-operatives openly, the number of co-operative institutions was limited in the period. In number, only 830 co-operative institutions were registered and operated in the period.

b) Second Phase

After the re-establishment of democratic system in Nepal in 1990, an open environment had been made and along with the openness and liberalization in all sectors co-operative sector in Nepal had also become open. The democratic government of Nepal had declared the Co-operative Act 1991 which had totally followed the provision of co-operative principles and provided open environment to organize and operate the co-operative institutions. Co-operative institutions in this period have been emerged in high number and total number of the institutions has become more than 8 thousands till now. It has been cleared that co-operative institutions are the business organizations organized and operated by the members themselves to enhance their social and economic condition. Nepal has become the member of International Co-operative Alliance (ICA) in this period (i.e. in 1997) and Nepal has accepted all the Principles and Norms declared by the ICA.

2.2 Empirical Review

Smitha (2003) conducted a study based on the eight fishery cooperatives of eleven existing primary cooperative societies in Vasai taluk. Financial ratio analysis technique was used to study financial performance of fishery cooperatives. Vasai zone with a production of 32,643 tons had contributed to the tune of about 32 percent of the total marine fish in 1995-96, which has come down to about 9,943 tons by the year 2002-03.This decline was due to over exploitation of fish and loss of fish stock due to increasing population level in the area.

Karki, (2005) Dairy co-operatives are found everywhere in both developed and developing countries. In developing countries, it is one of the income sources of their rural economy whereas in developed countries it takes as a sustainable business. These countries face different types of problems. Developing countries focus on increase in production volume of milk and milk product, and developed countries do on enhancement of milk product, brand, and merger of dairy co-operatives. Dairy co-

operatives have been getting various opportunities as well as facing different challenges. They are going to formulate different types of strategic planning to cope with these challenges and to get success. Strategic plans of dairy co-operatives in developing countries are, generally to increase production volume of buffalo milk, bring about the internal improvement in co-operative societies, reduce cost of production, provide quality service to consumer through skill, trained and educated manpower, and e-commerce. Strategic plan of developed countries is quite different from that of developing countries. Their strategic plans are to merge different dairy co-operative societies / institutions into a dairy co-operative, and compete in the global market with quality of products.

FAO, (2010) The milk producers seek to overcome this problem through their collective action because to be assured of a secure market is their real need. The DDC's raw milk pricing is mainly based on the negotiations with the rural milk producers. The same system applies in case of pricing of raw milk by the private dairies. However, the private dairies pay some additional price so as to remain in competition for milk collection. Although the private dairies also follow the same price for the processed milk as fixed by DDC, DDC and private dairies set their own price for other milk products. Thus, the pricing of milk and milk products is characterized by conflicting Act and Policy; absence of 9established pricing mechanism in terms of basis of pricing and pricing intervals; and involvement of many actors, but without any clarity on their roles (FAO,2010).

Patil (2011) explored Karnataka State Cooperative Milk Producer's Federation Ltd and its impact on Dairy Development by using different ratios such as, solvency, liquidity, profitability, turnover and efficiency, etc. The study revealed that there was a decreasing trend in the liquidity ratio due to accumulation of fixed assets. There was an increase in liabilities representing the increased trend of solvency of the organisation. Also higher inventory turnover represented the higher existence of stock carrying or unsalable units which would not adversely affect the organisation.

Halder, (2013) jointly carried out their research to review the existing milk production, consumption and marketing situation in Bangladesh. It revealed that the final result of the study was that the most vulnerable to declining milk consumption

were market dependent poor groups, the landless rural poor and slum dwellers. The urban market for processed and packaged milk products, though still very small, is expanding rapidly.

Shankara (2016) based his study on the Performance of the Karnataka State Co-Operative Marketing Federation Ltd., and its impact on farm market by using various financial ratios like solvency, liquidity, profitability and turnover ratio. He also used compound growth rate analysis for the selected financial and physical indicators. He analysed the response from three different groups of respondents by employing cluster analysis technique.

Mattigatti (2017) conducted a study on Performance of Milk Producer's Cooperative Societies and their impact on Dairy Farming in Dharwad district. By making use of different financial ratios such as gross profit, net worth and capital ratio he assessed the financial position of the societies. He found that, 1) increasing trend of gross ratio was due to the increase in the business turnover, 2) net worth in the case of below average societies was lower but positive.3) The net capital ratio was more than unity. He inferred that the lower net worth did not affect the strength of the below average societies.

Siddaram, Sonnad and Shivashankar (2017) in their study on Marketing Management of Milk and Milk Products in North Karnataka evaluated and analysed data relating to the Investment and Procurement management of milk for last three years i.e., 2012-2013. The results indicated that the investment in private processing unit was quite high compared to the co-operative sector unit. The performance with respectto economies of scale can be realized through adequate investment. The procurement pattern of raw milk by the private sector unit involved many intermediaries like contractors, sub-contractors and there was lack of producers' involvement due to absence of village level producer's societies.

Sidhu & Sidhu (2017) in their joint case study on the Primary Cooperative Service Society& Milk Producers Cooperative Society in Punjab, have expressed that success of Cooperative can be understood on the basis of parameters such as consistency in the growth rate of the membership & later in the stability of the membership. They took the indicators such as average lending of the member, pattern of over dues,

