

**ROLE OF SMALL SCALE COW FARMING  
ON POVERTY ALLEVIATION  
(A Study of Madi Municipality Basantpur, Chitwan District)**

**A Thesis**

**Submitted to Faculty of Humanities and Social Sciences,  
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## DECLARATION

I here by declare that the thesis entitled **Role of Small Scale Cow Farming on Poverty Alleviation: A Study of Madi Municipality Basantpur Chitwan District** submitted to the central Department of Rural Development Tribhavan University is entirely my original work prepared under the guidance and supervision of my supervisor. I have made due acknowledgements to all ideal and in formation borrowed from different sources in the course of preparing this thesis. The results of this thesis have not been presented of submitted any where etse for the award of any degree or for any other parposest . I assure that thesis has been published in any form before.

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## LETTER OF RECOMMENDATION

This is to certify that the thesis submitted by Menu Gayak entitled **Role of Small Scale Cow Farming on Poverty Alleviation: A Study of Madi Municipality Basantpur, Chitwan District** has been prepared under my supervision and guidance as a partial fulfillment of the requirements for the Degree of Master of Arts in Rural Development. Therefore, this is recommended for the final evaluation and approval.

.....  
Ram Prasad Tiwari  
(Thesis Supervisor)

Date:



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## ABSTRACT

A thesis entitled "Role of Small Scale Cow Farming on Poverty Alleviation: A Study of Madi Municipality Basantpur, Chitwan District, has been conducted. The objectives of the study is to analyze the problems and prospects of small scale commercial cow farming of the study area. The specific objectives are to analyze the small scale cow farming on poverty alleviation in study area, to analyze the economic impact of small scale commercial cow farming in the study area and to explore the supporting and constraining factors of small scale commercial cow farming by using purposive and convenience method of sampling. This study is mainly based on primary data as well as secondary data. The sample for the study 114 households has been selected for study.

The total family members of sampled households (114) are 594. The average family size per household is 5.21. Out of 594 only 13.64 percentage people are illiterate who are unable to read and write. Mainly these illiterate people are involved in the cow rearing. Literate persons who are in the age group of 15 to 59 are interested in getting exposure in cities and in the capital city Kathmandu and those who could not get better opportunities in Nepal seek employment opportunities in foreign countries. But the researcher found that, in some recent year a huge number of young people are also highly motivated to the agribusiness including commercial cow farming. The average land holding by sampled household is 2.85 kattha which can be assume as satisfactory for food production and livestock farming in small scale.

A huge number of young entrepreneur are highly motivated in the commercialization of agri-business in some recent year in the context of Nepal, especially in Madi. Madi is being developed as one of the leading districts in agriculture as well as livestock farming because of its well climate and access of various facilities. Even though the history of commercial cow farming is not so long, people are encouraged to rear some local cows in their home than other livestock with the purpose of self consume as well business in the projected area. For the purpose of livestock farming, people used to assume cooperative and mother group as the easier way to financial management. Even this have so many problems, it have also so many prospects like; prospects to develop cow farming as a main occupation, prospects to increase the level of income, prospects to increase employment, prospects to capture national Milk market, prospect to increase the production capacity of land, prospect to make healthier life.

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## ACRONYMS/ABBREVIATIONS

ARD	Agricultural Research for Development
CBO	Community-Based Organization
CFUG	Community Forestry User Groups
CLDP	Community Livestock Development Projects
DoLS	Deprivation of Lavery Safeguards
CBS	Central Bureau of Statistics
ECD	Early Child Development
FI-NGO	Financial Intermediary Non-Govt. Organizations
GDP	Gross Domestic Product
ICRA	International Centre for development oriented Research in Agriculture
ILO	International Labor Organization
INGO	International Non-Governmental Organization
IB	Insurance Board
ISRC	International Standard Recording Codes
MFI	Micro-Finance Institutions
NAP	National Agriculture Policy
NGO	National Governmental Organization
SFDB	Small Farmers' Development Bank
SLC	School Leaving Certificate
TU	Tribhuvan University
USDA	United States of Development of Agriculture
RM	Rural Municipality

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

A developing land locked country Nepal, has so many barriers in the way of improving the economic condition of the country. About 83% of the area of the country is covered by the hill and mountain region so that although it has some specific properties it is being the major barrier in establishing in the foundation of development. And also about 75% of the people are directly involved in agriculture. Hence, to make a good and drastic change in the economic status of the peoples of the country, it is only possible through the way of agricultural resonances by investigating and investing in resent technologies, ideas, skills as well as seeds including commercial animal husbandry.

cows are among the main milk producing animals in Nepal, whose milk is one of the choicest and has huge domestic demand. Cows are important part of rural economy of the country. They provide food and nutritional security to the millions of marginal and small farmers and agricultural labors. However, the productivity of cows under the prevailing traditional production systems is very low . It is because they are maintained under the extensive system on natural vegetation on degraded common grazing lands and tree lopping. Even these degraded grazing resources are shrinking continuously. So, rearing of cows under intensive system using improved technologies for commercial production . In the context of Nepal, the main sources of milk are our neighboring country like India. Large amount of money is going out of the country day by day for the availability of the milk in the country. So if we can develop the commercial idea in cow farming, no doubt it will not only stop to pay large amount of money to out of the country, will also create various opportunities of employment and ultimately contribute to raise the economic status of the farmer leading to the nation.

Livestock play a vital role in rural economy of our country. Dairy is a highvalue agricultural commodity of which the production process is relatively labour intensive. Poor rural households are said to have easier access to productive assets for dairy production than for crop production. The Dairy Industry has a bright future in Nepal and is a viable alternative for farmers because of low cost of production. There is a huge potential for capturing the large unorganized market base in dairy. Access to significant

technological innovations, development and creation of infrastructural facilities were also given considerable boost to dairy development. Animal health and quantity breeding practices were also contributed for further development of dairy activities. This helped in improving quality of life of the rural public apart from employment generation amongst the rural people.

The face of today's global dairy industry is changing. The technological advances in large-scale production have dominated production systems of more developed nations, while small-scale dairies have gained prominence in the developing world. In order to incorporate these small-scale production systems into the larger global dairy industry, a working knowledge of the benefits and challenges of small-scale dairy farms is necessary. To optimize the development of small-scale dairies, the effects of management practices, farmer training, culture, environmental issues as well as milk safety and the potential risk of milk borne diseases are aspects 29 that must be examined.

This study is planning to address the issues related to the small scale commercial cow farming in the country. The present paper has thus analyzed the prospects including the problems of the commercialization of small scale cow farming in the Madi Municipality Basantpur.

## **1.2 Statement of the Problem**

Nowadays, large group of young people are highly interested in the field of commercialization in agriculture, especially in animal husbandry. In this process, some of the young farmers are being very much successful in their way but some of them are losing their investment as well. There is nothing in the world without any risks and challenges. So that a good entrepreneur is who can face the challenges in better way. So it is highly beneficial to have deep study about the various problems and prospects to be a successful entrepreneur.

Especially in commercialization in cow farming, there are so many problems and obstacles as well as many opportunities. Normally people have a kind of fear of losing the investment because of various problems regarding with this profession. Basically, a beginning entrepreneur does not have any idea about the developed caste of cow with their feeding process. Even they have some idea there is a kind of compulsion to be

limited within the traditional framework because of the lack of fund. There is also the problem as well the prospects of market.

In this way, what is the present status of small scale commercial cow farming in Madi and how this playing role in enriching the socio-economic status of the farmer? How much investment is required as corresponding to the number of the cows? What kind of climate is required for this occupation? What would be the physical setting of the farm? How to manage the feed for the cows? What are the different kinds of the disease regarding with the cows? Where is the market of the produced cows? What will be the socio- economic effect of this farming? are considered as the major problem of the study and the study also intended to get the different supporting and contrasting factors for the small scale commercial cow farming in the context of Madi.

### **1.3 Objectives of the Study**

The general objective of the study is to analyze the problems and prospects of small scale commercial cow farming of the study area. The specific objectives are as flows:

- To analyze the small scale cow farming on poverty alleviation in study area.
- To analyze the economic impact of small scale commercial cow farming in the study area.
- To explore the supporting and constraining factors of small scale commercial cow farming in the study area.

### **1.4 Significances of the Study**

It is very most important to know a lot about different supporting and constraining factor in which we are planning to get involved to be a successful entrepreneur. So that the research will certainly be beneficial to all the related stakeholders who are interested in the field of animal husbandry. This study will very much fruitful to know about the different problems and prospects of small scale commercial cow farming so that a beginning entrepreneur may plan well.

The findings of the study may be useful for the planner, policy maker and implementers, project leaders, Government officials as well as change agent in the field of animal husbandry. The study may also be useful for the future researcher particularly in the study area.

## **1.5 Limitations of the Study**

The study has the following limitations:

- The result of the study cannot be generalized in other animals husbandry and other the places except the study area.
- The information that given by respondents are to be taken directly as the final data of the study.
- The farmers which are rearing cow in their home are selected as the respondent of the study.
- The respondent selected in the sample he/ she should have the experience of same occupation from at least two year before.
- Due to the lack of time, resource and money the study is limited on Madi Municipality Basantpur only.

## **1.6 Organization of the Study**

This study has been divided into five chapter .First one chapter deal with background , statements of the problems, objectives of the study, limitation of study, importance of the study, and organization of the study. Chapter two contains the review of literature. Chapter three describes research methodology in which relational of the site selection, research design, nature and source of data, universe and sampling procedure, data collection methods, analysis of data are described here. In chapter four, it dealt with the analysis and interpretation of field survey data. Finally chapter five is closely related with the major findings, conclusion and recommendations.

