

# Study on “Cost of Milk Production in Nepal”

## Study Report

### Submitted to:



**Government of Nepal**  
**National Dairy Development Board (NDDB)**  
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## TABLE OF CONTENTS

EXECUTIVE SUMMARY

ABBREVIATION

LIST OF TABLES AND ANNEXES

I. OBJECTIVES AND METHODOLOGY

**1.1 Background**

**1.2 Objectives**

**1.3 Methodology**

II. OVERVIEW OF DAIRY DEVELOPMENT

**2.1 Mismatch between Demand and Supply**

**2.2 Milk Production Potentials**

**2.3 Institutional Framework of Milk Production and Processing**

**2.4 Reflections from Past Studies of Costs of Milk Production**

III. ANALYS OF SURVEY RESULTS

**3.1 Results of Farm Household Surveys**

**3.2 Results of Key Informant Interviews**

**3.3 Results of Focus Group Discussions**

IV CONCLUSIONS AND REC OMMENDATIONS

**4.1 Conclusions**

**4.2 Recommendations**

## EXECUTIVE SUMMARY

This report presents the results of a “Cost of Milk Production in Nepal” that was assigned by National Dairy Development Board to Right to Access Nepal; a Kathmandu based nongovernmental organization. The overall objective of the study was to assess the cost of milk production and recommend price of raw milk to be paid to the milk producers. The specific objectives were to assess costs for milk production, profitability milk producers, perceptions of farmers and milk consumers of costs and pricing of milk; and recommend appropriate price for raw milk

Both secondary and primary sources were utilized for quantitative and qualitative information. Secondary sources of information primarily consisted of study reports on cost of production and relevant documents of National Dairy Development Board and Ministry of Agriculture and Livestock Development. Key Informant Interviews with 26 stakeholders, and three events of Focus Group Discussions with 33 local participants and Farm Household Surveys with 300 sample milk producing farmers were the main primary sources of information. These information collection instruments were administered in seven municipalities and two rural municipalities selected from three sample districts; Kavrepalanchowk in Bagmati *Pradesh*, Navapur in Gandaki *Pradesh* and Surkhet in Karnali *Pradesh*. In case of Ilam (from Province 1) and Bardiyaya (Province 5) no field surveys were conducted due to lock down imposed by the government in connection to Corona virus spread. For these two districts information on key indicators (milk production, selling price of milk and cost of milk production) was collected through telephonic conversation from the concerned authorities of Milk Producers’ Cooperatives working in these districts.

Distribution of 300 sample households revealed that all major ethnic groups were involved in the production and sale of milk; although majority (60%) of them was Brahmin/*chhetries*. Slightly more than 50% of them owned two *ropanies* of land where they carried out their dairy development activities. The sample households together owned 1,119 cows and buffalos leading to 3.73 animals per household. Out of total cows and buffalos, 343 (cows: 256, buffalo: 87) were at milking stage that consisted of 30% of total animals and 1.1 milking animal per household. On an average, 9.42 liters of milk per milking animal per day was reported; a cow producing more milk (11.40 liters/day) than that of buffalo (7.44 liter/day). The average lactation period was found to be 314.4 days (Cow: 291 days, Buffalo: 337.5 days). Of total milk reduced in the study locations, nearly 90% was marketed. The milk producers in sample locations were found to have sold their milk to Milk Producers’ Cooperatives. The selling price of buffalo milk (Rs. 71.53/liter) was reported to have been higher than that of cow milk (Rs. 54.20/liter) leading to average of five districts to Rs.62.86. Average cost of milk production per liter was Rs. 53.03 per liter with slight variations across the districts; in Surkhet it was Rs. 56.93, in Navapur Rs. 52.11 in Kavre Rs. 58.13, in Ilam Rs.48.00 and in Bardiyaya Rs.50.00.

Information on problems related to commercial production of milk generated from the sampled farm household surveys, Key Informant Interviews and Focus Group Discussions revealed that (i) high interest rates on loan charged by the financial institutions including commercial bank has severely impacted expansion/upscaling of milk production; (ii) farmers are less enthusiastic towards getting their animals insured due to inadequate knowledge about its premium payment obligation and procedures to get insurance; (iii) increasing costs of feeds, grass, fodder, transport and wage rates for hired labor have led to increased per unit cost of milk production that is not immediately compensated by increased price of milk at consumer level; (iv) veterinary services from public sector service providers are grossly inadequate and private sector service delivery is expensive; not affordable for small holder milk producers. Based on study results it is recommended that:

- Price of milk to be paid to the milk producers/sellers should be increased to cover increasing cost and fair amount of profit
- Milk producers need training on construction/management of clean/suitable animal sheds and growing grass for fodder as well as keeping grass seeds properly
- Expansion/scaling up of commercial milk production seem to depend upon bank loan; the farmers are not yet able to manage investment out of their income/saving. Therefore, they should be provided bank loan on subsidized interest rates
- Milk producing farmers maintained that they were not aware of animal insurance facilities and procedures to follow. This calls for initiation for orientation programs by the Milk Producers' Cooperatives in consultation with local insurance companies and public sector livestock development entities.
- Farmers should be motivated to grow improved fodder, grass and legumes. The farmers should be taught to feed these grasses and legumes as the supplementary feeding in appropriate quantity together with cereal straws after treatment and other feed stuffs. This will promote intake of quality roughages and will improve the efficiency of feeding at lower cost resulting in low milk production cost. Farmers shall coordinate with Community Forestry Users Groups (CFUG) to cultivate forage in forest and use with appropriate policy at local level.
- On fiscal measures, milk producers need to be provided with bank loan at subsidized interest rates; animal feeds at subsidized prices; reduction in import duties on animal feeds, medicines and other commodities.
- Costlier veterinary technical services provided by private sector technical personnel need to be replaced by cost free public sector technicians.
- On the part of milk producers, they need to be motivated to consolidate their land and other resources (sheds, equipments, utensils, vehicles etc.) and initiate joint management that will contribute to reduce costs of milk production.

## ABBREVIATION

CDCAN	Central Dairy Cooperatives Association of Nepal
CFUG	Community Forestry Users Groups
DCC	District Coordination Committee
DDC	Dairy Development Corporation
DLS	Department of Livestock Services
DLSO	District livestock Services Office
DOLD	Department of Livestock Development
FGD	Focus Group Discussion
FHS	Farm Household Survey
FY	Fiscal Year
KII	Key Informant Interview
MoALD	Ministry of Agriculture and Livestock Development
MPCs	Milk Producers; Cooperatives
Mt.	Metric Tonne
NARC	National Agriculture Research Council
NDDB	National Dairy Development Board
TOR	Terms of Reference

## LIST OF TABLES AND ANNEXES

### **TABLES**

Table 1.1: District wise number of sample households and participants of KIIs and FGDs

Table 2.1: Number of milking cattle and buffalo and amount of milk produced in study district

Table 2.2: Results of Past Studies on Costs of Milk Production

Table 3.1 Distribution of milk producing households by major ethnicity

Table 3.2 Distribution of milk producing households by land holding

Table 3.3 Number of milking cows and buffalo in study areas

Table 3.4 Milk production of cows and buffalo by months

Table 3.5: Quantity of milk consumed at home and sold

Table 3.6: Total quantity of milk sold last year and selling prices

Table 3.7: Costs of milk production

Table 3.8: Types of problems being faced by milk producers in rearing cows/buffalos

Table 3.9: Types of problems being faced by milk producers for marketing milk

Table 3.10: Milk producers' perceptions of possible measures to increase milk production

Table 3.11: Daily wage rates of females and males (KII results)

Table 3.12: Purchasing price of milking cow and buffalo (KII results)

Table 3.13: Selling price cows and buffalo after milking period (KII results)

Table 3.14: Costs of improved/modern grass, feed and construction of sheds (KII results)

Table 3.15: Selling price of milk per liter (KII results)

Table 3.16: Daily wage rates of females and males (FGD results)

Table 3.17: Purchasing price of milking cow and buffalo (FGD results)

Table 3.18: Selling price of cows and buffalo after milking period (FGD results)

### **ANNEXES**

Annex 1: Questionnaire-Milk Pricing-Farmers (in Nepali)

Annex 2: Questionnaire-Milk Pricing-KII (in Nepali)

Annex 3: List of KII (in Nepali)

Annex 4: Questions for FGD (in Nepali)

Annex 5: Photographs of Field

# CHAPTER I

## OBJECTIVES AND METHODOLOGY

### 1.1 Background

“*Pricing of milk*” is one of the basic factors contributing to resolving distortion in supply of raw milk. The milk producers most often are reported to stop producing milk for sale on the grounds that the costs of producing milk is increasing rapidly and they are not provided with the cost based “fair price” for their products. There are instances of farmers destroying huge amount of their fresh milk on highways to protest as they felt prices of milk set by the government were “unfair”. The National Dairy Development Board (NDDDB) as an apex body in dairy sector development in Nepal is responsible for dealing with the pricing of milk in the country. It undertakes study on cost of milk production on regular basis and forwards the findings with recommendations to the Ministry of Agriculture and Livestock Development (MoALD) for necessary action and to Dairy Development Corporation (DDC). The DDC, in turn, examines the consumer price, compared with production cost and forward the opinion to MoALD for approval. MoALD evaluates these reports and fixes the producers and consumer's price. Common practice as set by the NDDDB and DDC is that out of total price, 2/3<sup>rd</sup> goes to the farmers and 1/3<sup>rd</sup> to the processors.

This report is prepared on the basis of the results revealed by a study on “*Cost of Milk Production in Nepal*” conducted in three sample districts (Surkhet, Nawalpur and Kavre) of Nepal. The study was designed to generate information on cost of producing milk from the farmers, large livestock farming houses and other stakeholders concerned with dairy development at present. The results of the study are expected to provide a sound basis to concerned authorities for setting prices for the milk so that milk producers are motivated to increase milk production from present level (2.1 million Mt. in FY 2017/18<sup>1</sup>) in order to fulfill unmet demand for milk that is estimated to stand at 300,000-400,000 liters per day<sup>2</sup>. Increased supply of milk will also support over 450 public and private sector dairy industries that are operating far below their installed capacities mainly due to shortage of fresh milk; particularly during lean season (*March to August*)<sup>3</sup>.