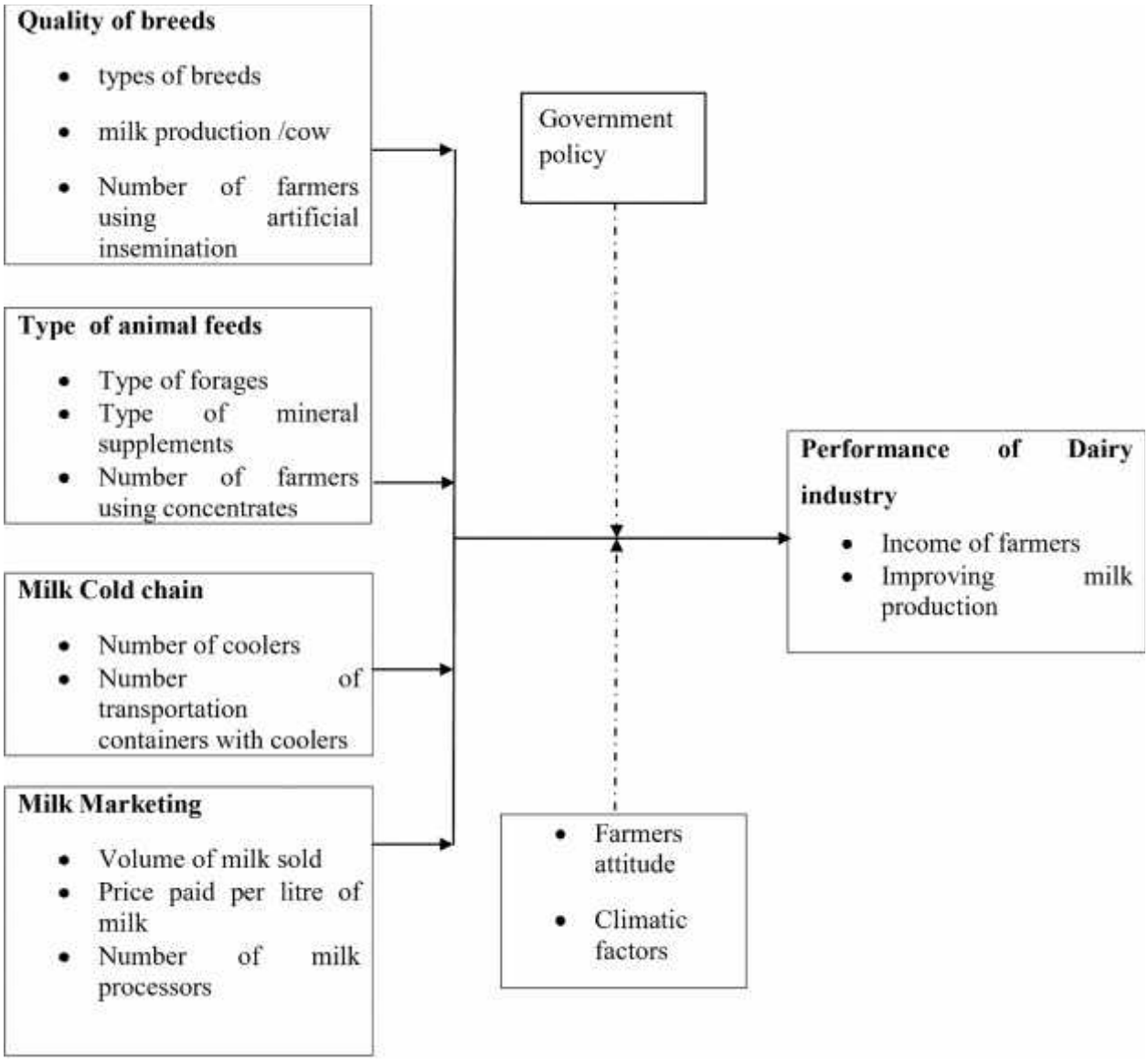
capital formation, the business expansion patterns & the measures of income, expenditure & profits, etc. The Capital formation was reflected by capital contributed by the members & to determine the ratio of borrowings against the capital contributed by the members, Debt/Equity Ratio was also used. Authors also stressed on the study of non-financial indicators.

Sarker (2018) studied and analyzed the cost, return and relative profitability of cooperative and non-cooperative milk producers' societies of West Bengal by ratio analysis and calculated Gross profit, Net profit, Overall profitability, EBIT, etc. The study has revealed that cooperative farms have much higher profitability than non-cooperative farms.

2.3 Conceptual Framework

The main focus of the study is to analyze the performance of dairy co-operative and its impact of development, to fulfill this study is concentrated on the following variables, in short the conceptual framework of this study is as follow:

Figure 2.1 : Conceptual Framework of the Study



This study is concerns with the use of mineral supplement. When the production of milk is increased the study also concern. When the farmers used supplements it helps to increasing the production of milk quality of breads and artificial insinuation.

CHAPTER-III
RESEARCH METHODOLOGY

3.1 Research Design

The major emphasis is the study is to analyze and explore the followed to compare, describe and present the subject matter related to dairy producer co-operative. The case study method used to assess the past performance, current status and situation of the dairy co-operative in the study area. The study assesses how the dairy was helped to uplift the livelihood of dairy farmers. This study try to analyze the status of farmers and their socio economic condition as well as how dairy was helping them to uplift their living standard, i.e. income employment, marketing and supply of dairy equipment.

3.2 Nature and Sources of Data

The present study is based on both the primary and as well as secondary data. The study will draw on both types of data such as qualitative and quantitative. The following sources, methods and tools will be adopting for systematic collection and analysis of data required for this study

3.3 Rationale of the Site Selection

The district is situated in the heart of country and has good transportation facilities. It is an industrial and business centre of the country. There is problem of dairy products marketing. Dairy farming has been playing crucial role to improve socio-economic condition of the rural people of the district through income from dairy product. Dairy business is the source of income, employment for literate and non-literate population. Milk and allied product of it is Source of proteins food, Source of fertilizer, raw materials of dairy industry, spiritual feelings, reducing import of dairy related foods items etc. The geographical situation of study is very much favorable for dairy industry because Gauriganj is near Mahindra highway, rural activities of peoples'; agriculture (crops production) is main occupation on the villagers. Dairy co-operative is one of the main sources of income in the rural area of Chitwan district.

3.4 Sampling and Population

In Chitwan district there are 144 dairy co-operatives, 6 dairy co-operatives was running (Co-operative Training and Division Office Bharatpur, 2070). Out of 6 Dairy cooperatives only one dairy co-operative will be select by using purposive method. The dairy co-operative named is Gauriganj Dairy Producer's Co-operative Ltd. In this cooperative, there are 112 share holders that is regarded as a population of the study (GDPCL, 2017). Out of the sample population only 50 % or 56 share holders (respondents) are selected as sample number for the study.

3.5 Data Collection Method

During the process of intensive case study, the researcher were collect information through primary as well as secondary data. The information will be included positive effects of dairy farming in their livelihood, the socio-economic changes through co-operative and dairying, help of socio-economic development by co-operative and the problem faced by the dairy farmers and the view on dairy co-operative were discussed in detail.

For the primary data collection following tools will be used,

- **Household Survey (HHs):** Every sampled HHs of milk producer farmer were served by preparing the structured questionnaire and inquiries will taken with house hold members
- **Key Informant Interview (KII):** Formal and informal interviews were conduct in the study area. The interview is directed different dimension of dairy farming. The key informants of this study will president and manager of the co-operative, veterinary technician.
- **Observation** : The management and operation of dairy co-operative, collection of chilling centers will observe. From the farmer's side, their livestock keeping system, shed management, feeding technique, quality of animals feeding technique observed during field visit.

3.6 Data Analysis

All the collected data from field were analyzed both quantitatively as well as qualitative as per their nature. The information collected from the field were code, and entered to the computer program Microsoft excel. Simple descriptive statistics were used to analyze the data and necessary table, graphs, pi=chart, prepared and inserted under suitable headings.

CHAPTER-IV
DATA ANALYSIS AND INTERPRETATION

4.1 Age Wise Distribution of Sample Households

Age plays important role in socio-economic development. The productive age (15-59) leads uplifting the social life by generating employment and increasing income. The dependence age group (0-14 and 60and above) is not fruitful economically but morally they are inspiration of society. The population status of the study area is as below shown in table.

Table No. 4.1: Age and Gender Distribution of Sample Households

Age Group	Male		Female		Total	
	No	**%**	**No**	**%**	**No**	**%**
Below 15	11	19.64	12	21.42	33	29.46
15–59	30	53.58	32	57.16	62	55.34
60 & Above	15	26.78	12	21.42	27	24.20
Total	56	**100**	**56**	**100**	**56**	**100.00**

(Field Survey, 2017).

