

Socio- economic Impact of Milk Cooperative

**(A Case Study of Kubinde Milk Production Cooperative Limited, Kubinde
Sindhupalchok District)**



A Thesis Report

**Submitted to Central Department of Rural Development Faculty of
Humanities and Social Sciences in Partial Fulfillment of the Requirement
for the Degree of Master of Art**



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LETTER OF RECOMMENDATION

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This thesis report embodies the result of his empirical investigation based on the fieldwork. I, therefore, hereby recommend this project report for the final evaluation and approval.

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LETTER OF APPROVAL

This is to certify that the master's thesis report entitled "Socio- economic Impact of Milk Cooperative : A Case Study of Kubinde Dairy Production Cooperative Limited, Kubinde Sindhupalchok", submitted by Mr. Rajendra Sharma, MA, Final Year, Rural Development , Tribhuvan University Kritipur in partial fulfillment of the requirements for the Master Degree of Arts in Rural Development has been evaluated and approved by the Thesis Evaluation Committee of the Department in the prescribed format of the Department of Rural Development, Tribhuvan University, Kritipur, Kathmandu, Nepal.

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I'm really pleased to uncover this piece of work based on my intensive field experiences. This thesis is submitted to the Central Department of Rural Development, Faculty of Humanities and Social Sciences, Tribhuvan University for the partial fulfillment of Master's Degree in Rural Development. This thesis is completed under the guidance of respected Professor Dr. Pradeep Kumar Khadka, Head of Department of the Central Department of Rural Development. I heartily appreciate his invaluable supervision and useful guidance and very grateful to all the respondent milk seller farmer of Kubinde Dairy Production Cooperative limited for their kindly co-operation. I sincerely thank to all the lecturers of Rural Development for their support and suggestions .I am indebted to the Central library (TU), Dairy Development Corporation and other various institutions for their kind and sincere co-operation.

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ABSTRACT

This thesis has been prepared for the fulfillment of partial requirement of M. A. in Rural Development. The present study attempts to explain the socio-economic impact of Dairy cooperative. Kubinde VDC of Sindhupalchowk district is chosen for the study area where the milk from local farmers are collected. Out of the total dairy farming households of the study area, only 25 percent are selected for the detailed study. Sample size is taken from the dairy cooperative by using the method of Stratified Sampling.

Dairy Co-operative is developing as a second occupation of rural Nepalese people. It has been playing a vital role to uplift rural socio-economic condition. The cooperative has provided saving and credit facilities to the rural farmers. It growing as a small bank in the area as there are no banking institutions nearby. The cooperative has promoting the saving practices of the rural farmers. It has also developed the we feeling among the rural farmers. The study has found the changing situation due to gradual development of education; some positive impact has been exposed toward education in the study area. Looking the result of the study, it can be concluded that the living standard of the people of the area is uplifted to some extent by milk selling. The income from the milk production and its selling occuppies about one third income of the farmers. Such income has helped the rural farmers to fulfill their different needs. Most of the farmers use the dairy income in cattle feeding, domestic consumption, education, purchasing fixed properties but the income from the milk is also supporting to purchase fixed assets such as land and house, health.

There are some problems in dairy Co-operative such as veterinary services, lack of shed management, low price of milk, high price of fodder etc. But these problems have not been hindering dairy farming negatively though it needs some improvements. Dairy farming and agriculture are interrelated to each other. The production of crops, improved grass and other feeding materials are high in this area. There is further possibility of market expansion. Likewise, suitable climate is other push factor which helps to further expansion of dairy Co-operative in this area. Thus, the overall scenario of socio-economic condition of dairy Co-operative is not so good, but, it is going very positively.

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ACRONYMS AND ABBREVIATIONS

A.D.	Anon Dome
ADB	Agriculture Development Bank
ADB/N	Agricultural Development Bank/ Nepal
AGDP	Agricultural Gross Domestic Product
APP	Agricultural Prospective Plan
CBS	Center Bureau of statistics
CDCAN	Central Dairy Cooperative Association of Nepal
CGI	Corrugated Galvanized Iron
CMPCU	Central Milk Producers Cooperative Union
DAN	Dairy Association of Nepal
DDC	Dairy Development cooperation
DDC	District Development Corporation
DOA	Department of Agriculture
DOC	Development of Cooperatives
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GDP	Gross Domestic Product
HDI	Human Development Index
HH	Household
ICA	International Cooperative Alliance
KMSS	Kathmandu Milk Supply Scheme
LRSC	Land Reform Saving Development
MCA	Milk Cooperative Association
MPA	Milk Producer Association
MPCS	Milk Producer Cooperative Societies
NBSM	Nepal Bureau of Standards and Mythology
NDBB	National Dairy Development Board
NDDB	National Dairy Development Board
RCC	Reinforced Cement Concrete

Sq. Km.	Square kilometer
TYDDP	Tenth Year Dairy Development Plan
UN	United Nation
US	united States
VDC	Village Development Committee
WTO	World Trade Organization

CHAPTER ONE

INTRODUCTION

1.1 Background

A co-operative is a voluntary organization of person with limited means to safeguard their needs and interest. "Unity in diversity is the main motto of co-operatives societies." The philosophy behind co-operative movement is "all for each and each for all". A cooperative is defined by the International Co-operative Alliance's Statement on the Co-operative Identity as an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. It is a business organization owned and operated by a group of individuals for their mutual benefit. A cooperative may also be defined as a business owned and controlled equally by the people who use its services or who work at it. There are different types of cooperative on the basis of working nature.

A dairy cooperative business is owned, operated, and controlled by the dairy farmers who benefit from its services. Members finance the cooperative and share in profits it earns in proportion to the volume of milk they market through the cooperative. 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 cooperatives 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 cooperatives in developing countries are, generally to increase production volume of buffalo milk, bring about the internal improvement in cooperative societies, reduce cost of production, and 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 cooperative societies / institutions into a dairy cooperative, and compete in the global market with quality of products. Dairy cooperative is a very popular business not only in developing countries but also in developed countries like the America, Germany etc. Developed countries produce cow milk and developing countries like Nepal produce buffalo milk. These countries are produced different types of dairy product like cheese, ghee, whey product, cream, solid milk, milk powder etc. Developed countries focus on qualities of product but developing countries often focus on quantities/volume of production. Live stock farming is an important economic activity since the commencement of human civilization. In the early stage of civilization when agriculture was not properly known, cattle formed the principle property of the people. Thus, the history of dairy co-operative is related with the history of civilization.

Livestock farming being a major component of Nepalese farming system is becoming one of the important occupations in the rural area of Nepal it is an integral part of Nepalese agriculture since these are used for labor (bullock) production, manure production, religious purpose and milk & meat production. Dairy farming has been helping the farmers to earn cash income to fulfill their basic needs, at the same time they can get manure as by-product and draft power for agricultural production. One of the other important aspects of dairy farming is to generate energy in household level for cooking and heating in terms of biogas, which is produced by decomposition of animal dung into an airtight digester. Major dairying animals in Nepal are cows and buffaloes. These are reared in mountain and Terai regions of country whereas yaks are other dairy animals of sub Himalayan regions. Out of the total milk produced in Nepal, share of buffalo milk is higher, which is around 70% of the total milk production. A 20 years long Agricultural Prospective Plan (APP) has been effective in the country since 1997/98 which targets an annual growth rate in Agricultural Gross Domestic Production (AGDP) of 5 %. Livestock sector has been taken as one of the most potential sectors with an expected average annual growth rate at 5.5% as a whole in livestock sector and 6.1% in the dairy sector. However, the social exclusion of some of the ethnic groups, especially the scheduled castes, in the dairy co-operatives in rural areas has been seen as one of the constraints to achieve the targets. Still now, milk produced by some of the scheduled

castes of the country has not been bought by the dairy cooperatives in the rural areas of the country.

Small holder dairy sector is playing critical role in generating cash income in the hills of Nepal. In fact, government programme has pushed for crossbreed cows as dairy animals. Nevertheless, improved buffaloes are becoming popular among small farmers as dairy animals because of their adoptability to local feed resources and high milk fat content and salvage value especially in the hills of Nepal. Initially, smallholder dairy farming was promoted through marketing arrangement of parasitical government organizations such as Dairy Development Co-operation (DDC) Nepal. These organizations have milk chilling and processing facilities and they have organized farmers groups or co-operatives to collect farmer's milk to be taken to chilling and then to processing centers. Nevertheless, these systems are presently, collecting hardly one-fourth of total marketable milk. Still a lot of milk is being cannoned through informal sector and now private dairies with their own chilling and processing plants are becoming common thing in Nepal. Producer's share in consumer price is lowest with the sales of milk to the parasitical organizations. The problem of smallholder dairy in Nepal has been exacerbated due to the import of cheap powder milk and the government's lack of monitoring in assuring quality of pastured milk of consumption. The parasitical organizations, which are heavily subsidized with government or donor's aid money, could not contribute to dairy sector development to the extent they were expected to. Animal feed, breed, and marketing and processing and its policy are critical issues across in Nepal for promoting smallholder dairy in mixed mountain farming systems areas. Shortage of feed during the dry period and the winter is serious problem affecting the milk productivity of dairy animals. Commonly, breed is of local types and milk productivity is low compared to crossbred animals. Product diversification appears to be al key issue in terms of low income from milk marketing and processing.

In Nepal, dairy development activities began in 1952 with the establishment of a small-scale milk processing plant on an experimental basis in Tusal, a village in the Kavreplanchok district. According to the annual report 2065 of cooperative board In Nepal there are 1561 dairy cooperative.

1.2 Statement of the Problem

Milk is an essential liquid for humankind. It needs to human from birthday to old ages. It has so many ingredients which we can use for making others groceries/edible items as well as use in some types of medicine. It has great demand in market but production and marketing of milk functions are not easy task. Milk producers as well as marketers have been faced so many problems and challenges. Different countries have different types of problems. In Nepal, especially in the hills and high hills where sustainable climate, pasture land, fodder as well as unemployed wages labor force are available dairy co-operative could be well developed as an industry. Agriculture is the primary occupation of people. The economic condition of people is low. In such a case, the dairy cooperative is one measure to case and lower the blows of the poverty and under development to the state and people. Therefore, dairy cooperative are established and managed to solve the problems of mass rural people.

The cooperative definitely helped the poor people. But this studies also focus on to reflect the present situation of dairy farmer like socio-economic condition and the problem related to farmer and .Working pattern of the dairy cooperatives and other management system of the cooperatives. In Nepal dairy cooperatives are not working satisfactorily. Lack of adequate supports from the government lead dairy co-operative societies to become inactive i.e. why the dairy farmers are unable to produce more milk products in the state.

1.3 Objectives of the Study

The general objective of this study is to analyze the socio-economic impact of the people, their problem and necessary measures for overcoming the problems. However; the specific objectives include:

To study the socio-economic impact of Dairy Cooperative

1. To identify the problems of dairy cooperative
2. To suggest measures for improvement

1.4 Significance of the Study

In Nepal, where nearly eighty percent of the population depend on agriculture for their livelihood, the country as a whole has had a food deficit for the last 26 years, mainly due to

subsistence farming, small and fragmented land holding size, low agriculture input and productivity, uneconomical farming units, and lack of decentralized grassroots-based agricultural developmental policies and programs. Widespread poverty, malnutrition, political instability, resource degradation, and a serious food deficit have become major national problems. Agricultural policies and actions for raising farmers' living standards, achieving food security, and enhancing the natural resource base are urgently needed.

Dairy cooperatives which are formed by the farmers, governed by the farmers, and run by the farmers in a democratic fashion are an ideal mechanism to increase livestock and agricultural production and farm income, enhance agricultural sustainability and food self-sufficiency, while promoting Nepal's socio-economic development. Through cooperatives, farmers are empowered and economic growth is stimulated. Appropriate governmental policies, programs, rules/regulations, and support systems are essential for the success of Dairy cooperatives.