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<sup>1</sup> **Economic Survey: 2019**, Ministry of Finance, Government of Nepal, Kathmandu, Nepal, May, 2019

<sup>2</sup> **Ten Year Dairy Development Plan: (2074/75-2083/84 B.S.)**; National Dairy Development Board, Kathmandu, Nepal, 2017

<sup>3</sup> **Feasibility Study of Milk Production and Potential Collection/Chilling Centers Establishment in Mid-Hill Highway and Hulaki (Postal) Highway**"; study conducted by Right to Access Nepal (RAN) for National Dairy Development Board, Kathmandu, Nepal, June, 2018

## 1.2 Objectives and scope

The overall objective of the proposed study was to assess the cost of milk production that will provide sound basis for the concerned authority to fix appropriate prices of milk. The specific objectives were to:

- Assess costs for milk production (fixed costs, variable costs, transportation costs, etc.)
- Assess the profitability of dairy farm (income and expenditure)
- Assess the perceptions of farmers and milk consumers of costs and pricing of milk
- Recommend measures for fixing appropriate price for raw milk and improvement/expansion of dairy development in study areas

## 1.3. Methodology

### 1.3.1 Data collection tools

The methodology of the study including the districts covered and sample size taken were finalized in consultations with the *technical team* constituted to formulate Terms of Reference (TOR) at NDDDB. This includes approaches used to collect both quantitative and qualitative data using secondary and primary sources of information as briefly outlined below.

#### **Desk review/secondary sources of information collection**

The dairy development related government plans, policies and reports including documents related to existing milk collection centers of DDC and various private dairies and milk producers' cooperatives were reviewed. Notably, research reports on milk production and cost of milk production<sup>4</sup> carried out in the past were reviewed to have inferences on the types of costs analyzed and identify the gaps to be bridged in the study. Published documents and concerned web-sites were also utilized for accessing information required.

#### **Primary sources of information collection**

The primary sources of information mainly included Farm Household Surveys (FHS), Focus Group Discussions (FGDs) and Key Informant Interviews (KIIs) carried out in three sample districts during field surveys as summarized below.

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<sup>4</sup> For example, *Study on Cost of Milk Production in Nepal*; National Dairy Development Board, Kathmandu, Nepal, 2018, *Final Report on Study on Cost of Milk Production*; Nepal Environment Protection Center, Kathmandu, Nepal, 2014

Selection of districts and local bodies: As suggested by the technical team at NDDDB, five districts from five provinces were selected; Ilam in the hills (Province 1), Kavre in the hills (*Bagmati Pradesh*: Province 3), Nawalpur in terai (*Gandaki Pradesh*: Province 4), Bardiya in Terai (Province 5) and Surkhet in the hills (*Karnali Pradesh*). These districts are milk pocket districts and have largest amount of milk production within the province. However, field visits were made only to three districts (Kavre, Nawalpur and Surkhet) only. Due to lockdown imposed by the government to fight Corona virus outbreak in the country, the two remaining districts (Ilam and Bardiy) could not be visited for the field surveys. With regard to three districts where field visits were made; eight local bodies were selected inn close consultation with DCC and district based milk cooperatives (Table 1.1).

Table 1.1: District wise number of sample households and participants of KIIs and FGDs

District	Local Bodies	Number of		
		Sample Households	KII Respondents	FGD Participants
Surkhet	Bheri Ganga municipality	50	10	11
	Barahtal rural municipality	50		
	<i>District total</i>	<i>100</i>		
Nawalpur	Gaidakot municipality	25	8	10
	Devchuli municipality	25		
	Kawasoti municipality	25		
	Hupsekot rural municipality	25		
	<i>District total</i>	<i>100</i>		
Kavre	Dhulikhel municipality	25	8	12
	Panchkhal municipality	25		
	Mandan Deupur municipality	50		
	<i>District total</i>	<i>100</i>		
<b>Total (three districts)</b>		<b>300</b>	<b>26</b>	<b>33</b>

Farm Household Surveys/Survey of milk producers: Using structured questionnaire prepared in Nepali (*Annex 1*) and pre-tested in rural-urban settings of Lalitpur district, this survey was conducted in 300 sample households (100 in each district) by the trained enumerators. Out of 300 sample farm households, 75% consisted of urban households selected from seven municipalities and remaining 25% from two rural municipalities (Table 1.1). In each district, a list of farm households involved in milk production for sale were prepared in consultation with the concerned officials at municipalities/rural municipalities and other relevant knowledgeable

local agencies. From the list, the households approached for information collection were randomly selected.