The table no 4.1 shows that 112 family members of 56 HHs, 53.57 percent are male and 57.14 percent are female. 53.35 percent populations are productive age group, among them 31.28 percent are male and 34.64 percent are female. Regarding the dependence age group the percentage of 60 and above is 10.55 percent and 24.43 percent of population is below 15 years.

4.2 Educational Status of the Sample Households

Educational status affects other aspects of socio-economic life of the people. It is the measuring rod of development of people and civilization of a society. Education is the light of human beings. Education can change the world. Education helps to betterment of people. It creates employment and generates income which reduces the poverty. The educational status of the study area is as below shown in below table:

Table No. 4.2: Educational Status

Educational Status	Male		Female		Total	
	No.	%	No.	%	No.	%
Illiterate	6	10.62	8	14.28	14	12.5
Primary	10	17.61	12	21.43	22	19.64
Secondary	15	26.78	20	35.91	35	31.26
Intermedia	16	28.47	10	17.85	26	23.21
Bachelor and Above	9	16.52	6	10.63	15	13.39
Total	**56**	**100**	**56**	**100**	**56**	**100**

(Field Survey, 2017).

The table shows that 17.88 percent population are illiterate among them male illiterate are 7.26 percent and female are 10.61 percent. The percent of primary educated population is 27.37percentand 26.26 percent of population has secondary level education. Likewise, 11.73 percent populations are educated by higher secondary level and remaining 16. 76 percent population are educated by bachelor and above level.

4.2.3 Occupational Background of the Sample Households

Table No. 4.3: Occupational Background of the Sample Population

Occupation	Male		Female		Total	
	No.	%	No.	%	No.	%
Agriculture	20	35.72	25	44.65	45	40.27
Student	15	26.78	15	26.78	30	26.68
Foreign emp.	5	8.94	2	3.57	7	6.25
Service	9	16.07	5	8.93	14	12.5
Business	4	7.14	5	8.93	9	8.03
Others	3	5.35	4	7.14	7	6.25
Total	**56**	**100**	**56**	**100**	**-**	**100**

(Field Survey, 2017).

Occupations are the source of income. In the study area, people generate income from different occupational sectors. Mostly 52.51 percent HHs are depends on agriculture

sector out of which 20.68 percent and 31.83 percent are male and female. In the study area 26.26 percent are students, service holders are 8.38 percent, foreign employer are 4.47 percent, business sector covered only 1.68 percent and others include 6.70 percent.

As like as the whole nation agriculture is the domain sector of employment in the study area. For the poverty reduction, it is necessary to link the agriculture to the other sector of the economy.

4.2.4 Income Status of Sample Households

Income determines the economic status. It helps to enhance the living standard of the people. In the study income of households is divided into 6 groups on the basis of amount earnings in thousand per month. The income includes dairy and other sectors also.

Table No. 4.4: Income Status of Sample Households Per Month

Income Size(thousand)	**HHS No.**	**% of HHs**	**Total Income**	**% of Income**	**Average Income**
<10	6	10.72	42,000	2.57	7000
10-20	22	39.28	3,22,000	19.68	14,636
20-30	6	10.71	1,62,000	9.91	27,000
30-40	12	11.93	4,80,000	29.34	40,000
40-50	6	10.71	2,80,000	17.11	46,000
50- Above	4	7.14	3,50,000	21.39	87,500
Total	**56**	**100.00**	**16,36,000**	**100.00**	

(Field Survey, 2017).

The income group who earn below Rs 10000 per month is 10.72 percent households. It is 2.57 percent of total income. 39.28 percent of HHs earns 10 to 20 thousand per month; it is 19.68 percent of total income. Likewise 10.71 percent HHs earns 20 to 30 thousand per month is 9.91 percent of total income. The highest income group earns 30 to 40 thousand per month (11.93 percent HHs) earns 29.34 percent of total income. The group of earning per month 40 to 50 thousand, 10.71 percent HHs earns 17.11percent income of total income. Lastly 7.14 percent HHs earns 21.39 percent income of total income.

4.2.5 Land holding Pattern of Sample HHs

Table No. 4.5: Land Holding Pattern of Sample HHs

Land Holding Pattern (in Kattha)	Number of HHs	%	Total Land	Average land
<10	26	46.43	172	6.61
10-20	22	39.28	334	15.19
20-30	4	7.15	88	22.00
30-40	2	3.57	80	40.00
40-50	2	3.57	100	50.0
Total	**56**	**100**	**774**	13.82

(Field Survey, 2017).

Land is the major factors of production. Land determines the livestock farming, because land supplied the feed and fodder for livestock. Land is very important for dairy production. The distribution of land holding size of study area is shown in the table below. In the study, HHs' land holding pattern is divided into 5 criteria according to land size i.e.0to 10 kattha, 10 to 20 kattha, 20to30kattha, 30to40kattha and 40 to 50 kattha.

The above table shows that 46.43 percent of HHs has only 22.22 percent of total land on 6.61 kattha on average which is less than 10 Kattha per HHs. 39.28 percent population covered 43.15 percent land of the total land with having 15.19 kattha on average.7.15 percent HHs has land between 20-30 kattha with average 22 kattha. 3.57 percent HHs have land between 30-40 kattha and 40-50 kattha with an average40 kattha and 50 kattha.

4.2.5.1 Leased Land Holding Pattern of the Sample HHs

In the study area some farmers have leased hold land for their dairy farming which is shown in table below as,

Table No. 4.6: Leased Land Holding Pattern of the Sample HHs

Land Size(kattha)	No. of HHs	Total Land (kattha)	Average Land (kattha)
<10	20	18	32.14
10-20	15	17	30.35
20-30	5	6	10.71
30 above	16	16	28.57
Total	**56**		**100.00**

(Field Survey, 2017).

Above table shows that only 6 no. of HHs are leased land holder out of which 4 no, of HHs has average leased land with average and 2 no. of HHs have average 29.5 kattha leased land.

4.2.6 Available Cattle in HHs

Table No. 4.7: Available Cattle in Sample HHs

No. of HHs	% of HHs	No. of Cattle	% of cattle
8	14.29	72	32.73
14	25.00	28	12.73
16	28.57	48	21.81
18	32.14	72	32.73
Total 56	**100.00**	**220**	**100.00**

(Field Survey, 2017).

In the study 14.29 percent HHs having 32.73 percent cattle, 28.57 percent HHs have 21.83 percent cattle 25 percent keeping only 12.73 percent cattle, this group having only 2 animals in average, we can say that they are subsistantial farmers. Likewise 28.57 percent farmers have 21.81 percent of total cattle they have 3 animals in average. At last 32.14 percent HHs having32.73 percent cattle these groups have 4 animals in average. In the study area there are 14.29 percent professional dairy farmers who have 9 animals in average.