## **CHAPTER II**

### **REVIEW OF LITERATURE**

#### **2.1 Conceptual Review**

##### **2.1.1 Policy Review Related to Livestock Farming**

Nepal is in the process of transforming its government from a unitary system to a federal democratic structure through the new constitution, offering the opportunity to bring a new set of priorities and stakeholders to policymaking. About 66 percent of its population is involved in agriculture, which accounts for 35 percent of the gross domestic product or GDP (National Sample Census of Agriculture-2011/12, 2012/13). The livestock subsector of agriculture contributes 24 percent of the total agricultural GDP (Ads Assessment Report, Agricultural Development Strategy Assessment,2012), and also plays important roles in human food and nutritional security, livelihood, regional balance, gender mainstreaming, and rural poverty alleviation (ILO, 2004). Yet, there is no separate national livestock policy in Nepal, and instead, its national livestock-related policies are spread across agriculture and other sectors. Some major policies related to livestock farming under different heading are reviewed.

##### **2.1.2 National Agriculture Policy (NAP), 2004**

The NAP, 2004 adopts a long-term vision oriented towards transforming the current subsistence-oriented farming system into a commercial and competitive one. The NAP aims to contribute to ensuring food security and poverty alleviation. Its objectives are:

- a. To increase agricultural production and productivity,
- b. To develop the basis of a commercial farming system and make it competitive in the regional and world markets, and
- c. To conserve, promote and properly utilize natural resources, as well as the environment and bio-diversity.

The policies of the NAP provided for achieving its objectives include:

- a. to ensure the needs of farmers with access to resources and with comparatively less access to resources,
- b. to provide special facilities by classifying farmers into those having less than half a hectare of land and lacking irrigation facilities, those belonging to dalit (so-called untouchable) and utpidit (downtrodden, underprivileged) classes and other marginal farmers and agricultural workers.

The Policy gives special priority to a set of high-value agricultural products, and seeks to develop commercial and competitive farming systems by a gradual extension of livestock insurance programs and organic farming. Overall, the NAP, 2004 has the merit of being decentralization-based, friendly to small-holder farmers of livestock, and inclusive of untouchables, marginalized groups and poor communities, Policy on commercializing different agro-products and attracting investors in agriculture.

### **2.1.3 Agriculture Business Promotion Policy**

Agriculture Business Promotion Policy in line with the National Agriculture Policy, the Agriculture Business Promotion Policy 2063 also intends to support market-oriented and competitive agriculture production, contribute to internal market and export promotion by developing agro-industries, and help poverty reduction through commercialization of agriculture. This policy also guarantees for an integrated approach to provide such facilities as agriculture inputs, technology and technical services, agriculture roads, rural electrification, irrigation, agriculture credit, insurance, markets, information system, appropriate mechanization of agriculture, and processing facilities with joint efforts of government, non-government, private and cooperatives sectors. Development of e-commerce, concession on interest of agriculture credit, encouragement to direct foreign investment, special programs for establishment of agro-industries by disadvantaged groups, women and dalits, 25 per cent concession on electricity charge for chilling vats and 75 per cent concession on import duty of machine and equipment to be used for agro-enterprises for 10 years, group loan, collateral of projects for loans, human resource development, capacity development of training institutes, free market price etc. are the major features of this policy.

#### **2.1.4 Forestry Sector Policy, 2000 (Forest Policy, 2000)**

The Forestry Sector Policy, 2000 is mainly concerned with the farmers for the use of forests to graze livestock and to collect fodder to feed livestock. The policy simplified the process of handover of institutional as well as group leasehold forestry to Community Forestry User Groups (CFUGs) and has stressed integration of the leasehold forestry program to local community development. The Policy recommended commercial management for forests in larger blocks in Terai and inner Terai districts. The Policy aims to base livestock quantities on the amount of fodder production and highland pasture so as to improve forest management and increase the production of fodder by community efforts.

#### **2.1.5 Rangeland Policy, 2012**

The Policy defines rangeland as natural pasture land, grassland and shrub-land. It aims to increase productivity by improving forage/grass productivity, to protect livestock farmers' traditional rights for pasturing livestock in community rangeland and forest. The Policy seeks to secure the facilities traditionally enjoyed by livestock farmers using range-lands located within community forests. The Policy identifies provisions to collect and conserve the green forage (grass) during the rainy season and winter and dry seasons in order to ensure continuous supply of cattle feed round the year. The Policy seeks to determine livestock density on the basis of capacity of the rangelands for minimizing the grazing competition and pressure of both domesticated and wild animals, and imposes charges or penalties on cattle for using rangeland with the goal of limiting unproductive cattle on the rangeland.

#### **2.1.6 Livestock Insurance Policy and Agriculture and Livestock Insurance Regulation (2013)**

Livestock insurance is extremely important, as livestock husbandry is risky, particularly for small and low-income farmers who face financial ruin in case of theft, injury, illness or death of an animal. According to DOLS, premature mortality is about 2 percent to 3 percent per annum for cattle and buffalo and considerably higher for small ruminants and pigs. Livestock insurance helps livestock farmers to cope with such risks, and facilitates farmers' access to finance by increasing their creditworthiness. Although general insurance was introduced in Nepal in 1937 after the establishment of Nepal

Bank Ltd, the country's first commercial bank, and the National Insurance Corporation was established in 1967, livestock insurance began only in 1987 in form of livestock credit or micro-finance guarantee insurance against animal mortality and loss. In Nepal, many organizations provide livestock insurance services on a limited scale; they include the Small Farmers' Development Bank (SFDB), Micro-Finance Institutions (MFI), Community Livestock Development Projects (CLDPs) sponsored community-based organization (CBOs) and Financial Intermediary Non-Governmental Organizations (FI-NGOs) which are not regulated by the Insurance Board (IB), the national-level regulating body.

This gap should be addressed by a proper policy mechanism. In recognition of the need of systematizing livestock insurance, Nepal introduced Livestock Insurance Regulation and a Livestock Insurance Policy. The Livestock Insurance Regulation under the Insurance Board aims at encouraging financial institutions to finance more agricultural projects, as most financial institutions abstain from extending loans and advances to livestock and agricultural projects in the absence of proper insurance coverage. The Agriculture and Livestock Insurance Directive makes it obligatory for non-life insurance companies to issue insurance policies on livestock, crops and poultry.

### **2.1.7 National Land Use Policy, 2012**

The Policy aims to encourage optimal use of land for agriculture by classifying the country's land territory into seven land use categories—agricultural, forest, residential, commercial, public, industrial, and others. Land in the agriculture category is for agricultural cultivation, livestock farming, and tree plantation. The Policy also aims to increase agricultural productivity by systematizing land fragmentation and by adopting a land pooling system. The goal is to encourage commercial, cooperative and contractual farming. This is the policy to allocate land for agricultural purposes including livestock farming. The Policy also aims to increase agricultural productivity by controlling land fragmentation, systematizing land-pooling activities, and encouraging commercial, cooperative and contractual farming.

### **2.1.8 Animal Health Program Implementation Procedure, 2013 and Animal Health and Livestock Services Act, 1999**

The policy rightly aims at promoting production, distribution, consumption and export of healthy livestock and making animal-health related programs more effective, as these functional areas are crucial in livestock management.

### **2.1.9 Birds Rearing Policy, 2011**

The policy was issued within the framework of National Agriculture Policy (NAP), 2004 and Agri-business Promotion Policy, 2006. The policy covers the poultry business, encompassing chickens, cocks, hens, ducks, turkeys, quails and other local bird species. It plans to make the poultry business more productive, competitive and sustainable by improved quality of chicks through well-managed hatchery and rearing as well as by systematizing distribution of poultry products.

### **2.1.10 Approach Paper to 13th Plan and Agriculture/Livestock Development Policies**

The Approach Paper to 13th plan (2013/14–2015/16) has made provisions for the livestock sub-sectoral development by including it in objectives, strategies and operating policies. The agricultural sector objectives set in the Approach Paper to the 13th Plan are

- a. To increase the production and productivity of crops and livestock products,
- b. To make crops and livestock products competitive and commercial,
- c. To develop and disseminate environment-friendly agro-technologies to minimize the adverse impacts of climate change, and
- d. To conserve, promote and utilize agro-biodiversity

The sectoral strategies for achieving the objectives are directed towards

- a. Promoting commercialization and diversification of agriculture and livestock
- b. Developing crop and livestock industries and enhancing their product quality
- c. Encouraging youths to take up commercial farming as a prestigious profession
- d. Promoting agricultural and livestock marketing, and

The operating policies to achieve the mentioned objectives are set as follows

- a. to expand promoting campaigns regarding artificial insemination and fodder and forage plantation,

- b. to develop rural infrastructures such as agro-roads, electricity, and communications,
- c. to develop agricultural marketing network including livestock wholesale markets and hat bazaars (open-air retail markets), and expand access of livestock information at local levels,
- d. to develop technical manpower for agricultural sector and provide entrepreneurship and skill development training required for agro-business,
- e. to encourage production of high quality seeds, high-yielding breeds and vaccination, and to develop bio-pesticides to treat animal for parasites,
- f. to make provisions for livestock insurance, concessional agricultural loans, subsidy on livestock related industrial equipment and tax rebate on trade to small and marginalized farmers, entrepreneurs and business people,
- g. to promote contract and cooperative farming with involvement of private entrepreneurs and cooperative sectors,
- h. to establish agriculture and livestock extension centers under the local bodies a teach VDC,
- i. to strengthen livestock related laboratories

### **2.1.11 Gaps Between Policy and Implementation**

National policy is a broad course of action adopted by the government in pursuit of its objectives. Nepal has already a rich body of policies in favor of agriculture. The National Agriculture Policy and the Approach Paper to the 13th Plan emphasize the central role of agriculture. Nevertheless, formulation of some important policies has been excessively delayed.