This study is concerned with the importance of dairy co-operative and its socio economic impact in rural farmer. It also highlights the related problems and socio-economic condition of farmers of the study area. This study is purely a micro level study because no such study has been done in the past to cover the entire aspect. By the way the study tries to fulfill the gaps of knowledge about various aspects like production, management, marketing and socio-economic condition of farmers of study area. The study aims to present information about the socio-economic condition to the dairy co-operative. The study tries to find out the impact of dairy co-operative of the general life of the farmers. Likewise, it will present the problems of dairy co-operative and recommends. Farmers are still facing milk holidays and not getting real price of the milk. To sustain and improve the dairy processing industry in Nepal it must become competitive in terms of cost production and quality. Trained manpower should be available to the private sector; raw milk pricing should be based on the quality and fixed by a free market system with little intervention from the government. Extension services should be backed up with more research and animals and product quality.

For its sound development this study will provide guidelines to construct dairy development policies and plan for the policy makers, development workers, rural farmers and it will fruitful for further study regarding this topics.

1.5 Limitation of the Study

This research is conducted only with limited objectives for the partial fulfilment of Master Degree in Rural Development considering the time and budget limitation. This study is only confined to the farmer of Kubinde VDC who sell their milk to the dairy cooperative. Since the research is limited to a particular locality of Sindhupalchowk district and also in a particular VDC of Kubinde, the findings and the conclusions drawn with this research may not be generalized.

1.6 Organization of the study:

This dissertation has been divided into Six different chapters. The First chapter includes introduction, Second chapter includes reviews of studies related to concept, history of cooperative, cooperative in Nepal and dairy cooperative. Besides this chapter Two also deals with the empirical study regarding cooperative and dairy cooperative. The Third chapter presents research methodology. This section deals with rationale for the selection of study area, Population and sampling, tools and techniques of data collection, household survey, key informant interviews, observation, interview, focus group discussions and at last data presentation. Chapter Four is concerned with the introduction of the study area and the characteristics of the sample respondents. Chapter Five is analysis and discussion about the study. Chapter Six deals about conclusion and recommendation.

CHAPTER TWO

LITERATURE REVIEW

2.1 Concept:

A cooperative is defined by the International Co-operative Alliance's Statement on the Co-operative Identity as an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise. It is a business organization owned and operated by a group of individuals for their mutual benefit. A cooperative may also be defined as a business owned and controlled equally by the people who use its services or who work at it.

Co-operative is a user - owned and user-controlled business that distributes benefits on the basis of use. According to patronage proportionality – ‘a co-operative is a private business organized and joined by members to fulfill their mutual economic needs as patron of the business, with the key control, ownership, and income distribution decision based on patronage proportions; namely, member voting, equity capital investment by patrons, and distribution of net income to patrons are proportional to use of the co-operative. The terminology used to describe co-operative and other firms differs widely. Co-operatives are also commonly called non-profit corporations or patron- owned corporations. The distinction between co-operative and other businesses is that co-operatives return net income to users or to patrons, while other business firms return net income to users or to investment (Cobia, 1989).

2.2 Cooperatives as Legal Entities

Although the term may be used loosely to describe a way of working, a cooperative properly so-called is a legal entity owned and democratically controlled equally by its members. A defining point of a cooperative is that the members have a close association with the enterprise as producers or consumers of its products or services, or as its employees.

In some countries, there are specific forms of incorporation for co-operatives. Cooperatives may take the form of companies limited by shares or by guarantee, partnerships or unincorporated associations.

2.3 Identity

Cooperatives are based on the values of self-help, self-responsibility, democracy and equality. In the tradition of their founders, cooperative members believe in the ethical values of honesty, openness, social responsibility and caring for others. Such legal entities have a range of unique social characteristics. 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 cooperative, for instance by a dividend on sales or purchases, rather than divided according to capital invested. Cooperatives may be generally classified as either consumer cooperatives or producer cooperatives. Cooperatives are closely related to collectives, which differ only in that profit-making or economic stability is placed secondary to adherence to social-justice principles.

2.4. Historical Background of the Co-operative

Although co-operation as a form of individual and societal behavior is intrinsic to human organization, the history of modern co-operative forms of organizing dates back to the Agricultural and Industrial Revolutions of the 18th and 19th centuries. The 'first co-operative' is under some dispute, but there were various milestones.

In 1761, the Fenwick Weavers' Society was formed in Fenwick, East Ayrshire, and Scotland to sell discounted oatmeal to local workers. Its services expanded to include assistance with savings and loans, emigration and education. In 1810, social reformer Robert Owen and his partners purchased New Lanark mill from Owen's father-in-law and proceeded to introduce better labor standards including discounted retail shops where profits were passed on to his employees. Owen left New Lanark to pursue other forms of co-operative organization and develop co-op ideas through writing and lecture. Co-operative communities were set up in Glasgow, Indiana and Hampshire, although ultimately unsuccessful. In 1828, William King

set up a newspaper, The Cooperator, to promote Owens's thinking, having already set up a co-operative store in Brighton.

The Rochdale Society of Equitable Pioneers, founded in 1844, is usually considered the first successful co-operative enterprise, used as a model for modern co-ops, following the 'Rochdale Principles'. A group of 28 weavers and other artisans in Rochdale, England set up the society to open their own store selling food items they could not otherwise afford. Within ten years there were over 1,000 co-operative societies in the United Kingdom.

The Rochdale Principles are a set of ideals for the operation of cooperatives. 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 implications of the Rochdale Principles are a focus of study in co-operative economics. The original Rochdale Principles were officially adopted by the International Co-operative Alliance (ICA). The Rochdale Principles of cooperative according to the 1996 ICA revision are detailed below.

1. Voluntary and open membership
2. Democratic member control
3. Member economic participation
4. Autonomy and independence
5. Education, training, and information
6. Cooperation among cooperatives
7. Concern for community

2.5 Background of dairy cooperatives:

Dairy farming was first introduced in Indonesia on the island of Java during the Dutch colonial era, when small herds of Holstein-Friesian cattle were kept close to the cities of Jakarta and Surabaya and in the highlands where the climate suited this temperate breed. After this nation gained independence, the herds were broken up and smallholder dairying emerged. Each farmer owned one or two cows and raw milk was sold in urban areas through

a system of private collectors who acted as middlemen; the farmers were paid about 25 percent of the retail price.

As is generally well known, land is perhaps the most important income-generating asset in the rural economies of Asia. Yet, scarcity of land and its skewed distribution are two of the major constraints of the rural Asian landscape. Close to 60 percent of the world's agricultural population lives in the villages of Asia, but its share of the world's agricultural land is only about 28 percent. This is much lower than in other developing regions. Furthermore, of this limited available land, a very large portion is comprised of holdings other than small farmers' holdings. While the conditions vary from country to country, small farmers in Asia, although accounting for more than two-thirds of the rural households, have access to only about 20 percent of the arable land. Against this background, economic activities that are not essentially land-based, such as dairying, have become crucial for small farmers and landless laborers. While farmers' cooperatives of various types play a useful role in promoting rural development, dairy cooperatives have special attributes that make them particularly suitable. Among these, they can facilitate the development of remote rural economies, thus upgrading 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 cooperatively establishing their own collection system and milk treatment facility in order to convert their perishable primary produce, which requires special and timely attention, into products with longer-keeping quality for marketing purposes.

Most dairy cooperatives adopt either a two - or three - tier system. One village or a group of two or three villages forms the basic unit of the primary cooperative. Only dairy farmers are allowed to enroll as members and they must commit to supplying milk exclusively to the cooperative. While the day-to-day functioning of the cooperative is managed by full-time salaried employees, the committee or board of the cooperative, consisting of only elected members, makes the decisions on the affairs of the cooperative. Primary-level cooperatives bring together members with similar interests at village level to work towards common goals.

This system can also identify good leadership talent that would be given a chance to develop through interaction with other community leaders.

A group of primary-level cooperatives forms a union, which can be for a district, region or milk shed area. This is the second tier. The third tier is the unions joining up to form a federation at state or national level, depending on the size and system of administration in the country. The federation has the power to act on such issues as pricing policies, extension, training, control of milk and milk product imports, subsidies and credit.

2.6 The Cooperative Movement in Nepal

Cooperative activities have existed in Nepal since traditional times. The cooperative movement of Nepal can be divided into the three types.

1. Traditional Co-operatives

Since ancient times in Nepal there were saving and credit associations popularly known as Dhukuti, and grains saving and credit saving known as Parma that have worked for a long period of time. Similarly, Guthi provided a forum to work together for smoothly running different socio-cultural practices in the different communities of the country which are still in practice.

2. Early Co-operative Movement

Modern cooperative initiatives date back to 1956 with the establishment of thirteen credit cooperatives in Chitwan District to assist flood victims. Establishment of the Cooperative Bank in 1963 that was converted into the Agricultural Development Bank in 1968 and the formation of the Land Reform Savings Corporation in 1966 can be cited as the major cooperative ventures in the early era of the cooperative movement in Nepal (NCFN, 2007). It appears that until 1990 most cooperative ventures were limited to credit and finance and were controlled by the government.

3. After 1990's

The Co-operative Act 1992 provided a liberal and democratic framework for co-operatives societies. There were 33 district co-operative unions upto 1990 and no national and central federations. After 1992, the mushroom growth took place not only in co-operative societies at the grassroots level, but also in secondary level and central level.

In 1990's National Co-operative Development Board and National Co-operatives Federation jointly took the initiative to distribute monetary benefits to the co-operative staffs established before 1991. Yet another achievement was made in 1997. National co-operative Federation was conferred with the International Co-operative Alliance (ICA) membership. Similarly, Ministry of Agricultural and Co-operatives and Co-operative Act, 1992 first amendment was enforced in 2000. Cooperatives are also found in the areas of transportation, vegetable production, coffee and tea production, wood carving, furniture, the cottage industry, carpet industry, and in ginger production. Even though governmental agencies, international institutions, Non-Governmental Organizations, and other stakeholders have put some effort into the cooperative movement in Nepal, the results are far from satisfactory. Most profitable cooperatives are urban-based, and except for finance, credit, and dairy cooperatives, the rural sector has not felt the presence of the cooperative movement in the country. Cooperative movements have to strive for the inclusion of women, dalits, poor people, and other oppressed classes of society. Some of the reasons identified for failure of the cooperative movement in the country include: lack of national vision for the cooperative movement, lack of adequate monitoring, lack of inclusion of every sector of society in the cooperative movement, lack of managerial skills and professionalism, lack of working capital, lack of technological support and development, and lack of credibility (Mali, 2005). As of 2065 B.S., the total number of cooperatives in Nepal is following below:

Table 1: Number of Co-operatives

S.N.	No. of Co-operatives	Number
1.	Agriculture Co-operative	1497
2.	Saving and Credit Cooperative	4432
3.	Dairy Co-operative	1561

4.	Electricity	254
5.	Vegetable and horticulture	116
6.	Tea Producers Co-operative	39
7.	Coffee Producers C/O	69
8.	Health C/O	41
9.	Multipurpose C/O	2808
10.	Science and Technology C/O	76
11.	Consumers C/O	103
12.	Bee Keeping	28
13.	Herbal	33
14.	Other C/O	245
Total		11302

Source: Department of Co-operatives, 2065

2.7 Dairy Cooperative in Nepal:

Dairy Co-operative is enhancing the socio-economic condition of the poor farmer so it is regarded as complementary agents to change the agrarian structure and removing socio-economic inequalities through progressive change. Dairy Co-operative brings all small milk producers in one group and help in solving their existing problems regarding their dairy farming. The principal organization for dairy development in Nepal has been the Dairy Development Corporation (DDC) established under the Corporation Act in 1969. Most milk-producing farmers are small landholders who have been organized to form producers' associations, which channel milk to DDC-run cooling centers. Under the new Cooperative Act, passed in 1992, the National Cooperative Development Board has been established to strengthen the cooperative movement in the country.

DDC has been collecting cow, buffalo and chauri milk from 29 districts. Milk is collected through the farmers owned, Milk producers Cooperative Societies (MPCS). Its present milk collection network has spread from Panchthar in the East to Surkhet in the West. Hetauda Milk Supply Scheme also supports KMSS & BMSS by supplying excess milk above their local requirement. Biratnagar Milk Supply Scheme manufactures skimmed milk powder from its excess milk and milk excess from other supply schemes. DDC has been playing a

special role in contributing to uplift the economic status of rural farmers. Thus dairy has been recognized as an effective tool for poverty alleviation. In the Fiscal Year 2062/2063 (2005/2006) DDC purchased about (approx.) 1, 50,000 liters of milk per day from the farmers.