4.2.6.1 Types of Cattle Kept by Sample HHs

Table No.4.8: Types of Cattle Kept by Sample HHs

Type of Animal	No.of HHs	%
Only Buffalo	4	7.18
Only Cow	30	53.55
Both Cow and Buffalo	22	39.27
Total	**56**	**100**

(Field Survey, 2017).

The farmers choose their milking animal cow and buffalos. 56 HHs have different milking animals according to their convenience. Farmer keeps only buffalo, only cow and keeps both cow and buffalo as dairying animals. On the sample HHs, 7.18 households keep only buffalos for dairy product, 53.55 percent HHs keep cows and 39.27 percent HHs keeps both cow and buffalo for their milk and by product. Most of the dairy farmers want to keep cows because of the high milk production as compared to the buffalo. In the sample HHs, there are 220 animals out of which 170 are cow and 50 are buffalo.

4.2.6.2 Milking and Non Milking Animals of the Sample HHs

Table No.4.9: Milking and Non Milking Animals of the Sample HHs

Type of Animals	Milking		Non-Milking	
	No.	%	No.	%
Cow	30	53.57	24	42.85
Buffalo	26	46.43	32	57.15
Total	**56**	**100**	**56**	**100.00**

(Field Survey, 2017).

The above table and figure shows that the out of total 220 dairy animal 94 cows and 22 buffaloes are milking where as 76 cow and 28 buffaloes are non-milking.

4.3 Dairy Production and Income Earning From Dairy Product

4.3.1 Daily Milk Production and Income From Milk

Milk is essential for human being since their birth. Every sample HH produce little more milk for both HH and commercial purpose and earn somehow which used for HH expense, education, health and other purpose of house.

Table No.4.10: Daily Milk Production Pattern of Sample Household

Milk Production in Liter	Number of HHs	% of HHs	Quantity of milk (ltr.)	% of quantity of milk	Average Milk Production
1 - 5	8	14.29	36	6.04	4.50
6 – 10	22	39.29	156	26.17	7.09
11 – 15	18	32.14	228	38.26	12.66
16 – 20	6	10.71	106	17.79	17.67
20 above	2	3.57	70	11.74	35.00
Total	**56**	**100.00**	**596**	**100.00**	

(Field Survey, 2017).

Milk producer HHs is divided into 5 categories according to production quantity like 1to 5,6 to 10 11to15 16 to 20 above 20 ltr per day. In this study, 14.29 percent HHs produced only 6.04 percent of total milk on average 4.50 ltr (per HHs) which is less than 5 liters per day. 39.29 percent HHs product 26.71 percent of total milk per day. Likewise other 32.14 percent HHs products 38.26 percent of total milk. 10.71 percent HHs produced 17.79 percentof total milk. At finally 3.57percentHHs products 11.74 percent of total production of milkper day. The total milk production is 596 liters per day of 56 HHs among this, HHs self consumption is 19.97 percent of milk. The selling percent of milk is remaining after self consumption i.e.80.03 percent which equals to amount Rs.16,695per day. They earned Rs. 20,860 by milk including self consumption and selling per day on average rate of Rs.35 per liter on the date of January 20014. Milk production pattern of survey HHs is shown in the below table.

4.3.2 Byproduct Income from Cattle of the Sample HHs

Table No. 4.11: Byproduct Income From Cattle of the Sample HHs

Byproducts	Number of household	Annual Incomein Rs.
Dung	14	1,800,000.00
Heifer	313	1,00,000.00
Buffalo male calve	15	3,00,000.00
Ghee	14	1,40,000.00
Total	**56**	**8,20,000.00**

(Field Survey, 2017).

Dairy farming generally concern for production of milk and its productonly. Butfarmers can generate income from byproduct like cattle dung, ghee, mohi,paneer, calves, and selling of barren buffalo and its calf for meat. Only 6 HHs sell dung out of 56 HHs on Rs 1, 24,000.00 the percentage of selling dong is low. The average income from dung is Rs 20,666 per HHs among 6. Only 3 households sell heifer on Rs 1, 00,000.00. Only one house sell buffalo male calve on Rs 33,000.00**.** 4 of HHs sell ghee an amount equal to Rs.5600.00 on average Rs. 1,400.00 among them. Income from byproduct is shown below table.

4.4 Function and Performance of GDPCL

4.4.1 Trend of Membership on GDPCL

The history of livestock farming is very long, but it took an occupation after the establishment of GDPCL in this area. Dairy (livestock) farming is integral part of agriculture, so every people of rural, must have cattle for self consumption of milk and compost for crop production. But institutional business starts after establishment of dairy co-operative named GDPCL. There in the research area new and old farmers are involving into GDPCL.The involvement period of farmers in GDPCL, is increasing every year.

GDPCL passed more than 17 yrs of its establishment. Farmers' attraction towards tobe a share member as well as general share member of this institution is increasing. The trend of membership of GDPCL is shown on the table below.

4.4.2 Involvement Period of Households into GDPCL

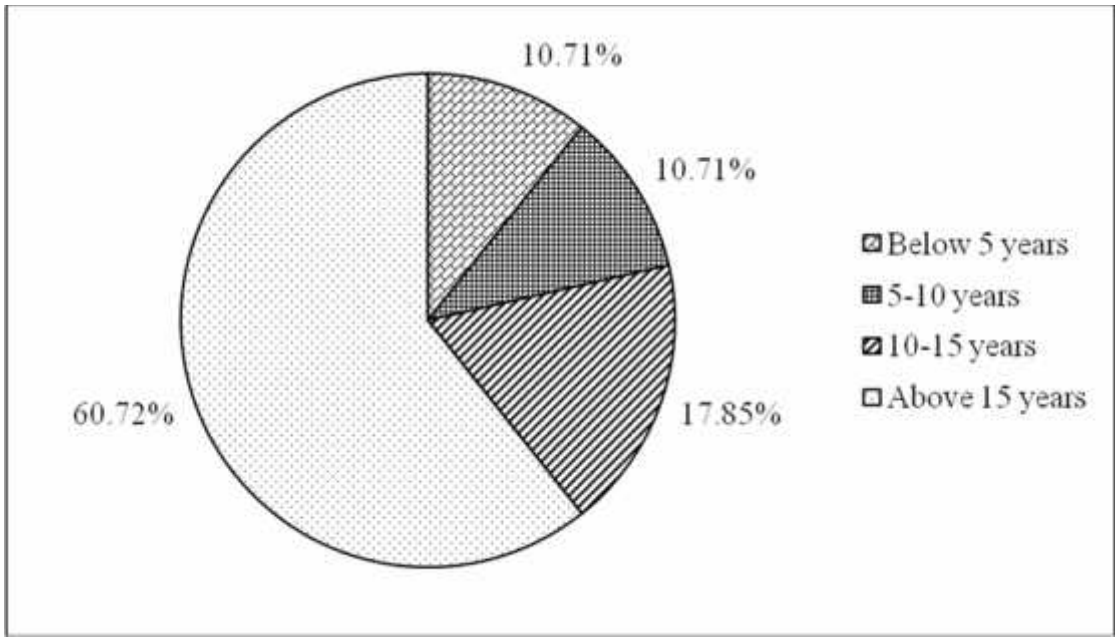
The history of GDPCL is more than 17 years. It passes through many ups and downs. Starting from the 25 founder members now it reaches to the 112 share members. The involvement of members of HHs is shown in the below table.