Even though it has many attractive policies they are not yet as expected, the reasons behind this may be lack of supportive adequate legislation (acts), rules and regulations for credible enforcement, Inadequate resource allocation, Ineffective coordination, Irregular and weak policy and program monitoring and evaluation, Lack of climate change monitoring, Limited human resources and implementation capacity, and Lack of continuity in leadership (short tenures of ministers and secretaries). Therefore, the related officials should to give primary emphasis on the proper implementation of already formulated plan and policies.

### **2.1.12 Consumption and Supply of Milk and Milk Products**

In earlier days when there were no organized dairies, demand for milk was fulfilled by raising cows/buffaloes by the people themselves or through the direct supply from the professional milk producers. These producers used to go house by house and deliver the required quantity of milk to the households. Dahi (yoghurt) filled in clay containers were produced by some traditional dahi makers and milk-based sweets were prepared by traditional sweet makers (haluwain). But after the advent of DDC, the scenario began to gradually change with the increasing supply of pasteurized milk and modern dairy products such as cheese, butter, ice cream etc. Many new sweet shops also started to emerge. Now, particularly in the urban areas, the situation has completely changed because many dairies in the organized sector have come up with varieties of dairy products. Besides, different dairy products are also imported to cater the consumers' demand.

Although an effort was made to estimate the annual consumption of milk and milk products through internal supply and imports, it could not be done in the absence of data. Data of the private dairies and informal milk market is absent for internal supply. For imports, the Customs data gives only the aggregated monetary value of the imported dairy products . The Statistical Report Vol. II (2013/14) has a Chapter on Consumption which shows only the amount spent for food consumption. It reports that on average 59 per cent of household consumption is spent on food expenditures in the country, and urban households spend less than 40 per cent on food, especially in Kathmandu where the share is just 29 per cent. Similarly, Household Budget Survey of Nepal (2018) conducted by Nepal Rastra Bank shows combined consumption expenditure on milk products and egg, and ghee and oil. Thus, both the reports do not give separate data on consumption quantity of milk and milk products. Import data published by Trade and Export Promotion Center (which is also based on the Customs data) shows that total milk products worth of NRs. 497.103 million was imported in 2017/18.

### 2.1.13 Schultz Theory

According to Schultz traditional agriculture is all economic concept. It implies a sort of an equilibrium: When agriculture of a country reaches such an equilibrium, it will become a traditional agriculture and according to Schultz, as we have already pointed out, this equilibrium can be reached irrespective of the cultural attributes of the society, its institutional arrangements or the technical efficiency of its factors. Traditional agriculture has nothing to do with the traditions of a society. According to Schultz agriculture can become traditional in any country, irrespective of the customs and conventions which its people have generally practiced. For example, it is not necessary that only a conservative, superstitious and a whimsical society can have a traditional agriculture. Even a forward looking society can find its agriculture to be traditional in nature. Schultz feels that most of the factors that influence production i.e. Thrift, attitude to work, industriousness etc. are not affected by the culture traits of a society. These are in-fact economic variables. People do not save for investment simply because the method of production does not give a high return. Again people do not work much because the return to labour is rather low. Accumulation of more capital or use of more labour are thus governed by economic factors and not by the cultural factor.

(b) Traditional agriculture has nothing to do with the institutional arrangement in a country. A country with any type of institutional arrangements can find its agriculture being traditional. For instance agriculture in a country can become traditional whether it has large farms or small farms though generally people feel that traditional agriculture is associated with small farms. Japan's agriculture is not traditional even if the farm size is very small.

Similarly, traditional agriculture can be found, both in countries with a high degree of owner cultivation or with a high degree of tenancy, For example, Holland is a country where tenant cultivation predominates, However, its agriculture is not traditional. Schultz further points out that the technical attributes of the factors of production in an agriculture do not determine the character of agriculture in a country i.e., whether it is traditional in character or not. Generally it is felt that if the factors of production are highly productive, its agriculture can be called a modern agriculture and if the factors of production have low technical efficiency, it is called a traditional agriculture, Schultz does not agree with this assertion.

For him, traditional agriculture has some economic feature and if these features appear in an agriculture even with technically efficient factors it will become traditional in character. According to him under certain circumstances, even American Agriculture which at present, is considered to be the most advanced agriculture can become traditional.

#### **2.1.14 Jorgensen Dual Economy Theory**

The Jorgensen dual development theory subscribes to the fact that if there is no agricultural surplus all labor remains on the land and in contrast if a surplus can be generated then a force available for employment in the manufacturing sector grows at the rate at which the agricultural surplus is growing. A simple analysis of this can be coined in the sense that the model denotes that the model brings a balance. Another important feature of the model is the assumption is that there is an excess supply of labour in the agricultural sector. This in turn implies that labour can migrate from the agricultural sector to the industrial one without affecting productivity and output in the agricultural sector (Temple J. and L. Woessmann, 2006). This implies that as labour supply moves out of the agricultural sector, the industrial sector and the economy accumulate capital and develop. Under these circumstances, it is the advanced sector that develops on the back of the less developed one. As the economy moves on and accumulates capital, the industrial sector grows and it is able to absorb more and more labour, wages being constant. Of course, the growth of manufactured output, the decrease in overall unemployment and increasing investment result in the overall improvement in standard of life in the economy. (Temple J. and L. Woessmann, 2006).

The migration of labour from agriculture to industry is the functional link behind the Jorgensen dual development theory. Clearly, the flow of labour migration is the major determinant of the dynamics of the economy and the development path. Yet Jorgensen and most of the subsequent literature do not fully clarify what the long-term dynamics should be in this kind of model. The focus is the transitional dynamics rather than the long-run steady state equilibrium. If one sticks to the previous assumptions, it may be argued that dualism will persist as long as labour flows from the agricultural sector into the industrial sector. Since the link is unidirectional, the economy will grow until the industrial sector accumulates capital and employs increasing labour. (Adelman and Morris, 1988) This might lead to the hypothetical disappearance of the agricultural

sector, or to a condition in which two sectors coexist with no linkages between them. In the first case the economy will become virtually a one sector one; in the second, the two sectors will continue to coexist, but dualism, as we have defined it, might disappear as well.

By following a different route, Jorgenson (1961, 1967), Fei and Ranis (1964, 1966) and Dixit (1973) assume that while the wage equates its marginal productivity in the industry sector, it equates, instead, its average productivity in the agricultural sector. The link between the agricultural sector and the industry sector is essentially one of physical dependence: the industrial sector depends on the agricultural sector for its food supply. Without the agricultural sector and the supply of food, the advanced sector cannot exist and develop. This is an exact situation in the Zimbabwe economy. The agricultural sector is not doing well and hence the industrial sector stagnant as well suffice to say that the dependence relationship of the model can easily be related to the situation in Zimbabwe. These model usually assume constant returns in the advanced sector and decreasing returns in the agricultural one. This assumption results in a development process in which the advanced sector will continuously grow and the relative size of the agricultural sector will decrease.

## **2.2 Empirical Review**

(Karmakar, and Banerjee, 2006) opined that India is the world's largest producer of dairy products by volume and has the world's largest dairy herd. The country accounts for more than 13% of world's total milk production and is also the world's largest consumer of dairy products, consuming almost all of its own milk production. Dairying has been regarded as one of the activities that could contribute to alleviating the poverty and unemployment especially in the drought prone and rain fed areas. In India, about three fourth of the population live in rural areas and about 38% of them are poor. He proposed the following three suggestions for the future development of India's dairy industry: Production Cost Reduction: In order to increase the competitiveness of Indian dairy industry, efforts should be made to reduce cost of production. Indian dairy industry should further develop proper dairy production, processing and marketing infrastructure, which is capable of meeting international quality requirements. Focus on Specialty Products: Dairy industry in India is unique with regard to the availability of

buffalo milk. In this case, India can focus on buffalo milk based specialty products, such as Mozzarella cheese, in order to meet the needs of the target consumers.

Radha Krishnan, Nigam.S, and Shantanu Kumar (2008) in their opinion growing human population, rising per capita income and increasing urbanization are fuelling rapid growth in the demand for food and animal origin in developing countries. India possesses the largest livestock population in the world. Contrary to the large population of livestock in India productivity of Indian livestock is low compared to many developing countries.

Mandeep Singh and Joshi.A.S. (2008) reported the economic analysis of dairy farming has been reported for marginal and small farmers in Punjab for the year 2003-04. It has been found that a majority of the farm households are not able to meet their requirements from their income from crops. Further dairy farming has emerged as a major allied enterprise for supplementing the income of marginal and small farmers in Punjab. Income from off-farm sources has been identified another important factor contributing significantly to the disposable income of these farm households. The study has suggested to further exploiting the potential of off-farm sources towards meeting the domestic expenditure. Also, the technical efficiency of crops and dairy farming should be improved to provide more income to farmers.