Key Informant Interviews (KIIs): Using semi-structured checklist prepared in Nepali (*Annex 2*) 26 KIIs were conducted at the center, province, district and sample municipalities and rural municipalities. The respondents consisted of stakeholders who are associated with the plan/policy formulation, pricing, distribution/sale of milk and milk production. They largely consisted of concerned officials/persons at:

- NDDDB, DDC, Department of Dairy Development (DoLD)
- Concerned ministries at three study provinces
- Dairy Cooperatives and their unions
- Milk processing plants
- Chilling centers and milk collection centers/points

Focus Group Discussions (FGD): Using semi-structured checklist prepared in Nepali (*Annex 3*) and pre-tested in rural-urban settings in Lalitpur district, three events of FGDs were organized (one in each district) to get perceptions (qualitative information) of 33 participants on costs of milk production and its pricing and triangulate information generated from other tools of information collections. Each event of FGD consisted of 10-12 participants (Table 1.1) represented from DCC, peoples elected representatives of municipalities and rural municipalities covered for the study, consumers' associations/groups, women groups, farmers' groups/associations, financial institutions involved in extending loans for milk producing farmers, milk producers' associations not covered in KII.

Telephonic conversation and on-line data collection: In case of Ilam and Bardiya districts, telephonic conversations were made with concerned officials as mentioned below. They were requested to furnish key information related to volume of milk production and costs of milk production through e-mail:

- District Milk Cooperatives' Association, Ilam district
- Kalika Milk Producers' Cooperatives, Bardiya district

### 1.3.2 Measures for ensuring quality data collection and its management

Quality of data collection, data entry, output production etc. were ensured basically by adopting measures to minimize non-sampling errors as well as entry and management of computerized data as briefly outlined below.

- An experienced and qualified Dairy/Livestock/Veterinary specialist was recruited to work as Team Leader. He was supported with qualified and experienced support staff (Field Supervisors, Enumerators, Data Entry Operators)

- Questionnaires/checklists were pretested and finalized in consultation with NDDB
- Questionnaires/checklist prepared in Nepali were used
- Field Manual prepared in Nepali was used
- Training for support staffs (Field Supervisors, Enumerators, Computer Data Entry Operators) on administration of data collection instruments, data entry formats and protocol, data cleaning, quality assurance and other procedures was conducted

### 1.3.3 Computation of costs of milk production

The information generated from the field was used to arrive at cost of milk production per liter using the following cost computation approach.

**Fixed Cost:** It included fixed capital and depreciation on animals, cattle sheds and machinery. The interest on fixed capital was worked out at the then prevailing rate of interest i.e. at 12 per cent per annum. Depreciation on fixed capital was worked out separately for cattle shed, machinery and equipments keeping in view the present value and useful economic life of the capital asset. However, fixed costs is not computed in estimating cost of milk production as no-interest rates and depreciations of major capital assets were associated in the production of milk.

**Variable Costs:** These costs included feed cost, labor cost, veterinary cost and other miscellaneous costs.

- **Feed cost:** The cost incurred on green roughage (forage & fodder grasses), dry roughage( rice straw, maize stoker, wheat straw etc) and concentrate (market concentrate feed, *duitto*, flour, *chokar*, *pina*, salt etc) to feed the animals constituted feed cost. It was worked out by multiplying quantities of feeds and fodder consumed by animals with their respective prevailing prices in the study area.
- **Labor Cost:** It included family as well as paid hired labor. The hired labor was calculated considering time utilized in various dairy activities and wages paid or wag equivalent of kind (e.g. food grains) paid. In case of family labor, opportunity cost theory was applied that is family labor cost was imputed as time devoted by the family members and multiplied by the wage rate paid to the hired labor for similar work.
- **Veterinary Cost:** It included the cost incurred on vaccination, medicines, breeding both for natural service and artificial insemination, and other charges/fees of veterinary service providers.
- **Miscellaneous Cost:** The costs of repairs, electricity, water charges, bucket, rope, etc were included under this group.
- **Cost per liter of milk production:** In order to estimate the cost per liter of milk, the total cost per farm was divided by average milk production per farm per annum, i.e. Cost per liter (Rs.) = Total variable cost per annum during last one year/average milk production per annum

## CHAPTER II OVERVIEW OF DAIRY SECTOR DEVELOPMENT

In this chapter an attempt is made to provide some insights into the existing scenario of milk production and past efforts made to the development of dairy sub-sector in Nepal based on literature reviewed in the course of study.

Available government sources suggest significant number of milking cows and buffalo and quantity of milk produced in five study districts in fiscal year 2017/18 (Table 2.1).

Table 2.1: Number of milking cattle and buffalo and amount of milk produced in study district (FY 2017/18)

Districts	Number of Milking		Milk Produced(Mt.)		
	Cow	Buffalo	Cow Milk	Buffalo Milk	Total
Ilam	22,995	7,901	22,180	13,575	35,755
Kavre	22,415	37,875	20,122	71,220	91,342
Nawalpur	7,145	14,225	8,891	16,547	25,438
Bardiya	16,488	31,895	12,680	29,217	41,897
Surkhet	18,920	14,824	13,640	10,025	23,665

Source: Statistical Information on Nepali Agriculture; MoALD, GoN, 2018

### 2.1 Mismatch between demand and supply

In recent years, individual farmer and farmers' cooperatives have emerged with larger commercial herds of cattle/ buffaloes in response to gross deficit of fluid milk which is estimated at about 300,000 to 400,000 liters per day<sup>5</sup>. The total number of milking animals in FY 2018/19 (2076/77 B.S.) is reported to be 2,639,359 (cow: 1,078, 775, Buffalo: 1,560,584). Total milk production is estimated to amount to 2,168,434 Mt. (cow milk: 795,530 Mt. and buffalo milk: 1,372,905 Mt.)<sup>6</sup>. However, the productivity is far below the average due to many inherent and external constraints including poor genetic potentials, inappropriate feeding and health care management. There is seasonality of milk production in the country, leading to flush season and lean season. The shortage of fluid milk is more severe during lean season (*March to August*). For addressing the increasing demand of milk and milk products in rapidly growing urban centers, dairy processors both public and private in the country are importing fluid and milk products. The huge amount of money is spent to import SMP (Skimmed Milk Powder) and different dairy products.