Table No.4.12: Period of Involvement of Household in GDPCL

Period of Involvement	No. of HHs	%
Below 5 years	6	10.71
5-10 years	6	10.71
10-15 years	10	17.85
Above 15 years	34	60.71
Total	**56**	**100**

(Annual Report of GDPCL, 2073/074).

Figure No. 4.1: Period of Involvement of Household in GDPCL



(Field Survey, 2017).

The study found that 60.71 percent farmers were engaged since more than 15 years. Then 17.85 percent farmer engaged from 10 to 15 years from establishment and 10.71 percent farmer engaged from less than 5 years.

4.4.3 Ethnic Participation in GDPCL

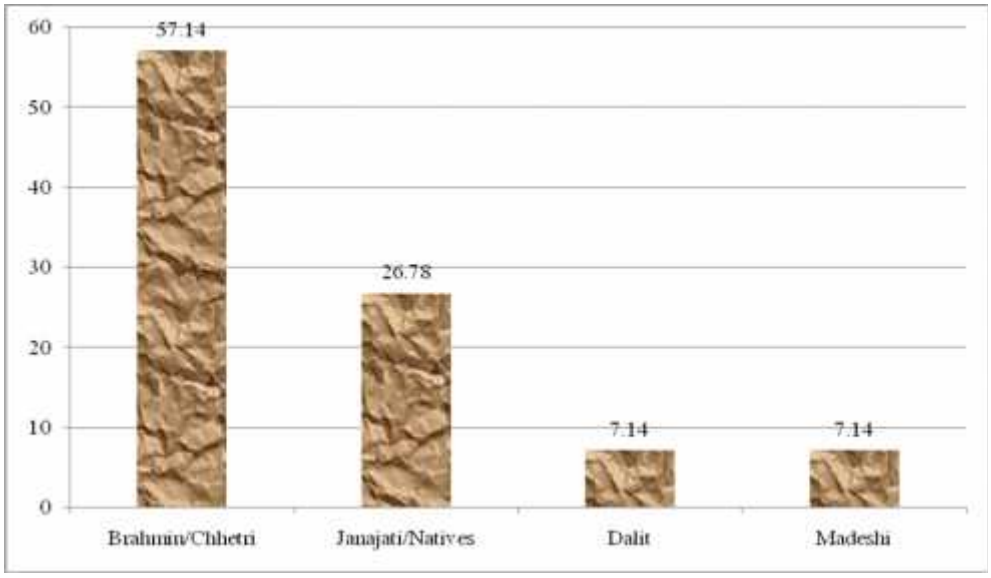
Table No.4.13: Ethnicity wise Participation in Co-operative

Ethnicity	Number	%
Brahmin/Chhetri	32	57.14
Janajati/Natives	15	26.78
Dalit	4	7.14
Madeshi	4	7.14
Total	**56**	**100.00**

(Annual Report of GDPCL, 2073/074).

Co-operative is a community institution. A community consist different cast and ethnicity. It is necessary to participate them to upgrade their socio-economic condition. In the study area there is the ethnicity of Tharu, Newar, Tamang, Magar etc. and Dalit and Chhetri-Brahmin. The community is composite of different tribes and ethnicity with having this the population of Chhetri-Brahmin has high majority so, the participation on GDPCL also majority of Chhetri-Brahmin. The participation of social group is shown in the table below.

Figure No. 4.2: Ethnicity wise Participation in Co-operative



(Field Survey, 2017).

The co-operative have been providing equal chance to join GDPCL to all caste and ethnicity group. The percentage of the shareholder members are majority from Brahmin-Chhetri than other ethnic group being the larger numbered representative. There is no any discrimination of any kind. Equal participation of gender is necessary for development of every social group.

4.4.4 Gender Wise Participation into GDPCL

Gender's participation on social institutions plays a role to sustain long time. In GDPCL, women's participation is low because of her nature, i.e. no interest of expose out from house and male dominated society of Nepalese culture. In this co-operative women's participation is only 21.33 percent while men's participation shows 79.67 percent of the study's co-operative.

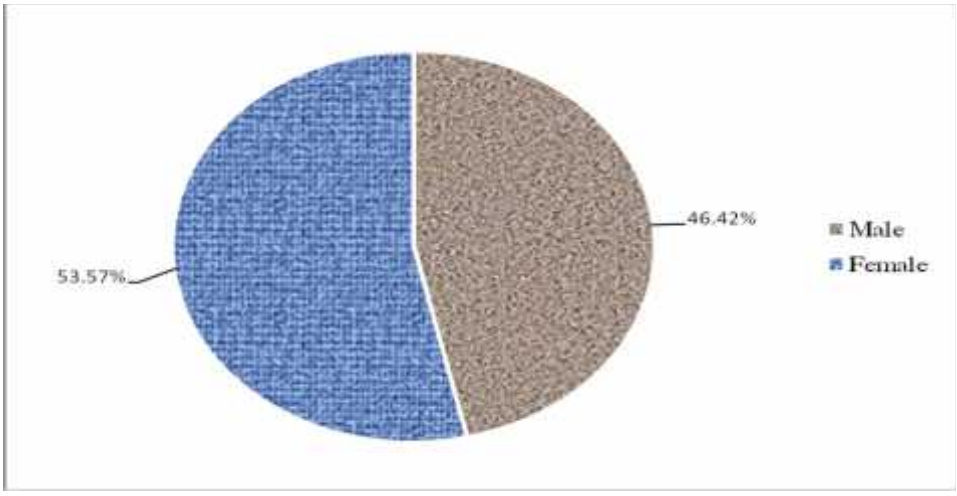
The trend of male and female participation on co-operative is shown by table.

Table No. 4.14: Gender-wise Participation in the GDPCL

Gender	**No, of member**	**%**
Male	26	46.42
Female	30	53.58
Total	**56**	

(Annual Report of GDPCL, 2070).

Figure No. 4.3: Gender-wise Participation in the GDPCL



(Field Survey, 2017).

4.4.5 Participation in the Executive Committee

112 members have equal right to be a member of executive committee in governing body of GDPCL. There are altogether 11 members including chairperson into the executive commute of GDPCL. Among them, 4 members are from Brahmin/Chhetri and 2 member from Janajati and one member of Dalit and Madeshi respectively. Altogther four member are female out of 11.

Table No. 4.15: Ethnic Participation on Executive Committee by Gender

Ethnicity	Male		Female	
	No.	%	No.	%
Brahmin/Chhetri	3	27.27	1	14.28
Janajati	2	18.57	1	14.28
Madeshi	1	14.28	1	14.28
Dalit	1	14.28	1	14.28
Total	**7**	**63.64**	**4**	**36.36**

(Field Survey, 2017).