Dhanabalan. M. (2009) opined that dairy has an important role in improving the overall economic conditions of rural India. To maintain the ecological balance, there is need for sustainable and balanced development of agriculture and allied sectors. From our first plan onwards, planners have given priority to allied sector for the economic development of the rural sector. Dairy farming is described as a small industry which provides gainful employment opportunities. It comprises of about six per cent of the national income.

Kaur (2010) analyses data from 200 rural dairy households in Punjab that are selling either to private or cooperative dairies, including mixed-gender and women dairy cooperatives. She observes that membership for women in the mixed cooperative are restricted to women who are head of the household. In the village with a women cooperative, female membership is compulsory. According to the researcher who promoted by authorities in order to make the milk society economically more successful.

According to Indian Mirror (2011) despite its huge production volume, India faces a milk supply gap due to increasing demand from a growing middle class population. Estimation suggests that Indian dairy production is growing at a rate of about four percent per year, yet consumer demand is growing at approximately double that rate. In response to increasingly strong demand for milk products, the Indian dairy industry is growing its milk production in several ways. In addition, those farmers working directly with buyers from the organized sector generally have access to modern extension services, which provide support for the dairy farmers to improve management, feeding, fertility and veterinary care. Out of all bovine population in India, 40 percent are indigenous cows, 46 percent are buffaloes and 14 percent are imported European or North American cattle crossbreeds. Out of the nation's total milk production, about 55 percent comes from buffaloes and the remainder from dairy cows (Singh, 2011)

Datta and Gailey (2012) interview seven members of the Lijjat women cooperative, dedicated to producing and marketing food items in an urban environment. They show that empowerment can be embedded in social enterprises that work based on the principles of collective ownership, cooperation, self-reliance and profit sharing. According to the authors the non-interference of the government and the resulting autonomy was one reason for its success. The interviewed women are found to be empowered through the participation in the cooperative because their economic situation as well as their entrepreneurial skills improved.

Swinnen (2013) challenge this perception based on data collected among 1000 rural households in Andhra Pradesh. They find that access to land seems to be a pre-condition to increase direct benefits of dairy production for the poor. According to them landless households are less likely to participate in dairy farming. Hence removing legal obstacles to land rent is recommended to allow landless families to reap benefits of dairy development.

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

Methodology is a useful bridge to solve the research problem in systematic way. It describes the methods and process applied to the entire aspect of the study. In other words, methodology is the way to gather information. Different tools and techniques are used in different phase of this study. Thus the framework of methodology contains population, sample, instrument, data collection procedure and data analysis procedure. This chapter shows the design of plan and procedure of the study. It determines the size of sample, method of sampling sources, methods of techniques of data collection, instrument of data collection and procedure of data analysis.

#### **3.1 Research Design**

The design of the study is exploratory and descriptive in nature because the study was focused on income, status and opportunities including different problems and status of cow farming in Madi. Research design refers to the procedures for the collection of data and its analysis. This study has been analyzed all the information collected by field survey.

#### **3.2 Nature and Sources of Data**

This study mainly based on primary and secondary data.

##### **A. Primary Data**

The study mainly focused in collecting primary data from the sample selected from Madi. The primary data are both qualitative and quantitative by schedule structured questionnaire including informal interviews and semi-structured questionnaire.

##### **B. Secondary Data**

All the secondary data were collected from different published and unpublished official records, reports of government and non-government organizations.

#### **3.3 Universe, Sample Size and Sampling Procedure**

The population of the study is considered as the total population of Madi Basantpur which have 7195 under 2135 households. The selection of the sample is done using

purposive and convenience method of sampling. While selecting the sample for the study, the 114 households for the study.

### **3.4 Techniques and Tools of Data Collection**

To collect the data regarding the socio-economic impact of commercial cow farming, the researcher had visited the sampled farmers with structure questionnaires and unstructured interview. Field visit, observation, informal interview were used as the supportive techniques and tools of the study. The researcher followed the flowing techniques and tools in particular.

#### **3.4.1 Survey Questionnaire**

In this research, the researcher were collected the information about the status and socio-economic impact of commercial cow farming as well as to know its supporting and contrasting factors with the help of structured and unstructured questionnaire.

#### **3.4.2 Observation**

An observation method has been done towards the structure of the cow rearing place of the sampled farmer to collect the information about environment, grass planting, feeding, and physical setting of the form.

#### **3.4.3 Interview**

An informal interview has been done to know further about the supporting and constraining factors of commercial cow farming.

#### **3.4.4 Case Study**

In this research the research three case studies has been done to know further about the supporting and constraining factors of commercial cow farming.

### **3.4.5 Focus Group Discussion**

Four group was formed for focus group discussion, among them two group comprised only of women and remaining two group was participate of both male and female.

### **3.5 Data Processing and Analysis**

The data collected from the field survey, observation and informal interview were analyzed by comparing, frequency counting, tabulating through descriptive way.

## CHAPTER IV

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 Introduction of the Study Area

Madi is a Municipality in Chitwan District of Nepal. With the population about 50,000, it is the fifth Municipality in the district. Basantapur was the major town of the former Baghauda Village Development Committee that was incorporated into Madi Municipality. It is adjacent to Chitwan National Park, this Municipality was formed by cabinet dated 2071-01-28 (BS). There were four village development committees before- Ayodhyapuri , Kalyanpur , Gardi and Baghauda. Madi is a beautiful valley surrounded by jungles; in north by Chitwan National Park and in south bordered with India. It is famous for several ancient religious sites. Pandavas were here in their 12 years exile. There is a village named after them, Pandava Nagar in western Madi, this is also the sacred place for Hindus as the Sage Valmiki lived here thousands years ago.

##### 4.1.1 Background of Population

The distribution of population of the sampled household in the study area according to their age is shown in the following table:

**Table 4.1**

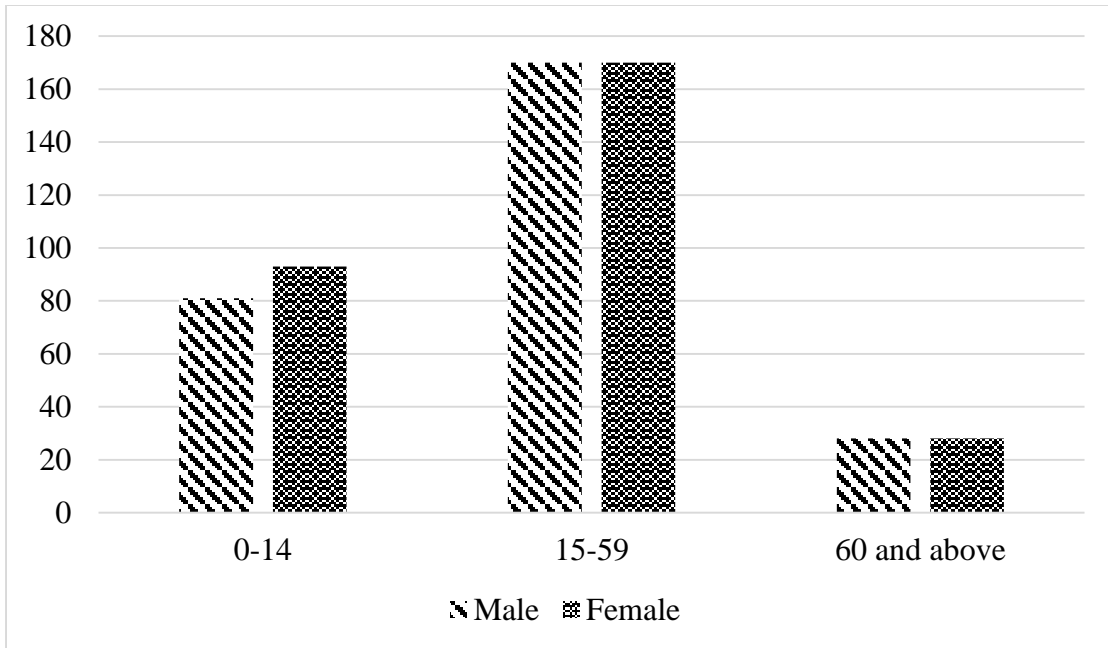
#### **Distribution of Age-wise Population Composition**

<b>Age-group</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>	<b>Percentage</b>
0-14	81	93	174	29.29
15-59	184	170	354	59.60
60 and above	38	28	66	11.11
<b>Total</b>	<b>303</b>	<b>291</b>	<b>594</b>	<b>100.00</b>

Source: Field Survey, 2018

**Figure 4.1**

**Distribution of Age-wise Population Composition**



The above mentioned table and figure represents the distribution of the population according to their age in the sampled households. In which, out of total 594 people, it is found that 29.29% of the people are in-between the age of 0-14 years, 59.60% of the people are in the age of 15-59 years, and similarly, about 11.11% of the people of the age more than 60 years. It could be seen that, majority of the people in the study are of the working age. Because of maximum number of the people in the study are physically strong, it can assume that there could be so many young entrepreneur in the various field so obvious in agri-business.