With GON announcement of the policy of privatizing DDC in early 1990, private sector grew at faster rate. The private sector involvement is mostly in Katmandu Valley where large private dairies are located. Its significant growth was seen only after the implementation and approval of "Ten Year Dairy Development Plan" by GON in 1990. the poverty reduction. Likewise, the dairy farmers in many districts have organized themselves in milk producers' cooperatives and milk producers associations. These associations collect the milk from individual farmers and supply it to nearby chilling center or processing plant. Some of these cooperatives have also started processing and marketing of milk from their own initiatives.

In order to coordinate private - and public-sector dairy development, the National Dairy Development Board (NDDB) has been constituted. The board will initiate intensive training of MPA farmers and committee members at the field level so that they fully understand their rights, obligations and management discipline. A progressive transfer of MPAs to cooperatives will be encouraged through necessary activities coordinated by the NDDB, which will facilitate the participation of individual milk-producing farmers in the ownership of milk-processing plants.

2.8 Review of Empirical Studies

The livestock sector is very complex with many crosscutting issues and interrelationship with other sectors, it is a very important part of the agriculture sector and key role to play in the country's development and poverty reduction (Report, ADB 2001)

According to agriculture perspective plan in the sector will rise from 2.9% to 5.5% by the end of the plan period. Dairy accounted for about two-last decades was about two-third off the livestock sectors. The average growth of milk production over the last decade was about 2.6% per year (Pardhan et al. 2003). In 1995-96 Nepal introduced agriculture-led economic

growth and rural poverty alleviation by implementing the 20 year APP which envisages researching and annual growth rate of 5.5% (Chapagain, 1995)

The demand for livestock in developing countries is predicated to double over the next 20 years due to human population growth, increasing urbanization and rising incomes more than 81% of the population of Nepal relies on the agriculture sector for employment and income generation. But agriculture development has been sluggish and most importantly has failed to keep the place with population growth. Nevertheless, contrary to the relative decline of agriculture the live stock production index has continuously been increasing over the last decades (FAO, 2003).

Policies and strategies to promote milk production in developing countries often don't address the key issues of small scale milk collection and processing and these acts as a limiting success. For the growth and development of small scale sector can best be achieved through local level organization of small scale productions into working groups and associations or co-operatives. The main driving force to attract small holders into this supply cycle is to provide increased returns to stimulate production and encourage uptake of improved technologies (FAO, 2001).

The primary benefit to be derived from increase in livestock productivity is sustainable producers, many of whom are resource poor, many of these being women and some of whom are landless. (PPLPI, 2004).

Dairy has been recognized as an improvement tool for development and poverty reduction and is today accorded to status of a thrust area by the government. DDC, an undertaking of Government of Nepal has made significant contribution in bridging the gap between urban consumers and the rural milk producers. It has provided its valued services to the farmers as their door steps sizeable increases in milk production has forced DDC to utilize milk in best possible ways and in recent times, massive diversification of dairy product has not only benefited the urban consumer's but has helped in the economic development of the rural mass milk producers (DDC, 2006).

Dupire (1962) explains that in the case of West African woman receive cattle from their families either s gifts or through inheritance. The cattle belong to the woman in that they control milk, keep animals of case of divorce and bequeath them to their children (Food and Agriculture Organization of UN, 1997).

Lindegaard (1993) in his research shows that when a household has a lactating cow, they meet their own demand for milk products and afterward they sell milk if they have any surplus. Then even though milk sales provide a reasonable possibility for cash income, the household requirements for the milk products is given high priority.

Development planners ignorance of the economic roles of women in pastoral societies indeed ignorance of pastoral socio-economic contributed to the relatively poor performance of "livestock projects" (Hurowitz, Jowkar, 1992).

Like Dairy Cooperative other types of co-operatives also grow quality and quantity if they receive fair government support capacity building assistance from within the outside the co-operative movement, (CICTAB, Pune, 2005)

Poverty in Nepal is mainly a rural phenomenon where households mostly land and livestock. Majority are dependent on agriculture for household income and livestock for petty cash. So it very necessary to realize the major benefits in livestock farming (PPLIP, 2004).

Milk Development Co-operation is going to get set up 250 milk producers' co-operatives societies in the Mid Western region to encourage the milk production in the various parts of the region. A meeting sat to plan out a powder milk factory at Banke district assumed that the Co-operative society will benefit to some so thousand farmers in the region (Kathmandu Post, 2003).

The milk holiday was coined in 1991 when the DDC could not buy all the milk offered and refers to days in the week when public or private dairy organization don't buy milk their regular suppliers (Dairy farmers) (Upadhaya et al, 2000).

Milk holidays are becoming an annual phenomenon in Nepal. The available evidence indicates that this is mainly a result of the inability of the formal dairy organization to sell milk and milk products (Upadhaya et al, 2000).

Milk holiday are largely a phenomenon of the flush season (September to March) during which the supply of milk is four times greater than in the lean season (Upadhaya et al., 2005). The Tenth Year Dairy Development Plan (TYDDP) 1990-2000 proposes that the DDC set its own price for milk based on commercial considerations, this has not yet materialized. Although the DDC has been responsible for formulating and executing pricing policy in practice it has to obtain government approval before implementing any price change.

According to Department of livestock services under the Ministry of Agriculture and Co-operatives of GON aims of developing the livestock sector by diversification and commercialization as an income generating and prosperous farming. The objectives of DLS in dairy sector include increasing production of milk, assisting in quality improvement of milk, helping in market identification and management, encouraging livestock based industries and developing human resource in the sector. In Nepal, women are actively involved in livestock production. Fodder collection, grazing and milking are generally performed by both woman and man, whereas activities like feed preparation, feeding, cleaning sheds and preparing milk products are women's domain (Acharya and Bennet, 1981; Katual, 1990). Women have a crucial role in detecting illness of the animal because of their close and frequent contact with them. Marketing of livestock is mainly done by men, but in consultation with women have the right to own livestock in Nepal. Girl children also share the responsibilities.

The milk put on the market is generally adulterated. Enquiries show that adulteration by producers is much less when compared with that practiced by collectors, distributors, etc. Producers are however primarily responsible for the initial contamination of milk as they pay little or no attention to clean production or proper handling of the milk. The most common adulterants used are water and skimmed milk. The water added may be dirty and contaminated. Cane sugar and flour are also added to foil detection by lactometers or by the

'Khoa' test. Similarly they have discussed about the co-operative marketing of milk. Almost all the milk societies and milk Unions have been organized with the primary object of improving the quality of milk supplied to towns and cities (Mamoria and Joshi, 1968).

In Nepal, a nationwide network of Department of Livestock services is working on improved buffalo production. External funding from the Asia Development Bank and the European Union has greatly strengthened its research and implementing activities. (Rasali, 2000).

Rural co-operative service provides research management, and educational assistance to co-operatives to strengthen economic position of farmers and other rural residents. The main motto is to work with co-operative leaders to improve organization, leadership, fixing prices, identifying market, to guidance to further development (Charles, 1996).

As envisioned by the Interim Constitution of Nepal, the cooperative sector has been recognized as one of the three pillars of development along with the public and private sectors. Various policies and programs mentioned in the approach paper of the Interim plan have considered co- operative as the medium of economic, social and cultural development through saving mobilization and increase in investments to restructure and strengthen the cooperative software, aimed at rural development. At present, Nepal has 9720 primary cooperatives, 5 central federation, one national cooperative bank and 133 district and sectoral federations. Altogether 1 million and 251 thousand members are associated with those cooperatives and their association, including 33 percent women members. Annual transaction of the cooperative sectors amounts to approximately about Rs. 50 billion. The share capital of the cooperatives societies amount to Rs. 1040 Million whereas balance of savings and investments amounts to Rs. 20 billion and Rs. 24 billion respectively. According to an estimate, the transaction of these cooperative has a contribution of approximately 1 percent in the GDP. Some 15 thousand people are directly employed in this sectors (NPC, Three Year Interim Plan 2064 -2067)

2.9 Dairy Cooperative in Sindhupalchok district:

In Sindhupalchok district there are 239 cooperatives. Total of 239 there are 140 dairy cooperatives. It shows that this district is highly potential for the dairy farming. The dairy development corporation declares that it is the pocket area for dairy products.

The history of dairy cooperatives begins in Sindhupalchok from 2042 B.S. establishing the Milk Chilling Center in Sipaghat by DDC. Now there are 8 Chilling Center in the district, the details are below:

1. Balephi Chilling Center by DDC
2. Melamchi Chilling Center by DDC
3. Sipaghat Chilling Center by DDC
4. Sankhu Chilling Center by DDC
5. Sangachowk Chilling Center by private Sector
6. Andheri Chilling Center by district milk production Cooperative association
7. Sipaghat Chilling Center by private sector
8. Naubise Chilling Center by Kubinde Dairy Production Cooperative

Table 2: Dairy Cooperative in Sindhupalchok

Active farmer for dairy Business	13000 Thousand
Daily Selling Milk	40000 Liter
Daily Income from selling Milk	10 Lakh
Total Dairy Cooperative	140

Source: District milk production Cooperative association, Sindhupalchok , 2065

The above mentioned literature is focused mainly on the development of dairy livestock, production economic status of dairy farmers and also about the problems of dairy cooperatives societies. It is the first attempt to study about the dairy farming through cooperatives and this study is carried out to find out the current situation or the condition of above unstudied topic of the study area.

CHAPTER THREE

RESEARCH METHODOLOGY

"Research Methodology is the Scientific method is a systematic step-by- step procedure following the logical processes of reasoning". This section deals with rationale for the selection of study area, Population and sampling, tools and techniques of data collection, household survey, key informant interviews, observation, interview, focus group discussions and at last data presentation.

3.1. Rationale of the Selection of Study Area

Dairy Cooperative is one of the main sources of earning in the rural communities. This study was done in the Kubinde VDC of Sindhupalchok district. Dairy Development Corporation declares that Sindhupalchok is one of the potential districts for dairy farming. Dairy has playing crucial role to improve socio economic condition of the rural people of the district.

This study is intended to find the role of dairy cooperative to change the socio economic condition of the people living in the study area. It is seen that the main occupation of the district are agriculture and livestock so the study may find out the problem and solution of the dairy cooperative. And the study of the dairy cooperative in the study area provides the clue for developing other small income generating activities and enterprises associated with it.

3.2 Research Design

The design of the research is case study research design since it assesses the past performance, current status and situation and the future trends and prediction of the dairy cooperative in the study area. The research portrays the accurate profile of how dairy cooperative developed among the other cooperative in study area. And, how the dairy cooperative is progressing in the present context, what are the driving force behind its development are the other facets of study. The study also assesses how the dairy is helping to uplift the livelihood of the dairy farmers.

3.3 Nature and Source of Data

This study has been conducted by using both the primary as well as secondary data. The secondary data were from the records of VDCs, District Development Committees, Dairy Development Corporation and CBS, Cooperative Organization, District cooperative office. And, the data from published /unpublished journals, books, articles and research reports were also agglomerated as secondary data for the study.

The study mainly adopts the primary data collected by conducting intensive field works in Kubinde VDC of Sindhupalchok district from Jan 2009 to February 2009. The sources of primary data are sample respondents, key informant interviews, FGDs, and field observations. On the basis of nature both qualitative and quantitative data were collected in this research.

3.4 Population and Sampling

The total population of the study area is the farmers having milk production at their homes which is 163 households. Among those households 40 samples were drawn by using stratified sampling. The strata were made on the basis of caste i.e. Dalit, Janajati, Brahman/Chhetri and on the basis of gender; Male and female.

3.5 Techniques of Data Collection

The primary data were collected by using different techniques such as household survey, interview, observation, focus group discussion, and key informant interview etc.

3.5.1 Household Survey

Every HHs of the farmer study was surveyed by preparing the semi-structured questionnaire and inquiries were taken with the Household heads.

3.5.2 Interview

Informal Interviews of the qualitative nature were conducted in the study areas. The interview were directive one and probed the different dimensions of how dairy should be advance in the present context. The interview also assessed on how to convert the existing

subsistence level of dairy farming to commercialization of it. The training regarding livestock farming, the veterinary services available in the region and the possible strategy of increment of dairy cooperative, problem of dairy farming, possible of market and the how the member were satisfied about the dairy services were probed on the interview.