The table shows the participation of women in executive committee is 36.36 percent and male participants are 63.64 percent. The representative Brahmin/Chhetri are 27.27 where the participation of Janajati is 18.57% and Madeshi and Dalit are 14.28 respectively.

4.4.6 Objectives of GDPCL

Main objective of GDPCL is to betterment of rural farmers who are concerns to it. The objective and general functions of GDPCL are as follows;

- To the access of marketing of milk which are produced and collection of individual farmers
- To get appropriate(high)price of milk
- To supply qualitative feed and fodder, improved and hybrid seed, cattle medicine etc.
- To improve the management

- To enhance socio-economic condition of the members.

4.4.7 General Functions of GDPCL

According to rule principle and motto of the co-operatives, it provides such kind of facilities to its members both share holder as well as non-share holder members.

- Marketing of dairy and allied products
- Training of Livestock
- Improvised seed distribution
- Shed Management Program
- Feed and fodder
- Livestock credit on 6 percent interest
- Observation tour
- Chilling Center
- Approaches to DMPC, NDMP and other related institutions.
- Implementations of PACT program me.
- Relation of banks and loaning program for farmers.
- Bargaining for fair price of milk with big dairy industries like DDC, Sujal, Bhaktapur dairy, Nepal Dairy, etc.

It has its own chilling centre of capacity 6,600 litres vat, milk analyzer machine, Generator and 6 permanent staff. Own building with meeting hall, store, own shed for chilling centeretc shows the prosperity of the co-operative.

4.4.8 Share Distribution of GDPCL

The main source for management of the co-operative is share capital of GDPCL. The objective of the share policy is to make the co-operative economically sound and make member responsible towards the institution. The member should participate in development of GDPCL. In the beginning or establishment, GDPCL have 25 shareholders on 2o5o B.S. They purchased 5 shares on Rs.100 per share. The total capital of Rs.12,500. They established it in Gaurijung-8 Chitwan to provide facilities and supply agricultural inputs for small and marginal farmers. Then increased members day by day members and share capital 40 lakhs.

Being a dairy co-operative focuses to facilitate on dairy instruments, improved shed,

improved breed, feed and fodder farm management, livestock care, bargaining for milk price are in priority of GDPCL.

4.4.9 Services and Support by GDPCL to its Members

For the economic-social progress of its members, co-operative have done directly affected and indirectly so many works but all works are not possible to include here. So some of them are include here. Co-operative has been providing such programs since its establishment are as follows,

- Compensation: The co-operative provides 50 percent compensations for the member whose dairying animal dead.
- Co-operative provides bonus of profit every year in general meeting. Co-operative provide per liter one rupee at every Dashain as providence fund for member who sell milk here.
- Co-operative sells dairying inputs on credit for its members on fair price.
- Co-operative sells milk for its members on cheap price then other customer.
- Co-operative provides loan facilities from banking institutions, co-operative being deposit itself for buying high milking animals. It suggests own members to be professional farmer and always suggest improved seed and animals.
- It linked with other institutions like district milk producer union, central milk producer union, and line agencies, NGOs/INGOs for the betterment of co-operative.
- Co-operative managed the farmer's observation and educational tour and travel yearly.
- Co-operative have voluntary saving and credit scheme among members.
- Co-operative encourage for animal insurance. And it starts with the help of pact program.
- Co-operative encourage to farmers to plantation of grass tree and managed the seed for milking live stocking based on grass rather than feed, Dana, Chokkar.
- PACT program servicing on farmers shed management, health care of animals high bread supply.
- Co-operative improved own chilling center with the help of Community animal development project, purchased milk analyzer with the help of District

animal service office(DLSO)and vat subsidy from Sitaram Gokul Milks Limited.

- From the help of PACT it maintained and improved 27 shed of farmers and purchased and distributed 25 chapcuttermachines to farmers.
- The co-operative gives extra payment Rs. 1.75per liter on FAT and SNF.
- Co-operative provides to farmers Rs. 40000. For live stocking loan on nominal interest.

4.5 Problems and Prospects of GDPCL

Like different other sector, dairy co-operative have also immunes problems and prospects. Problems of an institutions is the prospects because after solving the problems it lead to prospects of institution so any entrepreneur do not afraid to problems. For the profits and prospects of the institution, entrepreneur search the way of solving the problems to increase the profits and sustain in future. The problems and prospects of co-operative discuss below on the basis of study of GDPCL.

4.5.1 Problems of GDPCL

In the dairy co-operative of everywhere there arise some problems likewise GDPCL facing some problems which are as follows,

- Lack of professionalism: In the study area dairy farming is dominated by non commercial farmers, it leads production cost of milk is generally higher. Commercial farmers keeping more animals are producing milk at lower cost than the subsistence farmer having less animal. So it is possible to reduce cost of production by improving management, better feeding, breeding and health care.
- Lack of regular monitoring and suggestion from government sector as well from as central and district dairy producer unions.
- Load shading: Electricity is an important factor for production. Load shading increasing the cost of production of animal feeding, processed milk and milk product.
- Lack of veterinary services: In the study area proper veterinary services and facilities are not easily available in time.
- Lack of knowledge of animal insurance: the government has giving 50 percent

subsidy for animal insurance but due to the lack of insurance knowledge farmers are not interested to animal insurance.

- Lack of product diversification: The co-operative sells its collected milk directly to dairy industries Sujal, Nepal dairy, DDC, Bhaktapur dairy. But there is no system of manufacturing dairy products like icecream, butter, paneer, yoghurt etc. It is most necessary to convert the collected milk into industrial product.
- Lack of new technology: The farmers are using traditional technology and equipments, so the production cost increases. On the other hand co-operative also lack of new technology and equipments.
- Lack of government subsidy: For the development of agriculture sector, government did not help to farmers by grant and subsidy. By the nature, it depends on climate, labor intensive, perishable production so it is very risky profession. So other governments give high priority, subsidy and grant on agriculture except Nepal. We Nepali farmers bound to compete with Indian production which are getting subsidy from government to product so that the production cost of Indian agriculture goods is very low but Nepalese production cost is very high. If Nepalese government also gives subsidy on dairy farming, we can reduce the import dairy and its allied goods, and save the currency paying on dairy goods.

4.5.2 Prospects of GDPCL

Facing above problems dairy sector has huge prospects to generating employment and income and help for reducing poverty of this area. The Kathar VDC of Chitwan is useful for dairy farming purpose. Keeping livestock is integral work of traditional agriculture system. Some farmers keep cows and buffalos for self use of milk, meat, dung and draft. So livestock keeping is since long and they will continue to do in future for the purpose of crop production. It is the sign, that it is easy to increase the cattle for milk production and diversification of crop production to dairy farming or bring together. So this sector can be the backbone of socio-economic development by creating employment and generating income. For the more production of crop it is necessary of more compost, the demand of more dung increases more animal leads to more agriculture production and the residual of crop production is used as fodder of

cattle it leads more milk production and creates professionalism on agriculture.