**4.1.2 Background of the Education**

The distribution of the population in the sampled households according to their academic qualification is shown in the following table:

**Table 4.2**

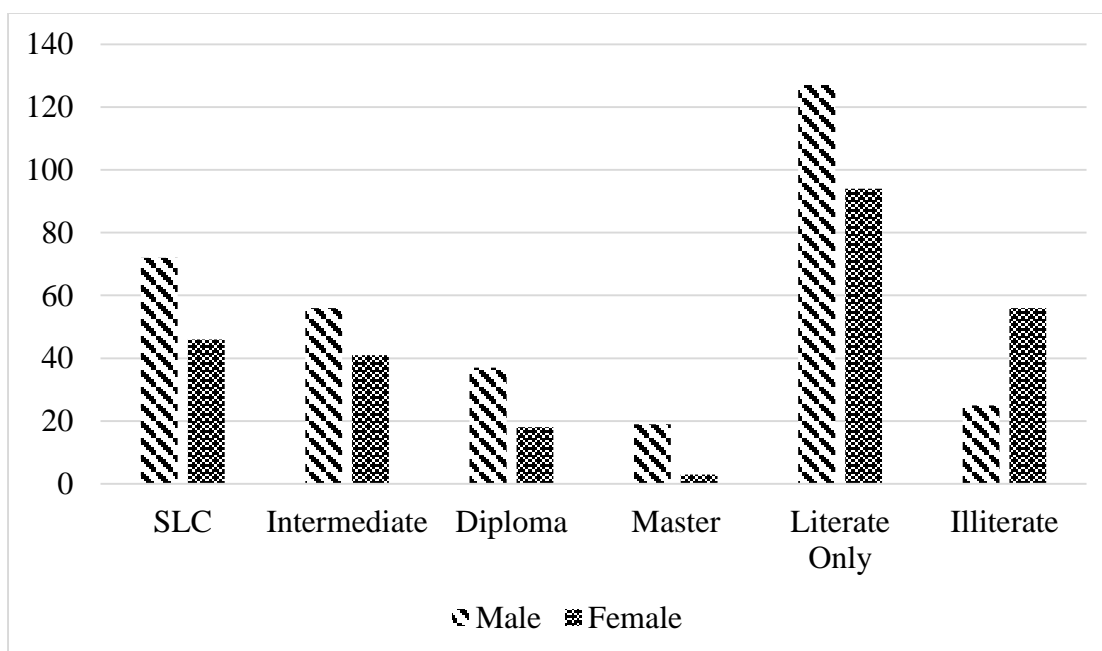
**Distribution of Education wise Population Composition**

Education Level	Male	Female	Total	Percentage
SLC	72	46	118	19.9
Intermediate	56	41	97	16.3
Diploma	37	18	55	9.25
Master	19	3	22	3.70
Literate Only	127	94	221	37.21
Illiterate	25	56	81	13.64
<b>Total</b>			<b>594</b>	<b>100.00</b>

Source: Field Survey,2018

**Figure 4.2**

**Distribution of Education wise Population Composition**



The above mentioned table shows that about 86.36% of the total population of the sampled households got literate. The academic qualification of the people got varies,

out of these literate people includes 19.9% have passed SLC, 16.3% of the people have passed Intermediate, 9.25% have passed Diploma and around 3.7 of the people have passed Master in some subjects. Only 13.64% of the people were got illiterate, most of which are also trying to be literate through various adult education programme.

#### **4.2 Land Holding by Sampled Household**

The researcher has observed that all the participants have cultivated land and it is also observed that there was not any barren land. All the land is used for producing seasonable food items. Out of the total land it is estimated that 10% of the land is occupied by residential buildings and animal farm. The amounts of the land (in Kattha) that are holding by the sampled households are found as

**Table 4.3**

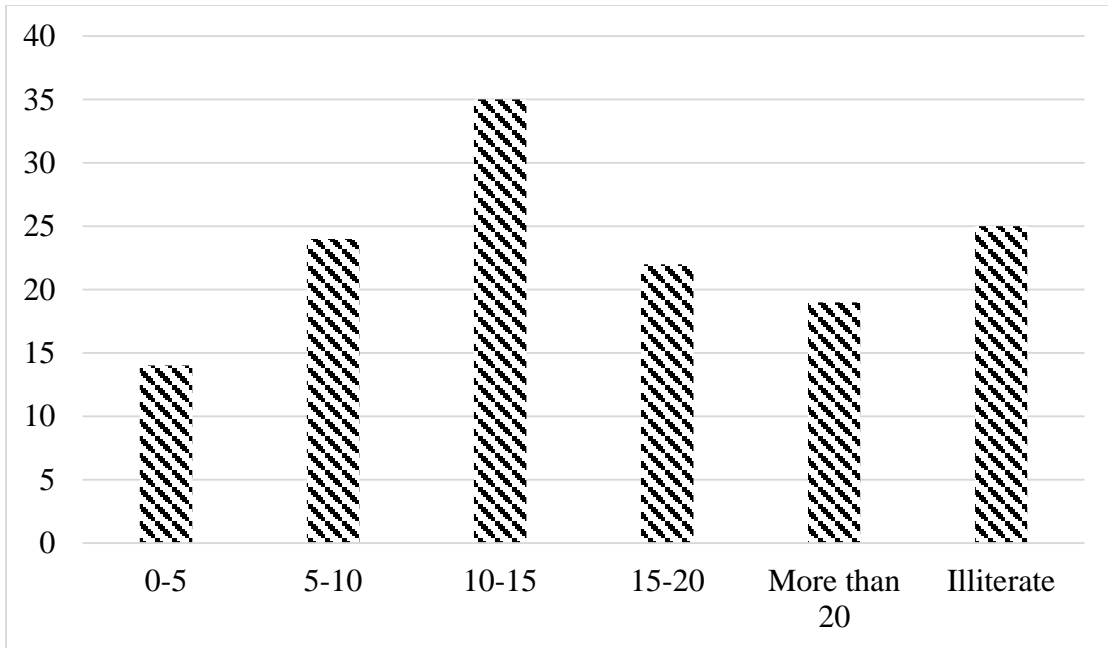
**Land holding by sampled households**

<b>Land (in Kattha)</b>	<b>No. of house holds</b>	<b>Percentage</b>
0-5	14	12.20
5-10	24	21.10
10-15	35	30.71
15-20	22	19.29
More than 20	19	16.70
<b>Total</b>	<b>114</b>	<b>100</b>

Source: Field Survey,2018

**Figure 4.3**

**Land holding by sampled households**



The table shows that very few (12.2 %) people have the land less than 5 Kattha. 21.1% of the sample households have the land between 5-10 kattha while 30.71% of the sampled households have the land 10-15 kattha. Similarly, 16.70% of the households have the land 15-20 kattha while 16.70% of the people have more than 20 kattha (1 Bigah). It seems that from the table, more than 50% of the sampled households have the land from 10-20 kattha which seems to be quite sufficient for normal food for a family of about 5 people. In an average, the area of the land that the people holding are satisfactory to consume the food for the family and it is also found that those families which do not have sufficient land to cultivate they used to take the land in rent (Adhiya, Bandakietc). Although the distribution of the lands is not equivalent and sufficient it seems to be satisfactory in the sampled area.

#### **4.3 Production of the Crops in the Sampled Area**

Madi Municipality is one of the potential area for the land production because it's fertile mud, irrigation facility, productive manpower, facility of fertilizer, developed seeds of crops etc. The average production of different crops in the sampled households is given in the table below.

**Table 4.4**

**Crops production by sample house holds**

<b>Types of Crops</b>	<b>Production (Quintal)</b>	<b>Percentage</b>
Paddy	1450	46.62
Wheat	470	15.11
Maize	634	20.39
Others	556	17.88
<b>Total</b>	<b>3110</b>	100

Source: Field Survey,2018

The table shows that, in the study area, the sample households used to product 1450 quintals of paddy in total in a year which is 46.62% of the total production of the crops while 20.39% of the of the total product is hold by the maize and similarly 15.11% of the total production is hold by wheat. And about 17.88% of the total production is holds by other crops (mainly by different cash crops). Since, the people can easily get the assess of the water for the crops from various source (like: deep boring, rapati and kerunga river, public kulo and nahar etc.) most of the area of Chitwan is assume to be good for agriculture that's why the study area is one of the most potential area for the agricultural product.

#### **4.4 Sources of Income**

It is found that sample households used to manage their financial resources from different area including cow farms. The average (annual, monthly) income of the sample households from different sources is presented below:

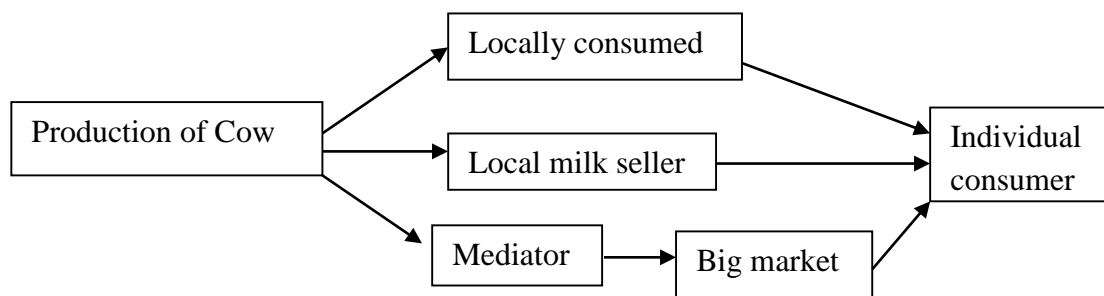
**Table 4.5****Sources of income of sampled house holds**

<b>Sources</b>	<b>Persons Engaged</b>	<b>Annual Income (tentative, in Rs)</b>	<b>Per household Average Income</b>	<b>Percentage</b>
Cow Farm	174	7,980,000	5833.33	19.85
Agriculture	253	5,454,000	3986.84	13.58
Livestock (other than cow)	140	3, 858,000	2820.17	9.59
Wage Work	39	1,404,000	1026.32	3.49
Service	37	7,992,000	5842.10	19.89
Business/Trade	38	4,412,000	3225.14	10.98
Remittance	43	2,948,000	2154.97	7.34
Pension	9	1,944,000	1,421.05	4.83
Other	41	4,200,000	3070.18	10.45
Total		40192000	29,380.117	100

Source: Field Survey, 2018

The table shows that the average monthly income of each sampled a household which is about Rs. 29,380.117 from various sources. Among the varieties of income sources, cow farming is the second highest income source of the sampled households which occupied 19.85% of the total income of the sample households in which the greatest income source of the people is found as service which occupied 19.89% of the total income of the sample households, both of which are seems to be equal. Form this evidence; we can declare that cow farming is one of the main sources of income for the sampled households.