<sup>5</sup> *Ten Year Dairy Development Plan: 2074/75-2083/84, NDDB, Kathmandu, Nepal*

<sup>6</sup> Ministry of Agriculture and Livestock Development, GoN, 2019

With rapid urbanization and increased income of the people and diet diversification, the demand for milk and milk products is increasing at faster rate each year. Even with the constant population growth rate of 1.4% per annum at present, the annual milk production has to be increased at least by 9% per annum from the existing level of 3.4% per annum to meet the WHO recommended 250 gm milk per day per capita requirements by the year 2020 for fulfilling the minimal nutritional requirements.

## **2.2 Milk production potentials**

The Agricultural Development Strategy (ADS) has revealed that the dairying is one of the most potential and promising sub-sector within agriculture sector which has grown rapidly as an industry. Further, the same document has also revealed that this sub-sector is of high priority area for economic transformation of Nepalese economy having the potential of increasing the productivity from the present level.

Despite huge potential for its development and the increasing demand in the urban centers, only about 17% of the total milk produced in the country goes to formal milk market. Likewise, there are high potentials for collecting fresh milk from most of the districts but at present only the selected dairy pockets in 41 districts are linked to the formal market. There is wide gap between the total amount produced and the total potential production. The dairy industries are operating far below their installed capacities mainly due to shortage of fresh milk during lean season. Out of the total, the government owned Dairy Development Corporation (DDC) has processing capacity of 225,000 liter per day. Furthermore, the private dairies are operating with following capacities which clearly shows that there is predominance of small to medium scale industries.

- 4 processing industries with capacity of over 50,000 liters per day
- 10 processing industries with capacity ranging from 10,000 liter to 50,000 liter per day
- 30 processing industries with capacity ranging from 1,000 to 10,000 liters per day
- 400 processing industries with capacity ranging from less than 1,000 liters per day
- SMP plants with capacity of 20 tons per day

## **2.3 Institutional framework of milk production and processing**

National Dairy Development Board: In 1990, the GoN approved the first “Ten Year Dairy Development Plan (1991-2000)” as a blueprint for dairy development in the country. Based on the recommendation of the Plan, the GoN established NDDDB in 1992 under a separate Act. The Board is an apex level autonomous institution of dairy development in Nepal. The major objectives of the Board are to:

- Assist GoN in formulating national level dairy development policies and plans, develop dairy industries,
- Find remedies to problems relating to livestock development and animal health sector for dairy development,
- Maintain coordination among the public and private dairies, carry out dairy development related high level studies and research works, and make arrangements for fodder and pasture resources.

The functions of NDDDB include:

- Policy formulation and recommendation on import of goods necessary for production and promotion of milk and milk products as well as animal feeds, and implementation of the approved policies
- Formulation and recommendation of milk pricing policy to the GoN
- Recommendation to GoN on well being of dairy processors and consumers
- Development of cooperative sector dairies
- Registration of dairy industries
- Management and mobilization of national and foreign grant and loan for dairy industries
- Technical assistance for setting-up, improving, promoting and safeguarding dairy industries
- Review, monitoring and evaluation of dairy development programs
- Other necessary activities for dairy industries

NDDDB has an Executive Committee (EC) composed of 14 members, which is Chaired by Minister of Agriculture and Cooperatives (MoAC). An Executive Director (ED) whose serving period as specified by the Act is four years heads its Secretariat. The Minister through Cabinet approval appoints the ED. The Secretary of MoAC is the Vice- Chairperson and the ED is the member-secretary. The members include four representatives of farmers, three private dairy entrepreneurs, General Manager of the DDC, Representative of Federation of the Nepalese Chamber of Commerce and Industries (FNCCI), Director General of Department of Livestock Services, and Joint Secretary of the Ministry of Finance.

Department of Livestock Services (DLS) and District Livestock Service Offices (DLSOs): DLS aims to contribute to poverty reduction in the country through livestock development by improving living standard of the people through sustainable livestock development. DLS strives to develop livestock sector by diversification and commercialization as an income generating and prosperous farming. It functions through DLSOs established in all 75 districts (now 77) of the country.

Dairy Development Corporation (DDC): It is the pioneer public sector dairy entity. It was created in July 1969 under the Corporation Act of 1964. Its major objectives are to:

- Provide a guaranteed market for milk to the rural farmers with fair price
- Supply pasteurized milk and milk products to urban consumers
- Develop organized milk collection system to meet increasing demand for pasteurized milk and milk products
- Develop an organized marketing system for milk and milk products in urban areas

A Board of Directors appointed by the GoN governs DDC. The General Manager or the Executive Chairperson is also appointed by the Government. Currently, DDC operates six Milk Supply Schemes (MSS) and a Milk Products Production and Supply Scheme (MPPSS). DDC's milk collection network exists in 31 districts.