Now a day's youth entrepreneur are attractive on dairy farming due to possibility and probability rather than other sector. The Nandini Dairy Producers Co-operative is a well recognized co-operative in Chitwan. Its well management and necessary scientific and modern equipment shows the well prospects of dairy farming. GDPCL has own chilling vat, land, shed, Generators, milk analyzer machine and other basic instrument, and trying to buy vehicle also. Besides above mention some prospects of GDPCL are follows,

- Suitable climate condition, available of leased land for poor and marginal farmer, easy transport facility, easily available of technical manpower and attraction of youth helps for the betterment of dairy sector.
- Consumers trend of consciousness of nutritive food (milk) it also helps to create market.
- Verities of production like pannier, ice-cream, chocolate, butter, and different favors of sweets create its own market.
- Firstly growing population density population, urbanization, consumer consciousness of portentous food help to create market so the co-operative can change milk into verities of production.
- Dairy farming is easy occupation to cash earning, every week or twice a month can get his money from selling of milk, so he can solve his daily problems.
- Saving and credit system will encourage to new comers into this sector. And it keeps sustainability of dairy farming.
- The governments' encouragement and insurance subsidy on dairy farming i.e. cattle insurance livestock heath care facilities, easy and cheap loan, information and education lack of alternative occupation easy marketing and easy supply of dairy inputs, suitable geographical situation make this sector attractive and prospects in future.

CHAPTER-V

SUMMARY, FINDING, CONCLUSION AND SUGGESTION

5.1 Summary and Major Findings

The studied sample HHs found the participation on co-operative of Brahmin\Chherti was majority. Women participation was only 53.58 percent and male participation was 47.42 percent. The active population was 55.34 percent, and remaining 52.67 percent are dependent like old aged, students and children. There were 12.5 percent illiterate population, whereas 13.39 percent population were graduated and above. Among 112 total population 56 HHs, 42.27 percent population engaged on agriculture sector including dairy farming. 30 percent of the survey households are commercial farmers rest are subsistence and have one to three castles. 25 percent of HHs has only 2 cattle, 28 percent HHs have only 3 animals, and rest 32 percent HHs have 4 cattle. It shows there were most necessary to encouraging towards professionalism.

The findings of the study shows 10.72 percent HHs earns below ten thousand per month, 39.28 percent HHs earns 19.68 percent of total income, and it is 10 to 20 thousand per month. 7.14 percent HHs earns 50 thousands per month which is 21.39 percent of total income.-The dairy producers of 53.55 percent keeps cow for dairying animal, 7.18 HHs keeps only buffalo and 39.27 percent HHs keeps both animals. Similarly, 14.29 percent HHs produced milk below 5 liter day, 39.29 percent HHS produced 26.17 percent milk of total product and 3.57 percent HHs product above 50 liters milk per day it is 11.74 percent of total milk by commercial farmers.

Land holding pattern among farmers, more than 20 HHs have 32.14 percent land of total land while 16 HHs not to taken land in leased covered 28.57 covered 12.9 percent of total land.

According to farmers' view cows are easy to live up and long time milking than buffalo so they keep cows than buffalos.14.29 percent HHs produced milk below 5 liter day, 39.29 percent HHS produced 26.17 percent milk of total product and 3.57 percent HHs product above 50 liters milk per day it is 11.74 percent of total milk by commercial farmers.

Income from byproduct (dung, ghee, mohi, calves etc) is not remarkable because of

self consumption. The production cost of dairying animals per day isRs. 40.75without adding the cost of straw and grass because farmers get it from their field themselves and they do not pay for it.

More than 88 percent farmers start dairy farming after establishment of GDPCL. They felt that this is the sustainable income source.

The co-operative initiated to cattle's insurance but the farmers are not interested to pay premium because of lack of insurance education and no confidence of returning premium after maturity. Only 4 HHs has paid the premium for cattle because of insurance is compulsory for animal loan.

Women's participation on GDPCL is well level, only 53.57 percent women involve in dairy 36.37 percent as executive members. The co-operative gives one rupee for per liter milk as bonus on every Dashain. More than 88percent farmers started dairy farming after establishment of GDPCL. They felt that this is the sustainable income source.

Although facing the different problem by the GDPCL like professionalism, lack of appropriate policy and regular monitoring, load shading, lack of veterinary service, inadequate food and fodder, lack of knowledge of product diversification, and influence of traditional values on livestock keeping dairy co-operative have many prospects to enhance the socio-economic condition and living standard of its members because it helps to provides employment opportunity for both literate and illiterate people.

5.2 Conclusions

Base on the field study and survey of the different farmer individually found that dairy farming is integral component of crop production. Farmer keeping livestock for both purposive) Crop production (Bio-gas and bio-mass, compost) ii) Dairy productions (selling milk).

Small farmers who keeps only one dairying animal he also join the dairy co-operative to grasp its benefits. But the levels of the poor and marginal farmers are in miserable condition on keeping dairying animals as well as socio-economic condition. The dairy

co-operative helps to encouraging on livestock farming and active participation on dairy co-operative to enhance the socio-economic condition of the rural people by (i) Psychological encouragement of group behaviors(ii) Providing marketing facilities to the milk producers (iii) Supplying dairy equipments i.e. feed and fodder, animal health, medicines, high improved breed, trainings on shed management and general information on livestock transportation etc. (iv)Providing cash as seed money and facilities saving and credit among farmers.

The dairy co-operative improved rural livelihood, it is the main and easy source of cash income earning and creating employment as well as solving day to day problems of small farmers. Dairy farmers are benefited from dairy co-operative economically, psychologically and they feel safe into the co-operative. It brings unite the rural farmers themselves in group and they have feelings of ' we' together as a family members. Co-operative creates awareness and opportunities for production, leadership, business skills, approach to political as well as statesmen. Co-operative changes the quality and patterns of life and mode of living. It has been measured during field survey and observed myself. It has a lot of potentialities instead of having problems like lack of institutional facilities, veterinary facilities, animal health, insurance, low price of milk, high price of inputs, subsistence level of farming, lack of governmental subsidy, political situation. These problems can be solving the joint efforts of government and private sectors then this sector has a lot of capacities and it can means of poverty reduction.

5.3 Suggestions

Dairy co-operative plays an important role in rural development. Although, some problems are attached on it, and should be removed. Some suggestions have been made for the co-operative and it's members. These are listed as follows:

- Co-operative should encourage farmers to keep high bread animals and commercialization of dairy production
- Most the farmers keep fewer than three animals it is not remarkable on commercial dairy farming
- Supply of inputs should be accessible to all kinds of farmers in appropriate price

- Co-operative should run according to the norms of co-operative instead of trading corporate as buyer and seller of other goods, government supervision and monitoring should be made regularly.
- Members of the executive committee should be oriented to the institutions and should have knowledge and devotion to the co-operative.
- Till now dairy co-operatives are running by individual farmers keeping livestock separately according to their capacity and knowledge so they are getting low profit. If the members deep cattle commonly, the expense will be reduced and they will earn more profit.
- Dairy co-operative should provide training, livestock health care, income generating schemes, easy load facilities and technical and fiscal suggestions and help to its members.
- Co-operative always awards of quality of milk and appropriate price of milk.
- There is need of government support and monitoring regularly.
- Animal insurance system should be imposed through co-operatives.
- The price of buying, service charge expense of co-operative and selling price of milk should be transparent between members.
- The co-operative should have promotional dominated by male and Brahmin Chhetri community.
- The dairy co-operative should have credit and saving scheme for every members by rule.
- Co-operative not to sale only milk. To make the final product of milk Ice-cream, pannier butter it take high price. then the milk.