3.5.3 Observation

The management and operation of dairy farming shed management, sanitation maintained, the effect of benefits by dairy income at their homes i.e. life standard, etiquette, gadgets, infrastructure developed and quality of milk produced were observed during the field visits.

3.5.4 Focus Group Discussion

Eight FGDs were conducted in the study area of which each of 2 FGDs in each of the 4 wards of the Kubinde VDC. With the participation of both men and women among the dairy farmers who are also the members of the cooperative, the discussion were focused more on the problems they were facing regarding dairy farming, its management, market of dairy products were discussed. The focus group discussions were conducted in the study areas by using checklist.

3.5.5 Case Study

Case studies were carried out for the intensive investigation of some of the individuals or families about the positive effects of dairy farming in their livelihood, the socioeconomic changes driven by cooperative and the problem being faced by the dairy farmers were jotted down in detail.

3.6 Data Analysis

In this study, the optimum primary data were collected from the sample respondents of Kubinde VDC. Most of the primary data were collected through face to face interviews and interaction with the sample respondents. The semi-structured interview schedule were prepared and administered in the field visit to collect information as per the objective of the study. The information covered in the schedule were personal and family characteristics

along with the dairy production, animal details, income and expenditure of dairy farming, role of cooperative for their socioeconomic change.

The data collected from FGDs, Case studies, Observations and interviews were the abstract and combination of verbal and emotional expressions, trail and trace evidences and visual impressions.

The data collected through semi-structured interviews were processed manually. They are edited and coded and computerized for further analysis in MS Excel.

The data collected from qualitative way (case studies, FGDs, Observation and interviews) were analyzed through qualitative content analysis to dissect the issues and dimensions of market, success, livelihood by dairy, problems and prospects of dairy cooperative.

CHAPTER FOUR

INTRODUCTION OF THE STUDY AREA

4.1 Physical Location and Geographical Characteristics

Sindhupalchowk district is located in Bagmati Zone in Central Development Region of Nepal. Geographically, it has an area of 2542 Sq. Km. and surrounded by Rasuwa and Nuwakot districts in the West, Rasuwa district and Tibet of China in North, Kavrepalanchok, Kathmandu and Ramechhap district in the south and Dolakha, Ramechhap district and Tibet of China in the east border of the district. The district headquarter is Chautara, located at an altitude of 1450 m. Geopolitically, Sindhupalchowk district is divided into 3 electoral constituencies, 13 Ilakas and 79 Village Development Committees (VDCs)

4.1.1 Demographic Features

The total population of Sindhupalchowk district is 305857 (CBS, 2001) comprising of males 152012 (49.70 %) and females 160001 (51.30 %) inhabit in 57649 households within the seventy nine VDCs of the district. Population density of the district is 120 per square kilometer, while average HH size is recorded 5.06 (C.B.S., 2001).

Table 3 Summary of Population Distribution

Total Area	2542 Sq.km
Total Population as of 2001	305859
Male	152012 (49.70 %)
Female	160001 (50.22%)
Population Growth in percent	1.32
Nos. of Household	57649
Average Household Size	5.06
Population Density per sq. km.	120
District Literacy Rate in percent	40.19

Source: Nepal District Profile, CBS, 2006

Table 4: Economically Active and Inactive Population above 10 years

Status	Total	Male	Female
Economic active	167246	84982	82264
Economic inactive	51952	24001	27951

Source: Nepal District Profile, CBS, 2006

4.1.2 Land Use Pattern

The land use pattern of the district is as follows:

Table 5: Land Use pattern

SN	Land Use	Area (Sq.Km)	Percentage (%)
1	Agricultural land	737.10	29.00
2	Forest land	775.67	30.51
3	Pasture land	118.23	4.65
4	Snow	47.00	1.85
5	Bush	322.53	12.69
6	Landslide	2.62	0.10
4	Parti	456.15	17.94
5	Others	82.70	3.26
	Total	2542	100

Source: Annual Report 063/64, Sindhupalchowk

4.2 Livestock Production

Livestock is an important component of farming system in Sindhupalchowk district. Livestock are regarded as one of the major assets of farm household. Cattle and buffaloes are primarily reared for draught power cultivation and transport, with the latter also providing milk and meat for on-farm consumption and opportunity sales. The livestock's population and their production are presented in table below.

Table 6: Livestock Population

SN	Livestock	Livestock Population
1	Cattle	78110
2	Buffaloes	41357
3	Sheep	15042
4	Goat	127444
5	Pig	8684
6	Fowl	269729
7	Duck	438

Source: Nepal District Profile, CBS, 2006

Table 7: Livestock Production

SN	Livestock Product	Unit	Annual Production
1	Milk	MT	12712
2	Meat	MT	2053
3	Egg (hen)	Thousand	7291
4	Wool	Kg	10680
5	Fish	MT	900

Source: Nepal District Profile, CBS, 2006

4.3 Brief Introduction of Study Area (Kubinde VDC):

Among the 79 VDCs of the district Kubinde is one. The main inhabitants of these VDCs are Brahman, Chheatri, Dalit and Janajati. The main occupation of the villagers are Agriculture and livestock. There is a great potentiality for dairy farming, vegetable farming in these areas such as potato, tomato, cucumber, beans and other off seasonal vegetables, if irrigation could be managed. The livelihood practices in the VDCs are buffalo, goat, and poultry farming. There are two milk cooperative in the study area. According to the VDC office the population of the VDC is about 6 thousand.

4.3.1 Brief introduction of dairy cooperative

The Kubinde dairy cooperative was established in 2049 BS and registered as an institution in 2050 BS. It is situated in ward-7 of Kubinde VDC, Sindhupalchowk. It has two milk collection center. The average milk collection per day is eight hundred litres. Recently this organization established one chilling center in Naubise of Fulpingdanda VDC. It covers farmers of ward 1-8 of Kubinde and some wards of Batase, Fulpingdanda and Fulpingkot VDCs. It started the saving and credit facilities from 2056 BS. Till now, it collects 36 lakhs savings out of which 35 lakhs is circulated among the farmers as loan without any securities. Initially the cooperative members were 39 and the capital share was 3900. They have set certain criteria to be a shareholder of this cooperative such as farmers should be from the catchment area of the cooperative. In the dated 2065 Chaitra there were 412 cooperative members.

Daily the milk is collected from 163 farmers in an average. Its another collection centre collects the milk of 45 Household. Most of the farmers are Chhettri / Brahmins and Janajati. There are also few dalits in the community and only one dalit brings milk to the cooperative. There is no discrimination towards Dalit. But the involvement of the dalit in the dairy cooperative is very less.

4.3.2 Saving and Credit System

The farmers can save their money with interest rate 8% per annum while they can take loan with interest rate 14%. The cooperative members need to collect at least Rs 50 per month. The farmers can get loan 3 times of their savings. But the upper limit of loan at a time is Rs 25,000/- and the time duration is 6 month. Cooperative provides loan to its members for domestic purpose and buffalo farming only.

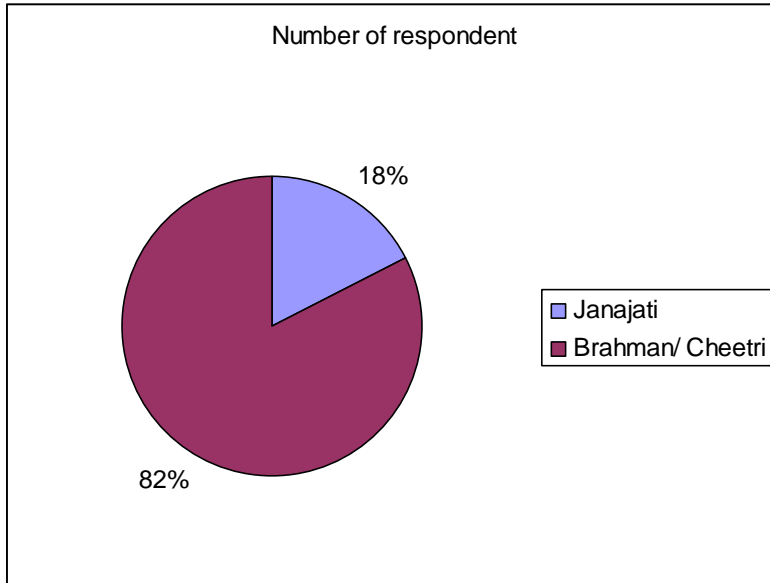
4.4 Characteristics of Sample Respondents

4.4.1 Cast/Ethnicity:

The main inhabitant of the study area is Brahman/Chetteri. They are involved in the livestock farming so the economic condition of the Brahman/Chhetri is quite good then other caste like

dalit, Janajati. Out of 163 milk Sheller farmer total respondents are 40. Among them 7 respondent are Janajati and 33 are Brahman/ Chhetri.

Figure 1: Caste and Ethnic composition of respondents

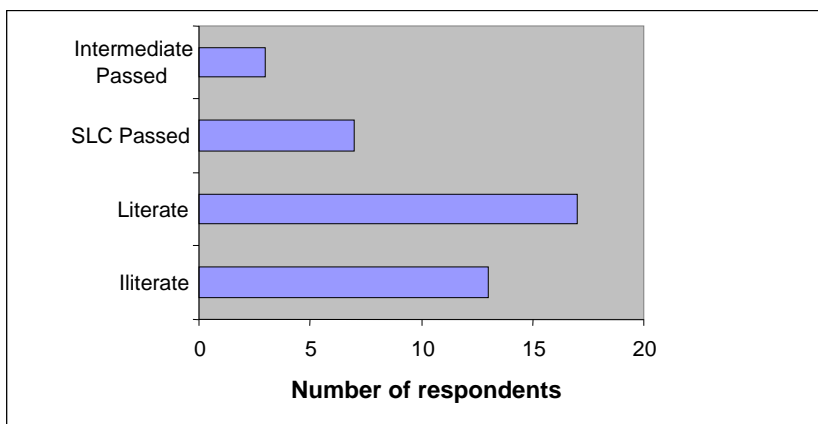


Source: Field Survey, 2009

4.4.2 Education

In the field visit, out of forty respondents, 13 are illiterate, 17 could do general reading and writing, 7 were SLC passed and 3 are intermediate passed. Please see the chart below for detail.

Figure 2: Education of respondents

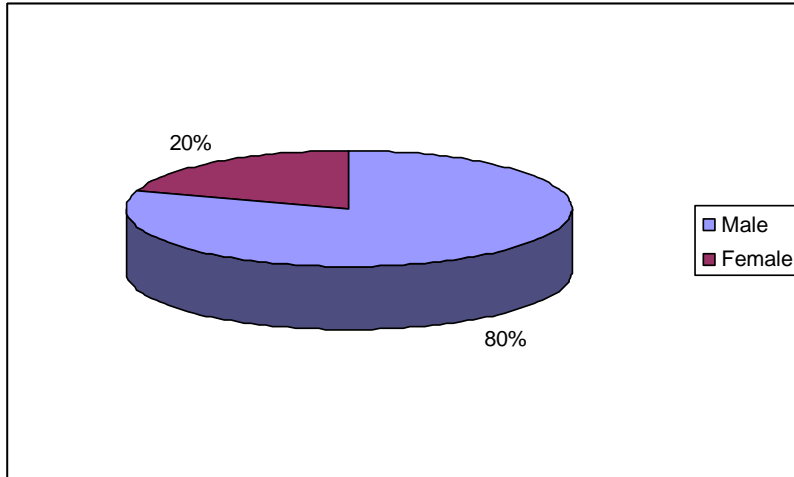


Source: Field Survey, 2009

4.4.3 Gender

Male and female both are active in livestock farming but in the study area most of the house led by male some house is led by female also. Out of 40 respondents, 32 are male and 8 are female. The composition of the respondent by the gender in detail is given below.

Figure 3: Gender Composition of the Respondent



Source: Field Survey, 2009

4.4.4 Age

The milk Sheller farmers were surveyed during the study. In the study area age group were found from 30 years to as much as 64 years. The age group of the respondents is detail below.