Dairy Cooperatives: The dairy cooperatives became more effective only after December 1981, when DDC initiated the milk producers oriented program by encouraging the farmers to form their own Milk Producers' Associations (MPAs) along the lines of cooperative principles. The MPAs are operated under the by-laws prepared by DDC. The MPAs had no formal legal status and they operated as single purpose primary cooperatives with milk trade and support to milk production as their main activities. There are more than 1,700 such primary Milk Producers' Cooperatives (MPCs), around 36 District Unions and one Central Dairy Cooperatives Association Nepal (CDCAN).

Chilling Centers: There are about 55 milk chilling centers (MCCs) in large capacity in Nepal. But, many small dairy cooperatives have installed numbers of chilling vat sized varies from 300 liter to 1000 liter.

Milk processors: Involvement of private sector in dairy development began in 1998. There are two associations of private sector led dairy industries; Nepal Dairy Association and Dairy Industry Association. About 2,000 milk processors (cottage, small, medium and large) are reported to have been functioning at present with daily milk processing capacity of 50,000 liter (maximum) and 1,000 liter (minimum). Majority of these processors process 1,000 to 5,000 liters of milk per day.

## **2.4 Reflections from Past Studies on Costs of Milk Production**

As mentioned above the NDDB as an apex body in dairy sector development in Nepal undertakes or outsources study on cost of milk production on regular basis and forwards the findings with recommendations to the MoALD for necessary action and to DDC. The DDC, in turn, examines the consumer price, compared with production cost and forward the opinion to MoALD for approval. MoALD evaluates these reports and fixes the producers and consumer's price. The results of two such studies conducted in the interval of four years are presented below (Table 2.2).

Table 2.2: Results of Past Studies on Cost of Milk Production

Particulars	Results of Studies Conducted in	
	2014*	2018**
Household having improved milking cows (%)	58.80	
Households having improved milking buffalos (%)	26.18	
Average productivity of milk (liter/day)	8.67	
Productivity of milk production : cow (liter/day)	11.37	
Productivity of milk production : buffalo (liter/day)	5.97	
Average lactation period (Days)	325	
Average lactation period: cow (Days)	300	
Average lactation period: Buffalo (Days)	350	
Share of feed cost in total milk production variable costs (%)	57.6	60.97
Average cost of milk production per liter (Rs.)	34.92	
Average cost of milk production per liter :cow's milk (Rs.)	33.62	48.55
Average cost of milk production per liter: Buffalo milk (Rs.)	38.19	
Milk sold to Milk Producers' Cooperatives (% of total)	63.11	
Net profit per liter of milk (Rs.)	1.18	

\* *Final Report on Study on Cost of Milk Production*; Nepal Environment Protection Center, Kathmandu, Nepal, 2014 \*\**Study on Cost of Milk Production in Nepal*; National Dairy Development Board, Kathmandu, Nepal, 2018,

## CHAPTER III STUDY RESULTS

### 3.1 RESULTS OF FARM HOUSEHOLD SURVEY

#### Socio economic profile of milk producing households

The milk producers randomly sampled from the lists of farmers involved in commercial production of milk in nine milk producing pockets of three sampled districts (Surkhet, Nawalpur and Kavre) furnished all relevant information pertaining to production and marketing of milk. They were approached by the surveyors to administer structured questionnaires prepared in Nepali (Annex 1).

Ethnic distribution of respondents suggests dominance of Brahmin/*Chhetries* with 60% share. Notably, *Dalits* and *Janjaties* as considered deprived communities in Nepal were also reported to have been involved in commercial production of milk in three locations; two in Surkhet and one in Kavre (Table 3.1).

Table 3.1 Distribution of milk producing households by major ethnicity

District/ Local bodies	Ethnicity				Total
	Brahmin/ Chhetries	<i>Janjaties</i>	<i>Dalits</i>	Other minorities	
<b>Surkhet: district total</b>	<b>50</b>	<b>30</b>	<b>20</b>	<b>0</b>	<b>100</b>
Bheriganga municipality	30	15	5	0	50
Barahtal rural municipality	20	15	15	0	50
<b>Nawalpur: district total</b>	<b>70</b>	<b>30</b>	<b>0</b>		<b>100</b>
Gaidakot municipality	18	7	0	0	25
Devchuli municipality	21	4	0	0	25
Kawasoti municipality	19	6	0	0	25
Hupsekot rural municipality	12	13	0	0	25
<b>Kavre : District total</b>	<b>54</b>	<b>38</b>	<b>8</b>		<b>100</b>
Dhulikhel municipality	25	0	0	0	25
Panchkhal municipality	11	6	8	0	25
Mandan Deupur municipality	18	32	0	0	50
<b>Total (three districts)</b>	<b>174</b>	<b>98</b>	<b>28</b>	<b>0</b>	<b>300</b>

From Ilam, involvement of all ethnic communities in milk production and its trade was reported while in Bardiya *Tharus* were reported to have been involved in producing Buffalo milk and *janajaties* and Brahmins in producing dominantly cow milk.