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APPENDICES

Appendix A : Questionnaire for Milk Producer Co-operative

1. Name of co-operative: Address:
2. Date of Establishment:
3. Who is/are the founder(s):-
   a. Farmers themselves
   b. External Organizations (Non Governmental units)
   c. Government Organizations
   d. If others, (specify)_____
4. How many members are involved in your co-operative?

Members growth in last seven years and social category

Social Categories In Years	Year													
	2063		2064		2065		2066		2067		2068		2069	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Brahmin/Chhetri														
Janajati/Adibasi														
Madeshi														
Dalit														
Total														
Grand Total														

5. No of commercial farmers …..... & non commercial farmers..... traditional farmers

6. Gender and ethnic records of execution committees

Caste/Ethnicity	Male	Female
Bhramin/Chhetri		
Janajati/Adibasi		
Madhesi		
Dalit		
Total		

7. How much is the per share amount and share registration fee of the membership?

   a. Share amount _____

   b. Reg. Fee _____

8. Does your co-operative have saving policy or scheme for the member/Milk producers?

   a) Yes b) No

   If yes, how much is the saving per month?Rs. _____

9. Does your co-operative has extra milk collection center?

   a) Yes b)No

   If yes, who runs it?

   a)Itself

   b) Lease or contract

   c) Others (specify)……

10. How much quantity of milk is collected daily in average?

    …….....

11. What is the supply mechanism of the quality of milk?

    ……..

12. Does your co-operative have chilling center?

    a) Yes b) No

    If yes, its capacity in liters……

13. For how long has your co-operativeare running the chilling center and how was it installed for years with support of?

    ……

14. Ownership of chilling vat?

    ……

15. Does your co-operative tie up with any institution or freely sell your collected milk?

……

16. Instruments used to make milk collection center for milk quality test of the collected milk?

…….

17. What are the price determination factors of the farmers' milk?

a. Fat b. SNF c. Other ……

19 Average price ofmilk

a) Buying price Rs ……../ltr

b) Selling price Rs ……/ltr

20 Does your co-operative have milk processing center? If yes, what are your products?

……..

21 Do you easily get market for your products? If not, what are the constraints?

……..

22 Does your co-operative have any program for the development of dairy sector for your members?

a) Yes b) No

If yes, then what are the programs?

……

23 Do your co-operative have any program for poor members?

……..

24 Did your co-operative helped in poverty reduction?

If yes, then how ……

25 Is your co-operative affiliated with any organization such as District Co-operative Union, DMPC, etc?

……..

26 Do you keep the number of livestock of your members?

If yes, How many cows_____ Buffaloes _____

27 Do you have any livestock insurance policy?

a) Yes b) No

If yes, how many farmers have insurance policy for their cow / buffaloes

Number of cattle/ buffalo insurance ……...

28 What are the services that your co-operatives provide to its members?

……..

29 Does your co-operative provide support to your members to purchase improved milking cattle ?

a) Yes b) No

If yes, Support on

a. Direct loan

b. 3rd party agreement

c. Link of the financial institution

d. Revolving funds

e. Guaranty

f. Others

30. Your opinion about dairy farming. Cow or Buffaloes are more beneficial?

……...

31. What are the strength ofdairy farming in your locality

……

Weakness ……..

Opportunities……..

Threats…….

32. Do you feel that your co-operative help for poverty reduction? Then how?

……..

Appendix B : Questionnaire for Dairy Farmers

1. General Information Form No.

Name and address of respondent:……..

VDC:…….. Ward No.:……..

Age:…… Caste/Ethnicity:…….

Gender:…… Religion:……..

2. Age profile of sample households

Age group/Numbers	Below 15 years	15-59 years	60 above	Total
Male				
Female				

3. Educational status of sample households

Educational Status	Illiterate	Literate	Secondary	Higher secondary	College level or above
Male					
Female					

4. Occupational status of sample households

Main Occupation	Male	Female	Total No.	Fully employed	Semi-employed

5. How much is your monthly family income?

a. <10,000 b. 10,000-20,000 c. 20,000-30,000

d. 30,000-40,000 e. 40,000-50,000 f. >50,000

6. This is your family business or your choose?

……..

7. Since how long have you been involved in dairy farming?

……

8. Why do you choose this occupation?

…..……

9. How many number of your family members are engaged in this occupation?

……..

10. Land holding pattern of sample households

Land Holding(Kattha,Bigha)	Irrigated	Non-Irrigated	Remarks
Own			
Leased(Private)			
Lease(Institution/Community)			

11. Information about livestock

Animal Category	Productive Milking/Preg	Unproductive				Total
		Heifer	Female Calves	Male Calves	Barren	
Buffalo	Local					
	Cross-Breed					
	Improved					
Cow	Local					
	Cross-Breed					
	Improved					
Total						

12. Sole Income from Dairy farming (annual)

Items		Quantity(Ltr.)	Price (NRs.)	Amount
Milk	Buffalo			
	Cow			
Self Consumption (in Market Price)				

13. Income from bi-product of dairy farming (annual)

SN.	Sector	Quantity	Amount (NRs.)
1	Dung		
2	Heifer		
3	Ghee/Paneer/Mohi		
4	Others		

14. Why did you join this co-operative?

    .....

15. What is the payment system of your employee and how much do you pay?

    .....

16. What is your status on this co-operative?

    .....

17. What does the NDPC do for the dairy farmers?

    .....

18. What do you want from NDPC?

    .....

19. What is the market problem of your products?

    .....

20. Do you grow straw yourself for your cattle?

    a. Yes b. No

    If yes, provide sufficiency for you.

    .....

21. Have you ever got feed for granted?

    a. Yes b. No

22. Have you kept all your records?

    a. Yes b. No

23. According to you, which among cows or buffalo are beneficial?

    .....

24. Which is the prime organization to support dairy farming on your view?

    .....

25. Do you have almost equal production in all year long?

    a. Yes b. No

0

26. Do you get grass form nearby forest or other farmers?

    a. Yes b. No

27. Are you personally satisfied with your carrier in this field?

    a. Yes b. No

28. What is the condition of quality of breed to the farmer and who supplies it?

    .....

29. Who provide info and services to your livestock's health?

    .....

30. What is the possibility of sustaining the dairy farming in your locality?

    .....

31. If you do have any kind of problem you are facing in dairy farming or with the co-operative,

    .....

32. Please state is there anything else you want me tomention in my report?

    .....