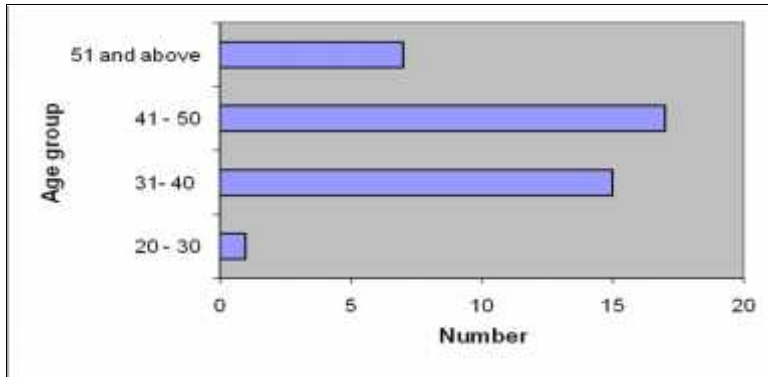
Table 8: Age of the respondent

Age of Respondent	Number
20 - 30	1
31- 40	15
41 - 50	17
51 and above	7

Source: Field Survey, 2009

It can be illustrate in the following figure:

Figure 4: Age of respondents



Source: Field Survey, 2009

4.4.5 Land Holding

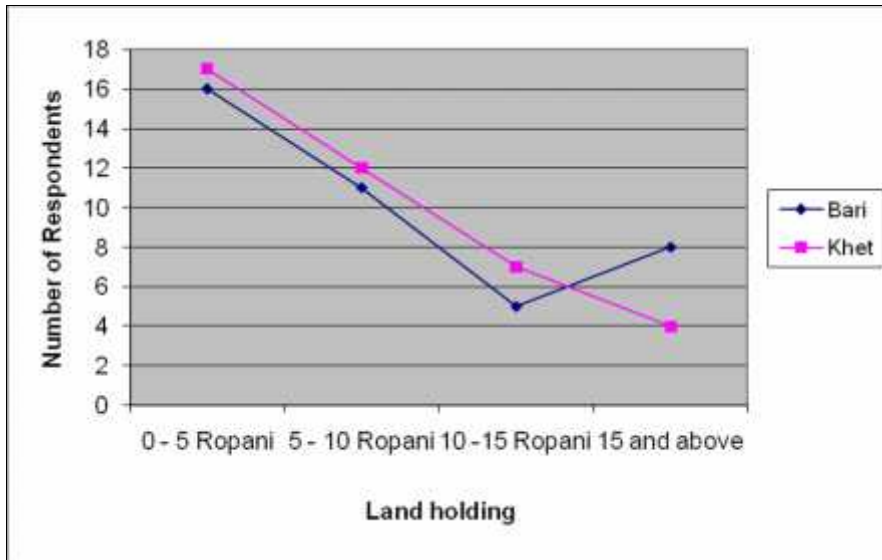
Most of the families of the study area are medium level and they have Up land (Bari) and lowland (Khet). Some farmers have grazing land also but it is very less. The landholdings of the respondents are detail below:

Table 9: Landholding of respondents

Land Holding of the Farmer in Ropani	Bari Holding HH	Khet Holding HH
0 - 5	16	17
5 - 10	11	12
10 -15	5	7
15 and above	8	4

Source: Field Survey, 2009

Figure 5: Landholding of respondents



Source: Field Survey, 2009

4.4.6 House Types

In the study area, the houses are made by stone and mud. The roofs of the houses are either made of stones or CGI sheets.

CHAPTER FIVE

ANALYSIS AND DISCUSSION

5.1 Social Aspects

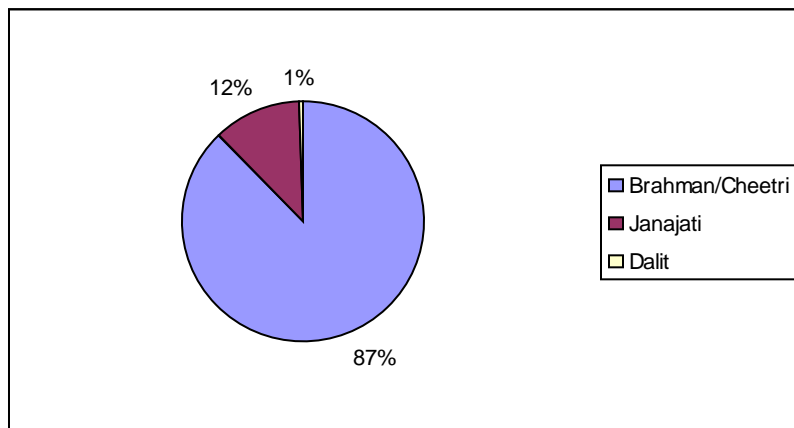
The dairy cooperative providing facilities for the people of Kubinde VDC ward 1 – 8, Fulpingdanda, 3 – 4, Fulpingkot 4 – 5 and Batase – 3 . The involvement in the cooperative are Brahman, cheetri, Janajati and Dalit. Any one from the above said territory people can be the member of the cooperative. Cooperative shares its profit to the shareholder every year. There in not any discrimination towards dalit, janajati and other ethnic caste. In the cooperative the majority is Brahman/ Cheetri. Caste wise milk seller in the dairy cooperative.

Table 10: Caste wise participation in the cooperative

Caste	Number of the Farmer
Brahman/Cheetri	143
Janajati	19
Dalit	1
Total	163

Source: Field Survey, 2009

Figure 6: Caste wise participation in the cooperative



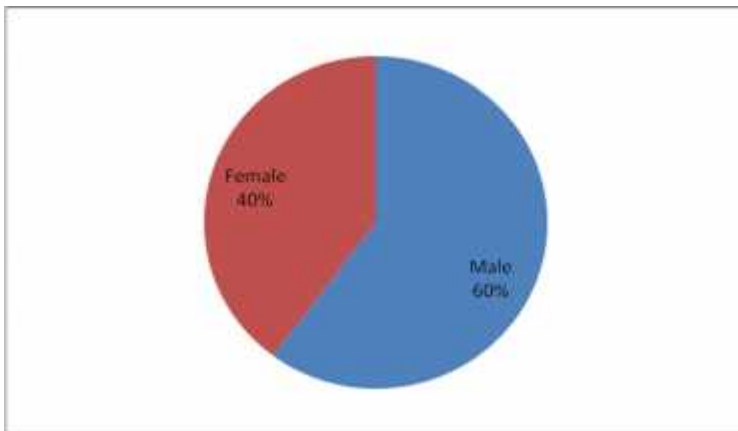
Source: Field Survey, 2009

In the study area most of Brahman/ Cheetri involved in the dairy farming then dalit and Janajati. Dalit cast Damai, Kami and Sarki are economically poor and deprived in the society. They have not enough land so they work as daily wages. Because of low income and little agricultural land they don't get asses for the livestock farming. The old generation of the dalit still continuing their traditional skill and technology but the young generation is working as daily wages, wood works and other alternative job. The condition of Janajti in the dairy farming also less. Cooperative provides equal facilities to its all member.

5.1.1 Gender

Both male and female are active in he livestock farming. They are active in the cooperative. The participation of the women in the cooperative is increasing. Out of 412 cooperative members the women were 164 and male were 248.

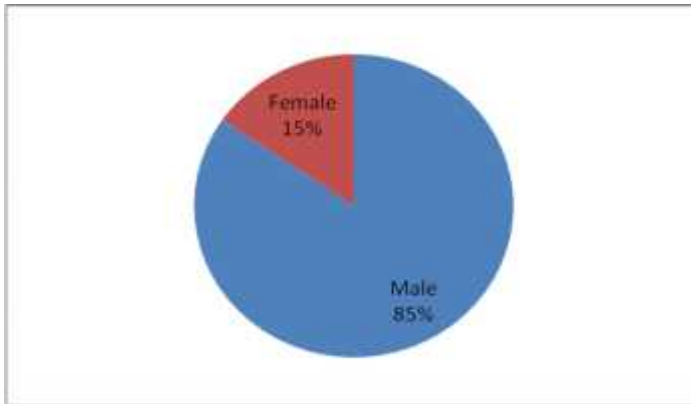
Figure 7: Gender wise members in Cooperative



Source: Field Survey, 2009

But in the decision making process of the cooperative the participation of the female is very little then male. There is one executive committee to run the cooperative smoothly and under the main committee there are two subcommittee, one is loan committee and another is account committee. The participation of the women in the executive committee:

Figure 8: Gender wise members in executive committee in Cooperative



Source: Field Survey, 2009

It shows that out of 40 % member of the cooperative women only 15% is in decision making process. It shows that clearly there is gender discrimination for the women. It is because of the male dominated society.

5.2 Economic Aspect

5.2.1 Food Availability

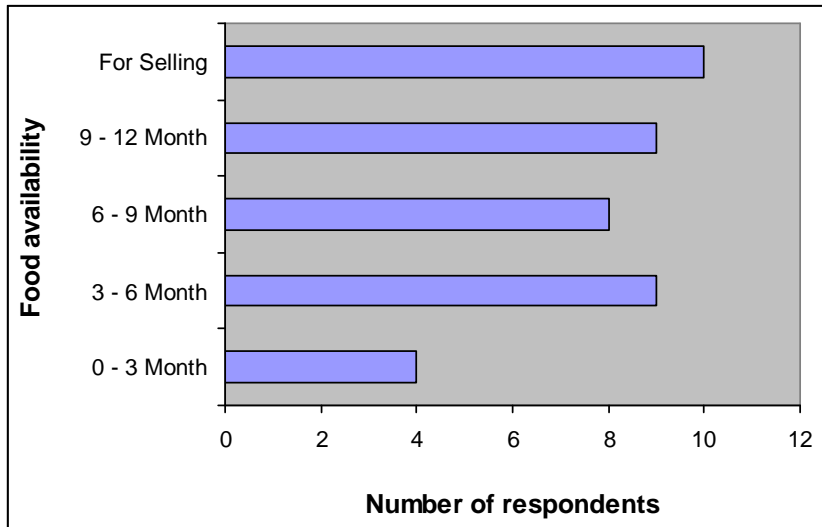
The main crops of the study area are rice, wheat, maize; potato etc. In the study area most of the people depend on agriculture so out of 40 respondent 10 were sold their agricultural product. Most of the farmer could not get food for the whole year the food availability of the farmer is detail below:

Table 11: Food availability of the people

Food Availability	Number of HH
0 - 3 Month	4
3 - 6 Month	9
6 - 9 Month	8
9 - 12 Month	9
For Selling	10
Total	40

Source: Field Survey, 2009

Figure 9: Food availability of the people



Source: Field Survey, 2009

5.2.2 Animal Holding

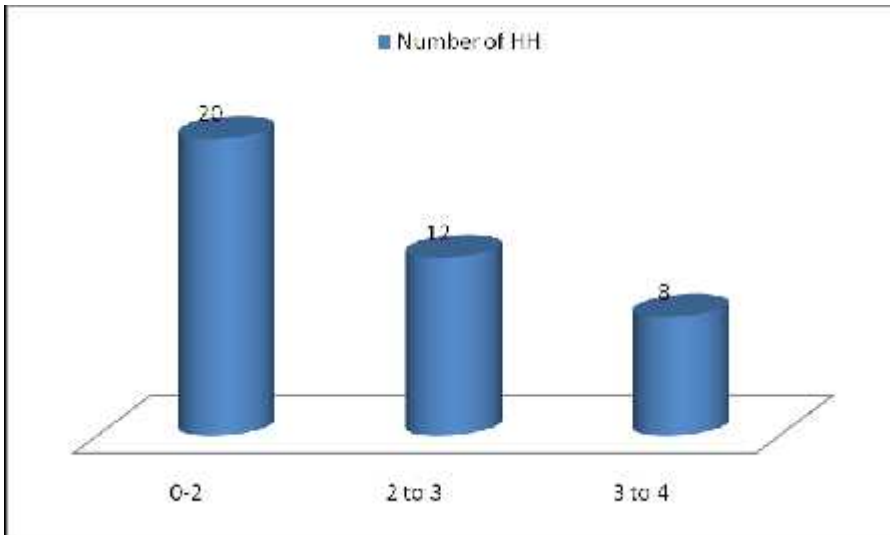
Farmers have been keeping livestock for many years. Buffalo, Goat, Ox, , Cow and Hens are major source of income from livestock in this study area. Almost all the farmers have kept buffalo for the dairy purpose. After the establishment of dairy co-operatives farmer have started keeping more buffaloes because now they have realized that dairy farming is an important source of earning.