## Marketing Channels



**Figure 4.4: Marketing Channels**

From the informal interview and the questionnaire survey, the researcher has sketched out the general marketing channel of the cow farming. First of the all, a newly born cow is become ready to sell around 12-24 month according to its body structure. Then, most of the cows that the farmer produced used to be sold from their home by the local seller.

### 4.5 Livestock Information

Chitwan is regarded as a developed district in the field of agriculture and livestock due to the emerging possibility of poultry, cow farms, dairy products and various fish ponds. Agro and livestock based professional practice in Chitwan has increased the economic activity in rural areas. Domestic animals like cows, buffalos, cows, poultry farming, fish form etc. are the main livestock in Chitwan district. People have been keeping livestock from the ancient period but history of commercialization of livestock is very short. In the study area, commercialization of livestock farming does not go back to more than three decades. Farmers keep livestock for the purpose of milk, meat, biogas and use bi-products in the farmlands.

The financial sources of livestock farming are cooperative, bank, self saving, villagers, mother groups etc. Livestock farming plays a vital role to uplift the economic condition of the farmers in the study area. According to the farmers, the study area is suitable for livestock farming. Livestock farming has various direct and indirect benefits such as use of house wastage, give nutritional food, employment, biogas and manure are direct benefits. The following table shows the number of the cows that the sampled households have;

**Table 4.6**

**Number of households according as the number cows**

<b>No. of cows</b>	<b>4-7</b>	<b>8-11</b>	<b>12-15</b>	<b>More than 15</b>	<b>Total</b>
No. of households	46	34	21	13	114

Source: Field Survey, 2018

From the above mentioned table it was found that out of 114 sampled households 46 households have 4-7 cows, 34 families have 8-11 cows, 21 families have 12-15 cows and only 13 families have more than 15 cows, generally, the households having more than 15 cows used to export their products to the nearer big cities.

**Table 4.7**

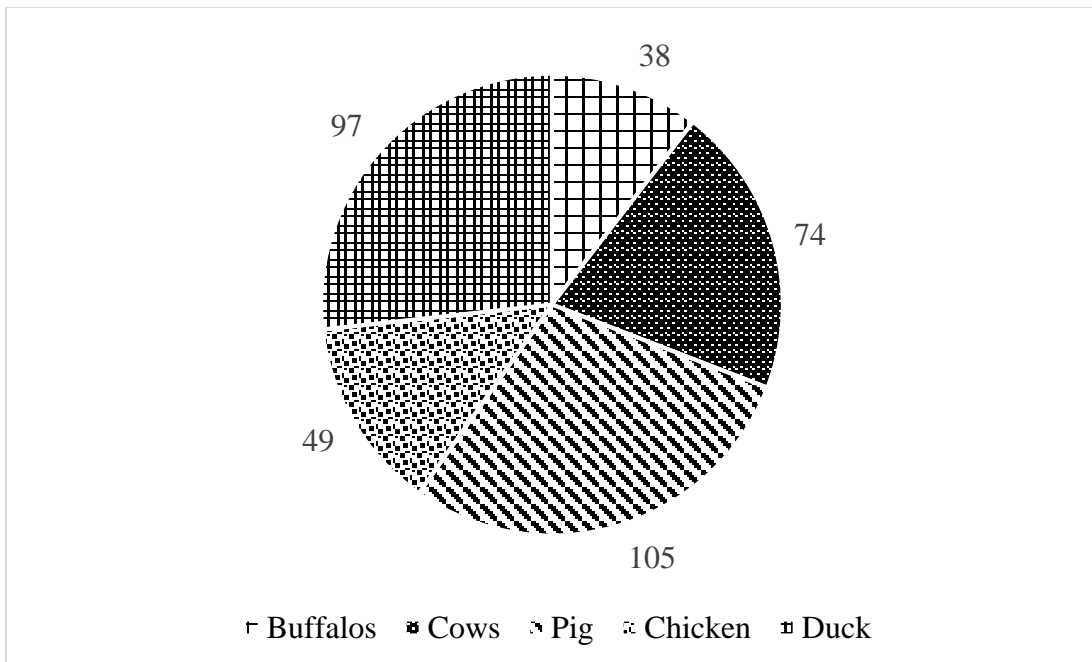
**Number of households according as the number of other Livestock**

<b>Livestock</b>	<b>Number of Livestock</b>				<b>Total</b>
	<b>0</b>	<b>1-2</b>	<b>3-4</b>	<b>5 or more</b>	
Buffalos	38	53	9	4	114
Cows	74	36	4	-	114
Pig	105	-	6	3	114
Chicken	49	16	19	30	114
Duck	97	-	6	11	114

Source: Field Survey, 2018

**Figure 4.5**

**Number of households according as the number of other Livestock**



It is found that out of 114 sampled households; only 66 households used to keep buffalos in their home, while only 40 households used to have cows in their home. And, only 9 houses used to keep pig on their home but 65 families have chicken in their home and only 17 families have duck in their home.

Madi Municipality is in the leading position in the agricultural product as well as in the livestock farming like poultry farm, fish farming and duck rearing etc. Since the present study is mainly focused on the small scale cow farming so it obvious to have some numbers of cows in their home, but it is interesting to get that some of the families are also rearing other livestock from businessman point of view like poultry farm, fish farming etc. Even they can help in generating their income of the farmer, farmer usually used to be motivated to rear cow because of its easy process of managing their foods, do not require to have any expertise, every family members can help in rearing and high demand of local cows. Therefore, the farmers who are rearing different kinds of livestock, they generally prefer to cow rearing.

#### 4.6 Purpose of Livestock Farming

The main purposes of livestock farming in the study area are to produce milk, meat, bio-gas and use byproduct in the farm land. The researcher found that there was multiple purpose of livestock farming. The responses are shown in the table below.

**Table 4.8**

**Number of households as the purpose of Livestock Farming**

S.N.	Purpose	Self Consume only	Self consume + Business	Total
1.	Milk (Cow)	-	114	114
2.	Milk Production (Buffalos and cow)	26	37	63
3.	Milk(Pig)	-	9	9
4.	Milk(Chicken)	42	23	65
5.	Milk(Duck)	7	10	17
6.	Fertilizer	108	6	114

Source: Field Survey,2018

If is found that, the primary purpose of cow farming in the study area is to produce Milk for business as well as to self consume. All most all of the sampled households used to keep cows for the purpose of business. But in other livestock it is found the mixed purpose of keeping livestock in their home either self use only or business. Out of 63 families, only 26 families used to keep cows and buffalos to produce milk for self consume while 37 used to keep cows and buffalos for the purpose of self consume and business. In the same way, people used to keep pig in their home for the purpose of business and self consume. Similarly, out of 65 families, 42 families used to keep chicken for self consume but about 23 families used keep chicken for both purpose. In the same way, out of 17 families, 7 families used to keep duck for the purpose of self consume while other 10 families used to keep duck for both purpose. Other than producing Milk and milk, the people have another next purpose of livestock farming for the fertilizer for their crops in which 108 families used to use the fertilizer in their own land but remaining 6 families used sell as well.

#### 4.7 Financial Sources of Cow Farming

In the study area the researcher has found that out of 114 sampled households, only 37 household have taken loan from different financial sources for cow farming, such as from dairy cooperative, banks, villagers, women groups and rest of other were doing this business by investing the money from self saving. But it is observed that the main financial investment for this farming is loan from mother group and cooperative, this can be shown as

**Table 4.9**

**Number of households which have taken loan for cow farming**

<b>S.N</b>	<b>Sources</b>	<b>No. of Households</b>
1.	Mother Groups	19
2.	Commercial bank	3
3.	Agriculture D. Bank	1
4.	Co-operative	9
5.	Others	5

Source: Field Survey, 2018

It is also obtained that the reason to take the loan from mother groups by maximum number of the farmer is because most of them are involved in some mother groups so that they can have easy access of loan in low interest rate.

#### 4.8 Influence of Cow Farming for the Economic Conditions

The researcher got the responses of the farmers on the statement that ' Are you feeling positive influence on your economic condition from cow farming?' as follows

**Table 4.10**

**Influence of cow farming for the Economic conditions**

<b>Influence on Economic condition</b>	<b>Number of Households</b>	<b>Percentage</b>
Good	94	82.47
General Influence	20	17.53
No Influence	-	0

Source: Field Survey, 2018

The researcher obtained that from the study, the role of cow farming in the sample households is very significant this because 82.47% of the sampled household said they have good influence of cow farming to uplift their economic condition. In the same 17.5% of sampled household appreciate general influence of cow farming in their economic conditions while got no one saying no influence on their economic condition.