Recent trends in Nepal shows dairy development activities in rural geographic setting in municipalities as potential buyers (collection centers, chilling centers, consumers) of milk reside in urban areas. Milk producers including milk producing farm houses and small holder farmers undertake their activities in small piece of land available in the periphery of urban centers.

Consistent with the existing situation, the sampled farming households producing milk were found to own small land holdings. The large proportion of sampled households in Surkhet and Kavre districts in the hills were found to have less than two *ropanies* of land. Likewise, 78 households out of 100 had less than two *bighas* of land in Nawalpur; a terai district (Table 3.2).

Table 3.2 Distribution of milk producing households by land holding

District/ Local bodies	Unit	Number of HHs				
		Having land holding			Registered as farm	Not Registered
		<1.0	1.0< 2.0	≥2		
<b>Surkhet: district total</b>		<b>5</b>	<b>60</b>	<b>35</b>	<b>0</b>	<b>100</b>
Bheriganga municipality	<i>Ropani</i>	5	30	15	0	50
Barahtal rural municipality	<i>Ropani</i>	0	30	20	0	50
<b>Nawalpur: district total</b>		<b>35</b>	<b>43</b>	<b>22</b>	<b>0</b>	<b>100</b>
Gaidakot municipality	<i>Bigha</i>	13	7	5	0	25
Devchuli municipality	<i>Bigha</i>	9	9	7	0	25
Kawasoti municipality	<i>Bigha</i>	7	11	7	0	25
Hupsekot rural municipality	<i>Bigha</i>	6	16	3	0	25
<b>Kavre : district total</b>		<b>1</b>	<b>55</b>	<b>44</b>	<b>0</b>	<b>100</b>
Dhulikhel municipality	<i>Ropani</i>	1	10	14	0	25
Panchkhal municipality	<i>Ropani</i>	0	15	10	0	25
Mandan Deupur municipality	<i>Ropani</i>	0	30	20	0	50
<b>Total (three districts)</b>		<b>41</b>	<b>158</b>	<b>101</b>	<b>0</b>	<b>300</b>

Note: 1 Hectare = 1.67 *Bigha*; 1 Hectare =20 *Ropanies*

Reports from Ilam and Bardiya districts also substantiated dominance of small farm size holding farming households in producing milk and its marketing for cash income.

### Number of milking animals and milk production

The number of cattle and buffalo per farming household in study locations was found to be 3.73 (Table 3.3) which is slightly higher than the national average of around two per household. However, number of milking cows and buffalo combined together was found to be 1.1 per household; 256 milking cows and 87 milking buffalos.

Table 3.3 Number of milking cows and buffalo in study areas

District/ Local bodies	Number of					Number of milking	
	Cows		Buffalo		Total	Cows	Buffalo
	Jersey	Others	Murra	Others			
<b>Surkhet : district total</b>	<b>250</b>	<b>25</b>	<b>60</b>	<b>10</b>	<b>345</b>	<b>60</b>	<b>50</b>
Bheriganga municipality	125	15	30	10	345	40	20
Barahtal rural municipality	125	10	30	0	0	20	30
<b>Nawalpur: district total</b>	<b>421</b>	<b>0</b>	<b>75</b>	<b>0</b>	<b>496</b>	<b>100</b>	<b>26</b>
Gaidakot municipality	135	0	28	0	163	25	9
Devchuli municipality	84	0	13	0	97	25	6
Kawasoti municipality	97	0	11	0	108	25	4
Hupsekot rural municipality	105	0	23	0	128	25	7
<b>Kavre : district total</b>	<b>278</b>	<b>66</b>	<b>18</b>	<b>16</b>	<b>378</b>	<b>96</b>	<b>11</b>
Dhulikhel municipality	119	0	7	3	129	24	5
Panchkhal municipality	51	20	0	6	77	25	3
Mandan Deupur municipality	108	46	11	7	172	47	3
<b>Total (three districts)</b>	<b>949</b>	<b>91</b>	<b>53</b>	<b>26</b>	<b>1119</b>	<b>256</b>	<b>87</b>

On average total milking months of animals in study locations are estimated to be 314 days. Milking period (337.5 days) of buffalos considerably outnumber those of cattle/cows (291 days). It was also reported that milk production per milking buffalo and cow is higher during first two months of lactation that gradually decreases in latter months (Table 3.4).

Slight variations in milk production per day per milking cow and buffalo are reported across five districts (Surkhet, Nawalpur, Kavre, Ilam and Bardiya) covered for the study (Table 3.4). On an average, however, 9.73 liters of milk is produced per day per milking animal. Milk production of cows (11.40 liter/day) is considerably higher than that of buffalo (7.44 liters per day).