Table 12: Number of Buffalo per household

Number of Buffalo	Number of HH
1 -2	20
2 - 3	12
3 - 4	8
Total	40

Source: Field Survey, 2009

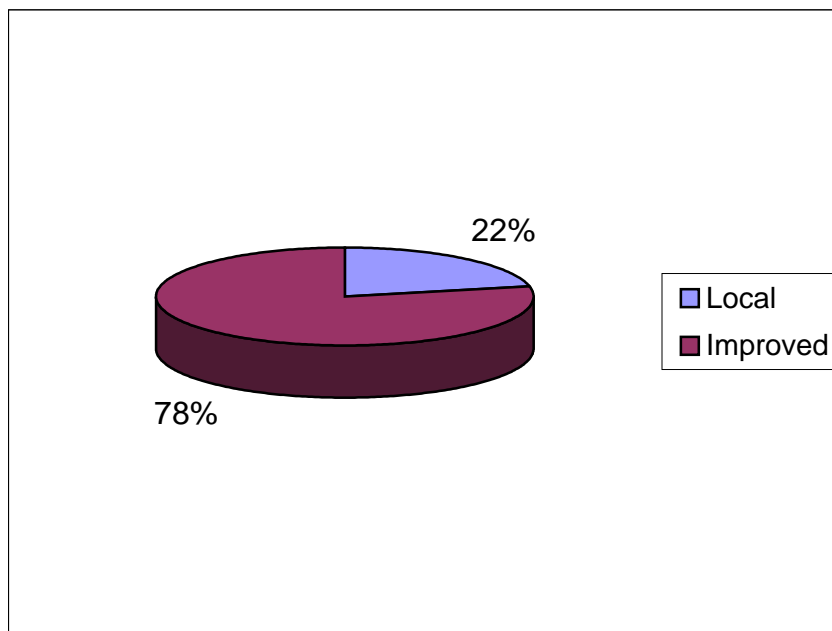
Figure 10: Number of Buffalo per household



Source: Field Survey, 2009

Based on the above figure, maximum household keep 1-2 buffaloes and only few keep more than three buffalos. It shows that still the farmers do not have practiced of farming in commercial purpose.

Figure 11: Types of Buffalos:



Source: Field Survey, 2009

Most of the farmers keeping the improved buffalos because it can give more milk than the local buffalo. Its cost is high. Farmers who cannot afford the improved buffalos are keeping the local.

5.2.3 Milk Production

The total milk production was less in liters before the involvement of the rural farmers in dairy co-operation because milk was produced for consumption purposes and selling nearby markets. Only a few farmers have sold their milk in the nearby market like Chautara district headquarters and the market centers Balaphi and Jalbire. All farmers did not get a chance to sell their milk because they have to walk more than 2 hours to reach the market center. But after the involvement in co-operatives, the milk production has been drastically increased because they have found the marketing facilities. Before, people kept more local buffalos. But now people prefer to keep an improved dairy buffalo because the total amount of milk production of local dairy animals is less in comparison to improved buffalos.

5.2.4 Utilization of Milk

Before the involvement of people in dairy co-operatives, it was difficult to find the marketing facilities. So milk was processed locally into ghee and other products. But with the establishment of dairy co-operatives, people only focus their attention on selling raw milk because it is easier and less time-consuming, so they use the produced milk for consumption purposes and selling purposes.

5.2.5 Period of Selling Milk

Not all the farmers sell milk throughout the year. They sell more milk in the summer season than in the dry season. Farmers who have more than two milking buffaloes sell milk throughout the year. But farmers who have only one or two milking cows or buffaloes can sell milk for 7 months only. The average months of milk selling in the study area is 9 months.

5.2.6 Income Earned from Selling Milk

Before the involvement of people in dairy co-operative, most of the farmers used to keep local dairy buffaloes because dairy animals were kept for milk and consumption and left over were

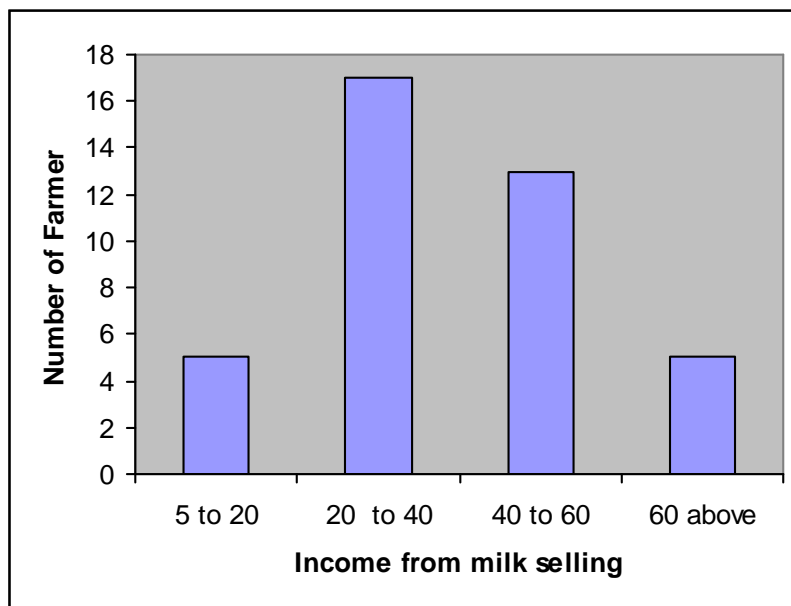
sold in nearby market. Dairy farming was for substantial purpose. But after the involvement in dairy co-operative people started to keep improved dairy cattle's as these cattle provide more milk in comparison to local buffaloes. Now people have started taking dairy farming as little commercialization.

Table 13: Annual income in NRS thousands from milk selling

Income from Milk Selling(In Thousands)	Number of Respondent
5 - 20	5
20 - 40	17
40 - 60	13
60 Above	5
Total	40

Source: Field Survey, 2009

Figure 12: Annual income in NRS thousands from milk selling



Source: Field Survey, 2009

Most of the farmer earning 20 to 40 thousand per year by selling the milk. Farmers who have more than 3 buffalo could earn more than 60 thousand per month. Some farmer earned eighty

thousand by selling the milk. It showed that farmer who reared more buffalos can earned more money.

5.2.7 Income from Non Dairy Animals

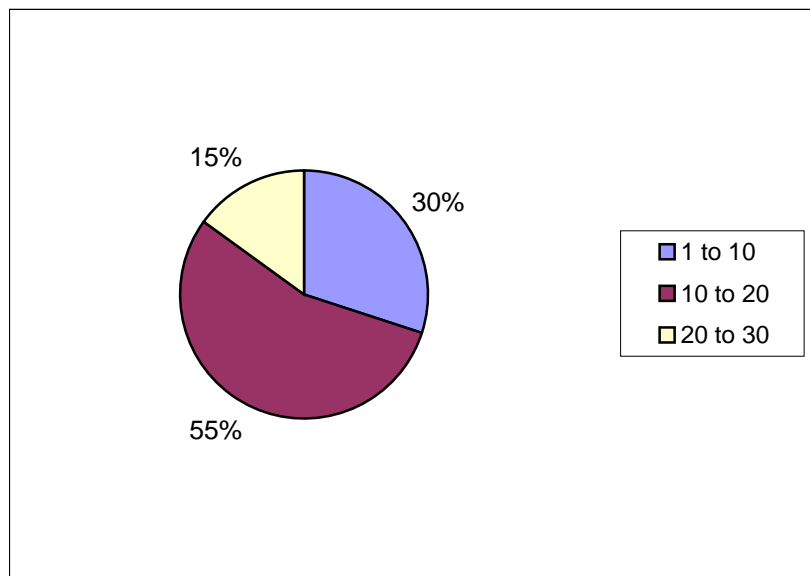
Most of the farmers have been keeping improved buffalos after involvement in dairy cooperatives because to buy those buffalos loan is provided by co-operatives in minimum interest rate i.e. annually 14%. Besides the milk selling, farmers earn by selling of the goat, calf and poultry. The following figure indicates the income from the non dairy animals.

Table 14: Income in NRS thousands from Non-dairy animals

Income from Non dairy animal(In Thousands)	Number of respondent
1 - 10	12
10 - 20	22
20 - 30	6
Total	40

Source: Field Survey, 2009

Figure 13: Income in NRS thousands from Non-dairy animals



Source: Field Survey, 2009

5.2.8 Expenditure for Dairy Animals

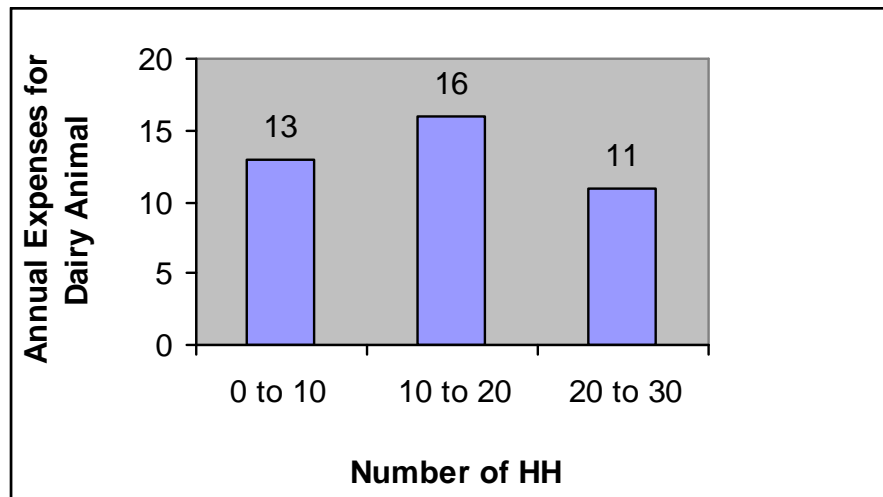
In this session the researcher includes the total expenditure for the dairy animals which farmer take from other or buying from other. It is not included the cost of farmer's own product and invest. It is the sum of veterinary services and fodder material for the animals.

Table 15: Expenses for the dairy animal (in thousands)

Expenses for the dairy animal (in thousands)	Number of Respondent
1- 10	13
10 - 20	16
20 - 30	11
Total	40

Source: Field Survey, 2009

Figure 14: Expenses for the dairy animal (in thousands)



Source: Field Survey, 2009

5.2.9 Uses of Dairy Income

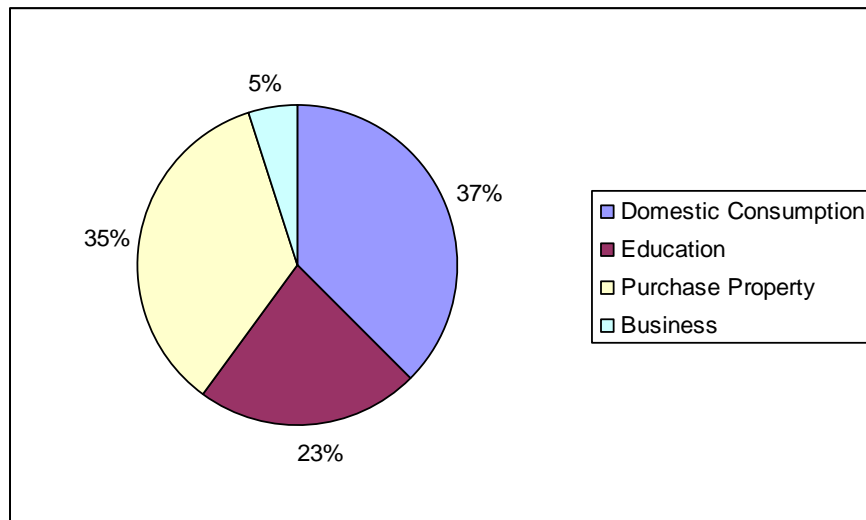
Farmers use the earned income from selling milk is spend in various household purposes. Mostly the earned income is spend for the cattle itself and left over is spend for domestic purpose, education purpose, to purchase property etc. Most of the members of co-operatives spend their dairy income on domestic purpose and to purchase property, education purpose and in other sectors like to add up in improved cattle.