**4.9 Problems and Prospect of Small Cow Farming in Madi Municipality**

The problem and prospect of small scale cow farming in Madi Municipality of Chitwan district are analyzed by counting the frequencies of the each statement that the respondents have kept. On the basis of the respondents view different problems and prospect of cow farming found as bellows:

**4.9.1 Problems of Cow Farming**

**1. Lack of Grass for Feeding**

Most of the farmers are used to feel lack of the green grass is one of the main problem in this sector. It is found that out of 114 sampled households 96 (84.21%) of the sampled households said it is the major problem of this sector. There are many reasons behind this like not having the idea about the developed types of grass, not having the proper land because of plotting of land, lack of other feeding materials etc.

**2. Lack of Developed Caste of Cow**

Out of the 114 sampled households 63 household said lack of the developed caste of the cow is also one of the problem for the commercialization in cow farming. In the

time of the survey, researcher himself also got almost all of the farmers used to rear local caste of the cows, which also supports the result.

### **3. Lack of Manpower**

Out of 114 sampled households 51 households said lack of manpower for rearing cows is one of the problems of this sector. This may be because, most of the people below the age of 20 years are generally used to be busy in academic activities and huge number of young people are used to be out of the house (national or international) that's why lack of the man power is also got as the problem.

### **4. Lack of Livestock Insurance**

Out of 114 sampled households 31 households said that lack of livestock insurance is one of the problems of the cow farming. Farmers complained that they have not been able to get access to the insurance. Even though the Government of Nepal have forced insurance companies to do cattle insurance and have given a minimum cap for insurance premium but they have not been able to reach the farmers.

### **5. Lack of Facilitated Loan**

Out of the 114 sampled households 29 households said that lack of the facilitated loan is as the problem for cow farming. Farmers do not have financial support for having improved caste of the cow. Local cooperatives are not proactive in providing loans for cow farming. As the loan in Nepalese context is collateral based, some farmers does not have adequate collateral. A subsidy based low interest rate loan is required by the farmers.

### **6. Lack of Proper Training (About Livestock)**

Out of 114 households 21 families said that lack of the proper training about animal husbandry is also being of the problem. From the informal interviews with the farmers, they expect some kind of training programme about livestock farming and agricultural field visiting programme for the better practice of this business.

## **7. Lack of Veterinary Facility**

Out of 114 sampled households 20 families said lack of the veterinary facility as one of the problem. By the observation while visiting to the sample household, the researcher himself found only one veterinary in the Municipality. Even though almost all of the families have some kind of the livestock, but the veterinary service is not found satisfactory so it is also considered as one of the problem in this business.

## **8. Low Price of Milk**

Only 23 families out of the 114 families select low price of the milk as one of the problem for cow farming in the context of the Madi Municipality . Even though the price of the cow milk is getting higher in the resent year, it is also supposed as fewer because of the investment in a cow to make it ready to sell.

### **4.9.2 Prospect of Commercial Cow Farming**

#### **1. Prospects to Develop Cow Farming as a Main Occupation**

Most of the respondents are agreed with the statement the cow farming can be developed as the main occupation. 78 respondents out of the 114 households were agreed with the statements. In some recent year, many young entrepreneurs are highly motivated to the agri-business especially towards cow farming in Madi Municipality. This also suggests us cow rearing also can be develop as one of the main occupation of the people.

#### **2. Prospects to Increase the Level of Income**

From the above analysis it can be seen that cow farming is in the second position to generate the income source of the sampled people. Out of the 114 sampled households 97 respondents we agreed with the statements that the small scale cow farming also have some potential to increase the economic level of the people. So that we can suppose one of the main prospect of cow farming is to increase the income level of the people.

### **3. Prospects to Increase Employment**

From the observation in the field, informal interview with the participants and survey questionnaire, we can conclude that the cow farming has potential to increase employment in the society. From the above mentioned analysis, 174 people are directly involved in this programme. And, 81 respondents out of 114 respondents we agreed with this statement. So that we can assumed the incensement in employment is also one of the prospect of cow farming.

### **4. Prospects to Capture National Milk Market**

Recently, Chitwan is the leading position to product milk in the nation especially from poultry, in the same way, if we are able to draw a bit attention of the young entrepreneur in commercial cow farming, certainly it may have the possibility to capture the national milk market. In the study 38 respondents marked that it has the prospect to capture the national milk market.

### **5. Prospect to Increase the Production Capacity of Land**

No doubt, the proper use of the fertilizer produced by cow farming obviously increases the production capacity of the land because fertilizer produced by cows are used to be the best one for the land. In the study 74 respondents out of 114 respondents are agreed with the statement that the cow farming has prospect to increase the production capacity of the land, so it is also assumed as one of the prospect to increase the production capacity of the land.

### **6. Prospect to Make Healthier Life**

As we already reviewed in the previous section, cow milk are used to be taken healthiest as well as the choicest milk among other. People used to rear cows in home for the purpose of self consumption as well as for business so that this may have a great role to make healthier life of the people. In the study, 41people are agreed with the statements, so this is also supposed as one of the prospect of cow farming.

## CHAPTER V

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

This study has analyzed the impact of small scale commercial cow farming on the socio-economic status of the farmers who are engaged in this profession. This study is prepared on the basis of both primary as well as secondary data. Primary data are gathered from the field survey questionnaire and the secondary data are from various publications such as district profile, office record etc. Out of 2635 households, 114 households which are rearing at least four cows for the purpose of business are taken as sample for the study. Collected data have been analyzed and interpreted in descriptive ways. Major findings, conclusion and recommendations are presented below:

#### 5.1 Summary

The major findings of study are as follows

- The total family members of sampled households (114) are 594. The average family size per household is 5.21. Out of 594 only 13.64 percentage people are illiterate who are unable to read and write. Mainly these illiterate people are involved in the cow rearing. Literate persons who are in the age group of 15 to 59 are interested in getting exposure in cities and in the capital city Kathmandu and those who could not get better opportunities in Nepal seek employment opportunities in foreign countries. But the researcher found that, in some recent year a huge number of young people are also highly motivated to the agribusiness including commercial cow farming.
- The average land holding by sampled household is 2.85 kattha (20 kattha =1 bigha) which can be assume as satisfactory for food production and livestock farming in small scale.
- Other sources of income apart from cow farming of sampled households are foreign employment, other livestock, services, business and others (vegetable farming, cash crops). Out of 594 people, 314 people are directly involved with the livestock farming among these 314 people 174 are involved in cow farming.

Income source generated by cow rearing occupied the second highest position after service in sampled households in which, 19.85% of the total income is contributed by cow farming whereas 19.89% of the total income is contributed by service.

- In some recent year, the researcher found that the young entrepreneurs are highly motivated to commercialization of cow farming.
- Farmers in the study area are rearing livestock for the purpose of milk production, meat, farming and energy (biogas). The main livestock in the study area are cows, buffaloes, cows, and poultry.
- The financial sources of livestock farming in the study area is loan from cooperative, mother groups, banks, self-saving, villagers, women groups etc. Farmer prefers mother group and cooperatives than banks because of it's easier process to get loan.
- It is found that 40.35% of the sampled households have 4-7 no. of cows, 29.82% of the sampled households have 8-11 no. of cows, 18.42% of the sampled households have 12-15 no. of cows, and 11.40% of the sampled households have more than 15 no. of cows. The researcher also found that 66.67% of the sampled households are rearing buffalos, 35.08 % of the sampled households are rearing cows, 7.89% of the sampled households are rearing pigs, 57.01% of the sampled households are rearing chickens and 15.02% of the sampled households are rearing ducks.
- The researcher found that no one sampled household have got opportunity to insurance their livestock.
- In an average, the monthly income of a sampled household is about Rs. 29,380.117 out of which 19.85 % is contributed by the cow farming which is in the second highest position to generate the income source of the sampled households.
- It is found that, the primary purpose of cow farming in the study area is to produce Milk for business. All most all of the sampled households used to keep cows for the purpose of business. But in other livestock, it is found the mixed purpose of keeping livestock in their home either self use only or business. Out

of 63 families, only 26 families used to keep cows and buffalos to produce milk for self consume while 37 used to keep cows and buffalos for the purpose of self consume and business. In the same way, people used to keep pig for the purpose of business and self consume. Similarly, out of 65 families, 42 families used to keep chicken for self consume but about 23 families used keep chicken for both purpose. In the same way, out of 17 families, 7 families used to keep duck for the purpose of self consume while other 10 families used to keep duck for both purpose. Other than producing Milk and milk, the people have another purpose of livestock farming for the fertilizer for their crops in which 108 families used to use the fertilizer in their own land but remaining 6 families used to sell as well.

- The researcher obtained that from the study, 82.47% of the sampled household said they have good influence of cow farming to uplift their economic condition. In the same way, 17.5% of sampled household appreciate general influence of cow farming in their economic conditions while got no one saying no influence on their economic condition.
- It is found that, most of the families used to expend their income from cow farming in domestic purpose and their children's education.
- Farmers in Madi are facing so many problems regarding cow farming, some of the major problems are;
  - ❖ Lack of grass for feeding
  - ❖ Lack of developed caste of cow
  - ❖ Lack of manpower
  - ❖ Lack of livestock insurance
  - ❖ Lack of facilitated loan
  - ❖ Lack of proper training ( about livestock)
  - ❖ Lack of veterinary facility
  - ❖ Low price of milk
- There are not only problems, the researcher found so many prospects of cow farming in Bharatpur Municipality of Chitwan districts. According to the farmers the major prospect of this profession in the Madi are;
  - ❖ Prospects to develop cow farming as a main occupation

- ❖ Prospects to increase the level of income
  - ❖ Prospects to increase employment
  - ❖ Prospects to capture national milk market
  - ❖ Prospect to increase the production capacity of land
  - ❖ Prospect to make healthier life
- On the basis of the information collected from the survey study, the small scale commercial cow farming has significant role in the socio-economic status of the people, so the study helps to make the conclusion that there is a good possibility of commercialization of cow farming so we can do this business in the larger scale which may be the mile stoning step to uplift our economic condition.