Table 16: Utilization of earning from the milk selling

Topic	Number of Milk Sheller Farmer
Domestic Consumption	15
Education	9
Purchase Property	14
Business	2
Total	40

Source: Field Survey, 2009

Figure 15: Utilization of earning from the milk selling

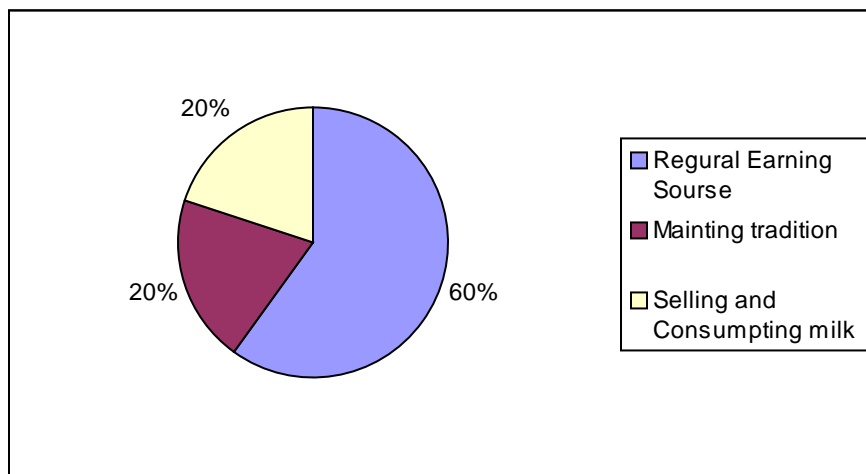


Source: Field Survey, 2009

5.3 Major Causes for Preferring Dairy Farming

Needless to say agricultural and dairy farming are interrelated to each other. For the dairy farming it is needed grass and other fodder which people can get from the agricultural products and waste. The Dairy farming has been developing as an easier mean to obtain regular cash income than food and cash crops. This sector is also less affected by climatic variation. Food and cash crops depend on nature and prices of such products do not remain stable. When the price of food and cash crops fall, it cannot cover the cost of production. So, there are various reasons for preferring this dairy sector by farmers. The main cause to focus in this dairy sector is regular earning income. So people who are depend on agriculture they are involved in the livestock farming.

Figure 16 Causes for Preferring Dairy Farming



Source: Field Survey, 2009

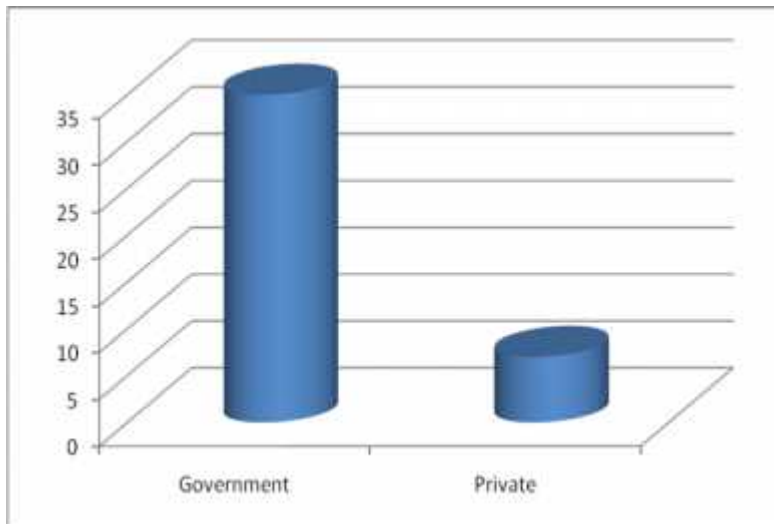
5.4 Dairy cooperative and Living Standard of the people:

5.4.1 Schooling of Children

All cooperatives people have realized the importance of education. They feel that without education they have not increased their social status. The researcher found that every farmer sends their children to school. Numbers of students have slightly increased than in the past. There is only government school so farmers send their children to the government school but few farmers send their children to the Town for the quality education to near district

headquarter and capital Kathmandu. Only few farmers who can afford they send their children to the private school. It is seen that most farmers send only sons to the private school. But with increases in income farmers prefer to send their children to private boarding schools then government schools if the private school is near. The schooling pattern of the farmer can predicts in the following chart.

Figure 17: Schooling of Children



Source: Field Survey, 2009

5.4.2 Toilet

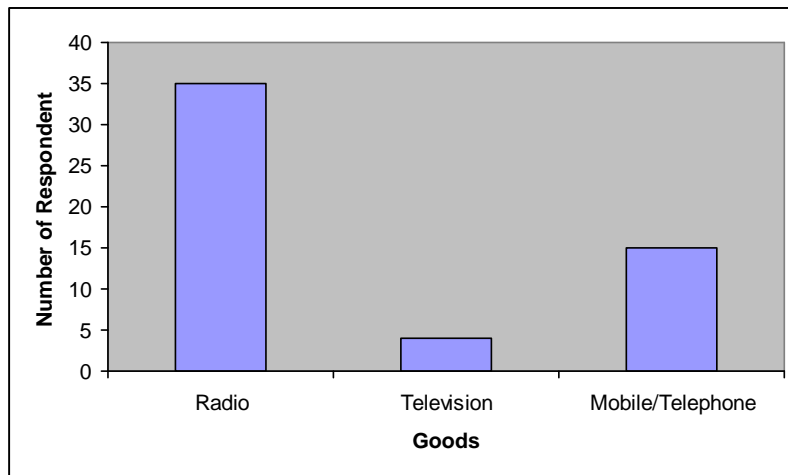
Toilet is necessary in every house because it helps to decrease the possibilities of infectious diseases. It is also a sign of consciousness. Most of the surveyed farmers have built toilets. But till some house have not access the toilet, Farmer who have not toilet they either use the toilet of neighbors or in open place. The toilet of the farmers is not hygienic they use pit toilet. 36 respondents said that they have toilets while other use open toilet or neighbor's toilet. They are planning to build toilet of their own.

5.4.3 Luxury Goods

The farmers have spent dairy income in luxurious goods such as radio, Mobile, television. Before all co-operatives they have less luxury goods, they have only Radio. But, after all co-operatives increase in their income level they able to buy luxury/necessary goods like

television, mobile, telephone etc. The rare of luxurious goods has been increasing with the increase in their income level. Because of the technical problem there is not access of television facilities in the study area so the farmer starting to buy antenna disk and television for the news and entrainment this shows that everyone needs entertainment besides work. Radio and TV at home helps rural farmers to more conscious about the various national and international issues.

Figure 18: Farmers having luxurious goods

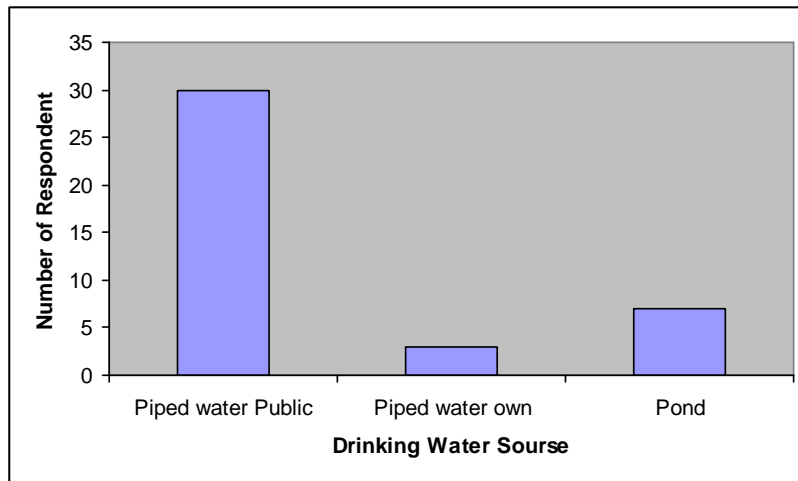


Source: Field Survey, 2009

5.4.4 Drinking Water

Water is necessity of human being. Before most of the farmer of all co-operatives used water from public tap. Besides this they use pond, local recourses also. The study found that there is still problem of drinking water.

Figure 19: Drinking water supply



Source: Field Survey, 2009

5.4.5 Fuel Consumption for Cooking Purpose

Firewood is the major sources of fuel in the study area. People can get firewood from the nearby community forestry so most of the farmer uses the firewood. Some household started bio gas but now almost bio gases are not running. Farmers need more awareness about bio – gas. Only few houses cooking food in rice cooker out of 40 respondent only three household using the rice cooker for cooking food rest household using firewood.

5.5 Awareness building

5.5.1 Sources of Loan

Loan is the major source of rural poverty because the low level of income results in taking loan but the high interest rate makes rural people unable to pay backing the mentioned time. This results in indebt ness. Before many farmers used to take loan from, the village money lenders where interest rate is high (24%) due to which rural people getting poor day to day. But the involvement in co-operatives many farmers are given loan in low interest rate 14%. This has resulted into farmer's investment in new field and earning income. As the cooperative provide loan to their members only, there is gradual growth of membership in the cooperative. This has also helped farmers in saving their money. The following table shows the increase of members in the cooperatives in past ten years.

Table 17: Increasing ratio of the cooperative members

Year	Shareholders
2056	112
2057	160
2058	200
2059	250
2060	280
2061	306
2062	325
2063	350
2064	364
2065	412

Source: Field Survey, 2009

Most of the respondents were satisfied with the interest rate of the cooperative (Saving = 8% and Credit 14% per year). Only few respondents not satisfied with its rate.

5.5.2 Involvement in Dairy Farming

The major activities of daily farming are cutting grass, feeding, cattle, cleaning and caring and at last marketing. Generally cutting grass feeding cattle and cleaning are the work of female and marketing is done by male. Before there were, work division between male and female. Women were bounded in household work and male at the outside the household. But during the study the researcher found that in the study area there was no such division of work. The people have realized that their aim is to earn money so they perform any of the activities when ever anyone is free. This shows gender equality. Now male also goes for cutting grass and feed the cattle's if the women are busy in other work the perception of male and female and their work division has been changed into "WE' and "OUR".

5.5.3 Animal Health

In the study area the people and the cooperative also not so much conscious about the animal health. Cooperative had given the training to the farmers sometimes but it is not enough to manage their shed and the related for livestock farming. Cooperative had send one person for the veterinary training and he has established one veterinary shop near by the cooperative building but farmer need more facilities besides this. The quality of veterinary should be increase there is not any regular check up and vaccination for animal. The researcher found during the field survey the shed for the animal is not managed and there is not enough care for the animal health.

5.5.4 Feeds and Fodder

Ground grass, tree fodder crop by products of rice plant and maize plant are the main feed stuffs for the dairy animals in the study area. Before the farmers were not so conscious about feeding for cattle. But now they have realized that if they could feed more improved green grass to cattle then this results into increase in production of milk and milk fat percentage on which basis the payment is done by dairy development industries either government or private.

5.6 Dairy Cooperative and Rural Development

Dairy Cooperative has played a vital role in the development of rural people in the Kubinde, Fulpingdanda, Fulpingkot and Batase VDCs. It has provided market place for the milk produced in the village. Local farmers are encouraged to keep buffalos. The loan facility of the cooperative without any collateral has helped farmers for easy access of money. The loan is sanctioned to the local farmers only for domestic purpose and buffalo buying. The repayment of the loan is done every six months. Besides this, farmers have practice of saving money being the member of the cooperatives. The cooperative has established chilling center with an investment of 11 lakhs, where it received NRS 7 lakhs contribution from the DDC. The cooperative is able to provide job opportunities for the local people. There are 7 fulltime and 10 part-time employees in the cooperative. In the year 2065, the cooperative has collected the profit of amount NRS 2 lakhs.

5.6.1 Dairy and Infrastructure Development

The cooperative has established one RCC Building of its own. A lane (small road) is build for the farmer to reach the cooperative. It is providing annually NRS 5 thousands to a local school namely Shree Seti Devi Panchakanya Higher Secondary School. This school is only Higher Secondary School in the VDC.

5.7 Problems and Prospects of Dairy Farming

5.7.1 Dairy cooperatives

Dairy co-operatives have lot of potentialities if the proper attention is given from concern sectors. These co-operatives not only doing saving and credit facilities but also provide loans, marketing facilities to the rural poor farmer and make them secure. And the advices make farmers more aware of the problems and prospects of this sector.

5.7.2 Problems of Dairy Farming

) High cost of milk production because of subsistence level of farming:

Dairy farming in the study area is still dominated by non-commercial farmers, so the production cost of milk is generally higher. So it is needed produce milk at a competitive price. Even commercial farmers rising more than three buffaloes are producing milk at a lower cost than the farmers rearing a single animal. It is possible to reduce production cost by improving management through better feeding, breeding and health care.

) Low price of Milk

Farmers always demand for increasing the price of milk. According to them water is more expensive than milk. The price of milk is very less in comparison to their expenditure for their animals. People of the study area got 25 rupees/liter milk in average. It is very cheapest. If the condition will not improve farmer affected badly.

) Lack of diversification

Product diversification has been very limited in Nepal. Less than 5 percent of milk collected is converted to other dairy products and most of them are for consumption purpose. And even farmers prefer to sell raw milk rather than selling milk products

because they feel that time is also saved and well it is easy too. There is also problem of animal diversification. Farmers only rear buffalos, very few farmers keeping the local cows for the religious purpose.

.) Lack of Insurance Facilities

Most of the farmers complain about the lack of insurance of animals. Farmers buy improved breeds taking loan from different sources but if the animals die or become sick then there is no facilities of repayable.

.) Veterinary services

The proper veterinary services and facilities are not available in the villages. There is lack of trained veterinary doctors and technicians. Thus most of the problem of dairy farming is lack of veterinary facilities. And they too have to come to main city to buy medicine and if they prefer to call them in village's then heavy amount have to be paid. So the farmers fear to keep improved cattle's because if they die because of lack of treatment then the farmers have to bear heavy loss. And sometimes farmers buy veterinary drugs in shops and feed their animals, sometimes these impacts negatively to their animals.

.) Lack of new technology:

The cooperative is not using the proper new technology. There is need of computer and other new equipment to taste the milk. Problem of Milk damage because there is only one time collection, if the collection time is change morning and night, it will be less. Because people have to sell both morning and evening time.

.) Milk Holidays

It is the major problem of dairy farming but last two years this milk cooperative not facing the milk holidays it must be continued in the future.

5.7.3 Prospects of Dairy Farming/ Cooperative

Besides these problems this dairy sector has lot of prospects in future. Farmers have been keeping dairy animals since long and they will continue to do in future also. There are losses of potentialities in this sector for raising the living standard of rural farmers. This sector can be strong means for rural development. The major reason being agriculture and dairy farming are complementary to each other. Animal manure is useful in agriculture. It helps to produce more crops and the diversity the crop as animal manure makes soil more fertile. If more animals are kept more dung is produced which results in more production. If more crops are produced then farmers will have more crop-residue and grain to feed animals. Due to more fertile land improved grass and other feeding materials are likely be grown in this area. If the private sector are encouraged in this field to keep the milk power plant, or to diversify the product then it can competitive with international market and reduce the import of dairy product. Then the problem of milk holidays can be solved and the secured marketing facilities can be provided to the rural farmers. The availability of marketing facilities meant rapid growth of dairy development.

-) The climactic condition of the area is pleasant. It is neither too cold not too hot. The suitable climate helps of this area helps for the quick development of dairy farming. Both the breed either local or improved breed can be reared in this area. Similarly, varieties of improved grass and fodder can be grown in the study.
-) There is not proper availability of road networks. To reach its own chilling centre porters have to carry the milk for 20 minutes. There is not proper facilities of transportation
-) Dairy farming is less affected by climactic variation than agriculture field. So many farmers are attracted towards this sector which is positive sign for healthy competition. Rural milk producers. Produce good quality and hygienic milk as a result it will have positive effect on human health and as well product can be diversified and can compete with international market.
-) This cooperative established its own chilling centre where daily 2200 (In average) liter milk is collected from the different dairy cooperative. It provides facilities for the other dairy cooperatives also. So it may product the different items of dairy which can

sell in the near market and it will get market of Tibet of China because it is near by the cooperative.

-) Till date, the repayment of the cooperative is found very well where some of the clients who repay late are charged the fine as per the rules of the cooperative. It should be continue in the future.
-) Saving and credit system of the cooperative also remarkable. It is seen that there are duplication of membership within the own family. It is needed to make criteria for to be a cooperative member.

CHAPTER SIX

CONCLUSION AND RECOMENDATION

6.1 Conclusion

Based on the successful experience from field study of the Kubinde Dairy Production Cooperative Limited the researcher has found that dairy farming is integral component of livestock farming. People of this area are more into dairy farming. But with the development of dairy co-operatives, participation of poor and marginal farmers is not in high rate.

The cooperative plays vital role for the improvement of the socio economic condition of the people. Firstly, fostering we feeling among rural farmers Secondly, providing marketing facilities to rural milk producers. And thirdly providing saving and credit facilities to the rural poor farmer. Dairy cooperatives have made the farmers to unite themselves in groups and they have feeling of togetherness. This sector has significant impact on the quality of life. Number of people has changed their patterns of life as well as their mode of living. This has been measured during study by analyzing their socio-economic status, and their awareness level. Through the study the researcher has found that this dairy farming has lot of potentiality instead of having lot of problems in this sector, like-lack of institutional facilities, veterinary facilities, animals health, insurance low price of milk, milk holidays, subsistence level of farming etc. these problems hinders in development of this sector but these problems have solution. Problems lies in every sector but if we can solve through the involvement of government and private sector in this field then this sector has lot of capacities and it can be a means of rural development.

6.2 Recommendations

Dairy farming plays an important role to uplift the standard of the rural farmers. Still there is lot of problems and need for improvements. Sustainable and commercialization of dairy farming is necessary to reinforce its role in rural development. Recommendation for its improvement is as follows:

1. Subsistence versus Commercialization: Most of the farmer rearing 1 to 2 buffalo per household. Cooperative should encourage the farmer providing different facilities to

- farm more buffalos. It is the subsistence level farming it must transfer to the commercial scale.
2. Need of diversification: The livestock pattern of the study area is only rearing buffalos. Cooperative should encourage farmer to farm the different dairy animals like cow.
 3. Cooperatives should encourage farmers to keep improved animals whose productivity is higher than that of local ones. Cooperatives should provide breed of animals on subsidy prices.
 4. Animal insurance: There are not facilities of animal insurance Cooperative should give much attention for the animal insurance. Farmers should organize and give pressure to the concern agency to insurance of their cattle's because in case of their loss they may receive its claim.
 5. Trainings / Exposure visit should be given to farmers for quality production of milk, animal health and diseases and shed management. Farmer should be aware of animal health regular checkups of the animals also.
 6. Farmers should be made aware of giving good quality based feed / fodder to their cattle's because milk production from cattle's depends upon the feed they get.
 7. Cooperative should use the new technology to improve the condition of organization Cooperative collects milk only in the morning time, so it is recommended that to collect twice in the day morning and evening. If so there is less chances of milk damage. The cooperative should adopt new technology for dairy and marketing.
 8. Cooperative provides loan for only domestic consumption and for purchasing buffalos. This needs to be changed giving priority for business, small scale industry and other income generation activities and there is limit of 25 thousands which should be increased.
 9. Cooperative should take initiatives to motivate Dalit, Janajati, women and marginalized people for dairy farming.
 10. Cooperative should have balanced gender and other ethnic groups in the executive committee.
 11. There is a not good facility of veterinary services. The cooperative should provide veterinary services to encourage farmers towards the dairy production.

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ANNEX A : CHECKLISTS

Check list to collect Information from the Kubinde Dairy Production Cooperative Limited, Sindhupalchok

Q. No.	Question	Answer
1	Date of establishment of Cooperative	
2	Date of registered of the institution as co - operative	
3	Average Number of milk Sheller farmer	
4	Number of Share holder members of Milk producer co – operatives (Male, Female, Dalit, Janajati)	
5	Average daily collection of milk(In liter)	
6	Number of staff in collection centre(Position, Part-time, Full time)	
7	Means of transportation of milk to the chilling centre	
8	Transportation cost of milk/liter	
9	Average price of per liter milk	
10	Paying duration of farmers	
11	David and credit system of cooperative(Intrest%, Time Duration)	
12	Saving Schemes (At Least How Much Per Head)	
13	For what purpose dairy give the loan to farmer?	
14	To Whom dairy provide loan? Shareholder/ milk Sheller farmer?	
15	Facilities given by the cooperative to the farmer/Share holder	
16	Major Achievements of the cooperatives for the socio economic change of the farmers	
17	Progress report of the cooperative	
18	Problems that cooperative faces during collection and marketing of the milk and from the farmer	
19	Future Plan of the cooperative	

ANNEX B: QUESTIONNAIRE

A. General Information

1. Name of the farmer:

2. Address:Ward/ village.

3. Age.....

4. Sex.....

5. Member of cooperative a) Yes.....b) No

If yes from which year:.....

6. Education of Farmer:

7. Detail of house hold:

Particular	0-14	14-59	60-
Male			
Female			
Total			

8. Level of Education of the Household:

Sex	Illiterate	Literate	Primary to class ten	SLC	IA	BA	MA
Male							
Female							

9. Land of Farmer and the production

Land Type	Ropani	Self Cultivate	Rented out	Rented In
Bari (Upland)				
Khet (Lowland)				
Forest/ Grazing land				

10. Food Availability of the farmer by their own product:

Up to 3 months	3 -6 months	6-12 months	For Selling

11. Major crops of the farmer:

.....

12. Detail list of animal:

Animal	Number		
	Local	Improved	Total
Buffalo			
Cow			
Goat			
Ox			
Pig			
Other			

13. Please provide the following information about Milk Production of dairy cow and dairy buffalo (In Liter).

Animal		Annual Production(Liter)			Utilization of Milk		
	Number	Local	Improved	Total Liter	Domestic Consumption(Liter)	Processed	Sale(Liter)
Buffalo							
Cow							

14. Income from selling milk and milk product (Annual):

Income from	Annual Income
Selling Milk	
Selling other dairy product like ghee and other	

15. Income from non dairy animal (annually):

Animals	Income
Buffalo calf	
Cow Calf	
Male Buffalo	
Ox	
Goat	
Pig	
Others	
Total	

16. Where do you sell milk and why?

I) To Dairy Cooperative II) To direct consumer III) To near market

17. How much price do you get per liter?.....

18. How many month in a year do you sale milk regularly?.....

19. Source of income apart from Milk selling:

S.No.	Member Engaged (Male/Female)	Annual Income
Service Employee(Government)		
Service Private		

Business		
Labor wages		
Livestock(Non Dairy Product)		
Other		

20. Provide information about quantity and price of feeding materials you used for animal? Per Day.

Feeding Material	Quantity	Total Price	Remarks
Grass			
Dhuto			
Maize			
Other			

21. Which of the following work you prefer most? Why?

- A) Food Crops B) Dairy Farming C) Labor
D) Services E) Livestock and other agricultural production F) Other

22. How do you utilize the income earned from dairy farming?

- A) Domestic Expenses B) Education
C) To purchase property D) Other

23. Is there any veterinary services provide by cooperative? How much you expenses for per year for the veterinary?.....
.....

24. Have you taken any loan from the cooperative? If yes what purpose?

- 1) For dairy animal purchase 2) Domestic Purpose

- 2) Education
- 3) Marriage and other ceremony
- 4) Business
- 5) To purchase Property

25. What is your loan source before?

- 1) Dairy cooperative
- 2) Relatives/ Friends
- 3) Bank
- 4) Local money leader
- 5) Other If any

26. How much you pay interest rate for the cooperative?.....

27. Are you satisfied with the dairy interest rate? If No Give your comment.

.....

28. Means of Measuring Living Standard:

- A) Luxury goods: i) Radio ii) Television iii) Vehicle iv) Refrigerator
v) Others
- B) Drinking Water: i) local source ii) Piped water own iii) river
iv) Piped water public (Time takes to go the water resource(In Minute).....)
- C) Toilet: i) No toilet ii) local toilet iii) Hygienic toilet iv) others
- D) Fuel consumption: i) Fire wood ii) firewood + Electricity iii) Biogas
iv) LP Gas v) Other
- E) Schooling: i) Government school ii) Boarding school

29. Is dairy cooperatives support following topic of the societal development?

S.No	Support by Dairy cooperative
Drinking water	
School	
Scholarship for student	
Road/ Goreto Bato	
Health	
Other	

30. Is dairy cooperatives providing any training regarding livestock farming and other if so mentioned?

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31. What is the problem of diary farming?

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32. What do you suggest for improvement?

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Thank you for your informative answer!