## **5.2 Conclusion**

A huge number of young entrepreneur are highly motivated in the commercialization of agri-business in some recent year in the context of Nepal, especially in Madi. Madi is being developed as one of the leading districts in agriculture as well as livestock farming because of its well climate and access of various facilities. From the study, it can be concluded that, small scale cow rearing in the projected area is one of the main source of income generation which has a very influencing positive effect on the socio-economic status of the people. Even though the history of commercial cow farming is not so long, people are encouraged to rear some local cows in their home than other livestock with the purpose of self consume as well business in the projected area. For the purpose of livestock farming, people used to assume cooperative and mother group as the easier way to financial management. Even the cost of the cow's Milk is higher in some recent days; people in projected area are not completely satisfied with the live cow's cost. The study also concluded that there are various problems or the barriers for the small scale commercial farming in the projected area mainly; lack of grass for feeding, lack of developed caste of Cow, lack of manpower, lack of Livestock insurance, lack of facilitated loan, lack of proper training (about livestock), lack of veterinary facility, low price of Milk etc. Even this have so many problems, it have also so many prospects like; prospects to develop cow farming as a main occupation,

prospects to increase the level of income, prospects to increase employment, prospects to capture national Milk market, prospect to increase the production capacity of land, prospect to make healthier life.

### **5.3 Recommendations**

Nepal remains a predominantly agrarian economy. About 66 percent of its population is involved in agriculture, which accounts for 35 percent of the gross domestic product or GDP. The livestock subsector of agriculture contributes 24 percent of the total agricultural GDP, and also plays important roles in human food and nutritional security, livelihood, regional balance, gender mainstreaming, and rural poverty alleviation. Yet, there is no separate national livestock policy in Nepal, and instead, its national livestock-related policies are spread across agriculture and other sectors. In this context, the government of Nepal should have to make a separate policy for livestock farming so that farmers can get different subsidies and supports and hence they are encouraged to this profession.

To make more participation in the commercialization of cow farming, it is necessary to have an organized marketing system, service of facilitated loan as well insurance of livestock so the study recommend to the related official to manage those things so that the farmer feel secure with this profession.

Government should enhance and increase the access of market and provide necessary technical support such as veterinary animal feeding and environmental information.

Farmers are not aware of improved caste and feed of the cows. So it is necessary to make them aware about different developed caste of cows in the place of local cows.

At last, the commercialization in cow farming can be established as one of the main occupation which can help people to live a bit satisfied life so the researcher suggest to the new entrepreneur to seek different alternatives related to agribusiness especially commercialization in cow farming.

## CASE STUDIES

### Case Study 1

Janak Shiwakoti and his family Janak is 23 years old, and lives in Basantpur with his mother, two sisters, one brother and one cousin. The family migrated to this area 20 years ago from the Banglung, attracted by the potential farming activities of the Madi. The family have successfully carried out two entrepreneurial activities; one is related to cow farming and another is related to organic agriculture. The families uncle donated them a small cow (now fondly called “the motivating cow”), which gave the son, Janak the idea .Janak's mother, who was a proud member of the cooperative for the past 8 years, applied for a loan of 10Lakhs rupees through the cooperative and the family started to develop Janak's idea. Today, they have a total of 13 cows, which are used for milk production. The families neighbours have also been motivated, to also start cow farming businesses. All together they collect 190 litres per day, which are then sold at 50 rupees per litre (190 litres come from the families own cows and the rest from their neighbours). Janak has also purchased a small tractor to collect the milk from the neighbours, so they can sell it altogether. In addition, the family has started an organic farming project, where they have leased an area of land that they use to produce different kind of vegetables, including cauliflowers, beans, tomatoes, peas and other vegetables. Janak, with the support of his family is now preparing two business plans - one for each of his development business projects, aimed at expanding the two activities. Janak's mother intends to ask for new loans to the cooperative as well as to the Federation, in order to support the future plans of the family business. His mother says “we were so poor, there was no money for us. We had difficult times in the past, now I feel so lucky to have this son, and look at my family. We all feel good, the cooperative provides many trainings, and also about how to save and how to ask for loans.

## Case Study 2

Seven years ago, Bishnu Poudel left Nepal in hopes of a better future and went to Qatar. Once he arrived in Qatar, things were not so rosy. The pay was menial and the working conditions hard. He left Qatar disappointed after just two years and started a cattle business instead. The rest as they say is history. He is now the proud owner of Anil Buffalo Firm, with 8 buffaloes and 9 cows which produces up to 110 litres of milk every day. The firm employs four people and Poudel himself manages to save Rs70,000 at the end of each month. “In Qatar, life was hard and the pay not good,” said Poudel, “Here, the pay is good and you don’t mind the sweat dripping from your face to your own country’s soil.”

To ensure the success of dairy farms in the area, the farmers have collectively opened a dairy corporation of 32 people called the ‘Namuna Durgafat Dairy Producers’. The farmers contribute nearly 250 litres of milk every day to the corporation’s reservoir which gets transported to Bharatpur. A member of the dairy corporation, Ramu Neupane said, “We earn some Rs15,000 to Rs50,000 through the milk business every month while the dairy corporation earns nearly Rs450,000 per month.” The local dairy corporation has received a grant of Rs1.8 million from some government agencies to expand the buildings and road networks. According to Neupane, more and more people are returning from foreign employment to try their hand at the lucrative dairy business. Furthermore, as the road infrastructure increases across villages, the dairy business has become a sustainable source of income for villagers.

## Case Study 3

Shakhar Ghimire was one of those returning from foreign employment to dabble in the dairy business. he returned from Malaysia and Dubai to start my own business, said Ghimire, “I can save up to Rs200,000 by the end of the year from this business, which is far better than what I used to receive in foreign countries.” The production of milk has increased by 20% all over the region,” said Poudel, “The milk here sells for Rs 50 per litre and that has made dairy farming a sustainable source of income for people.” For those returning from foreign employment to start a dairy business in Madi, the grass seems to be much greener here than abroad.

## REFERENCES

- CBS. (2014). *Chitwan District level Report*. Kathmandu: National Planning Commission.
- Creswell, J. (2008). *Education research: Planning, conducting and evaluation quantitative and qualitative research* (3<sup>rd</sup>ed.). Upper sanddleiver, NJ: pearson.
- Dalgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. and Courbois, C. (1999). *Livestock to 2020-the next food revolution*. Food, agriculture and environment discussion paper 28, IFPRI: Washington.
- ILO. (2004). *A Fair Globalization: Creating Opportunities for All*. Report of the World Commission on the Social Dimension of Globalization: Geneva, Switzerland.
- Kumar, S. (2007). *Commercial cow farming in India: An emerging agri- business opportunity*. Agricultural economics research review: New Delhi.
- Lincon, Y. S.& Guba, E. G. (2000). *Paradigmatic controversies, contradictions and emerging confluences. Hand book of qualitative research* (2<sup>nd</sup> ed., pp 163-188). Thousand Oaks, CA: Sage publications.
- Marapana, R.& Seresin, T. (2011). *Cow farming systems in the southern province of Shree Lanka: Feeding and management strategies*. World Journals of Agricultural Sciences, 7(4), 383-390.
- MoAC. (1995). *Agriculture Perspective Plan*. Kathmandu: Ministry of Agriculture and Cooperatives, Nepal.
- MoAC. (2004). *National Agriculture Policy*. Kathmandu: Ministry of Agriculture and Cooperatives, Nepal.
- NLC. (2007). *Interim Constitution of Nepal,2007*. Kathmandu: Nepal Law Commission.
- NPC. (2012). *Approach Paper to the Thirteenth Plan (Fiscal Year 2012/13–2015/16)*. National Planning Commission, Government of Nepal: Singh Durbar, Kathmandu, Nepal.
- NSCoA. (2012). *National Sample Census of Agriculture-2011/12*. Kathmandu: Central Bureau of Statistics, Nepal.

## Appendix A

### Questionnaire of Household Survey

#### Household Survey:

##### 1. For individual farmer (main person of house):

a) Name..... a) Age:..... b) Sex:.....c) Ward (Add.): .....

e) Religion ..... f) Occupation: (i) Main: ..... (ii) Other:.....

##### 2. Description of family member.

S.N.	Name	Age	Sex	Education	Occupation
1					
2					

##### 3. Livestock Information

Livestock	Number	No. of people engaged	Livestock	Number	No. of people engaged
Goat			Chicken		
Buffalo			Duck		
Cow			Sheep		
Pig			Other		







21. Production of crops

Crops	Production (Quintals)
Paddy	
Wheat	
Maize	
Others	

22. Annual Income (Individual family)

Sources	Income (Rs.)
Cow Farm	
Agriculture	
Wage Work	
Service	
Business/Trade	
Remittance	
Pension	
Other	
Total	

23. Do you have experienced any kind of support for government or any organization for cow farming?

a) Yes

b) No

If yes, How.....

24. What are the problems of cow Farming? (Write in priority order)

.....

25. What are the problems of cow Farming? (Write in priority order)

.....

26. Do you have any suggestion, recommendation, and view about cow farming?

.....

**APPENDIX B: PHOTOGRAPH**