Table 3.4 Milk production of cows and buffalo by months

Types of milk	Daily Milk Production (Liter)			Total Milking Months	Average Milk Production (Liter/Day)
	1 <sup>st</sup> 2 months	2 to 6 months	Above 6 months		
<i>Cows</i>	11.60	11.00	10.80	9.70	11.40
<b>Surkhet : district total</b>	<b>11.75</b>	<b>11.50</b>	<b>11.00</b>	<b>10.00</b>	<b>11.00</b>
Bheriganga municipality	11.75	11.50	11.00	10.00	11.00
Barahtal rural municipality	12.0	11.75	10.80	10.0	11.00
<b>Nawalpur: : district total</b>	<b>11.0</b>	<b>11.15</b>	<b>11.0</b>	<b>9.50</b>	<b>10..80</b>
Gaidakot municipality	11.00	10.75	10.00	9.50	10.50
Devchuli municipality	11.00	10.80	10.25	9.50	10.50
Kawasoti municipality	11.00	10.00	10.50	9.50	10.75
Hupsekot rural municipality	11.00	10.75	10.50	9.50	10.25
<b>Kavre: : district total</b>	<b>11.70</b>	<b>10.70</b>	<b>10.30</b>	<b>9.50</b>	<b>10.70</b>
Dhulikhel municipality	11.80	10.90	10.00	9.50	11.70
Panchkhal municipality	11.70	10.70	10.50	9.50	11.00
<b>Ilam</b>	-	-	-	-	<b>12.50</b>
<b>Bardiya</b>	-	-	-	-	<b>12.00</b>
<i>-Buffalo</i>	7.25	7.00	6.75	11.25	7.44
<b>Surkhet : district total</b>	<b>7.00</b>	<b>6.75</b>	<b>6.0</b>	<b>11.00</b>	<b>6.50</b>
Bheriganga municipality	7.00	6.75	6.0	11.00	6.50
Barahtal rural municipality	7.00	6.75	6.0	11.00	6.50
<b>Nawalpur: : district total</b>	<b>7.00</b>	<b>6.75</b>	<b>6.50</b>	<b>10.8</b>	<b>6.60</b>
Gaidakot municipality	7.00	6.50	6.25	11.00	6.58
Devchuli municipality	6.75	6.50	6.25	10.75	6.50
Kawasoti municipality	6.80	6.80	6.50	10.80	6.70
Hupsekot rural municipality	7.00	6.50	6.25	10.80	6.58
<b>Kavre : district total</b>	<b>7.00</b>	<b>7.00</b>	<b>6.75</b>	<b>10.75</b>	<b>6.60</b>
Dhulikhel municipality	7.00	6.50	6.25	10.80	6.70
Panchkhal municipality	7.25	6.50	6.25	10.75	6.60
Mandan Deupur municipality	6.50	6.80	6.50	10.80	6.50
<b>Ilam</b>	-	-	-	-	<b>8.50</b>
<b>Bardiya</b>	-	-	-	-	<b>9.00</b>
<i>Average (cow +buffalo)</i>	-	-	-	-	<b>9.42</b>

The study revealed that in all sample farming households in all study location milk was produced for both home consumption and sale. A large proportion of 4,418 (89.6%) of the total daily milk produced (4,929 liters) was reported to have been marketed; the remaining amount of milk (10.4%) was consumed at home (Table 3.5). Farmers in all study locations stated that they produce and sell large quantity of milk during *Zestha to Kartik* (May 16-November 15) as compared to those during *Mangsir to Baisakh* (November 16-May 15).

Table 3.5: Quantity of milk consumed at home and sold

District/ Local bodies	Milk (Liter/Per Day)		
	Consumed at home	Sold in the market	Total
<b>Surkhet : district total</b>	<b>180</b>	<b>1,800</b>	<b>1,980</b>
Bheriganga municipality	100	9,00	1,000
Barahtal rural municipality	80	900	980
<b>Nawalpur: district total</b>	<b>193</b>	<b>1,730</b>	<b>1,923</b>
Gaidakot municipality	48	724	772
Devchuli municipality	52	284	336
Kawasoti municipality	46	327	373
Hupsekot rural municipality	47	395	442
<b>Kavre : district total</b>	<b>138</b>	<b>888</b>	<b>1,026</b>
Dhulikhel municipality	49	398	447
Panchkhal municipality	31	182	213
Mandan Deupur municipality	58	308	366
<b>Total (three districts)</b>	<b>511</b>	<b>4,418</b>	<b>4,929</b>

#### Sale of milk and marketing channels

In an attempt to indicate volume of milk marketed in the study locations; the milk producer were asked to figure out how much they sold their milk-produce during last 12 months. About 599,000 liters of milk was found to have been sold in the market (Table 3.6). All 300 milk producers said that over 95% of their milk was sold to milk producers' Cooperatives last year. Remaining 5% reported to have sold their milk to neighbors and local tea stall/restaurants.

The farmers expressed their feelings that milk producers; Cooperatives are preferred because they serve as ensured market, pay reasonable price and, above all, provide technical supports when needed and work for the cause of milk producers. The selling price of buffalo milk (Rs.71.53/liter) was found to be much higher than that of cow's milk (Rs. 54.20/liter) as shown in Table 3.6. Combined selling prices of both stands at Rs.62.86.

Table 3.6: Total quantity of milk sold last year and selling prices

District/ Local bodies	Milk Sold (Liter)	Selling Price (Rs. Per liter)					
		Cow-milk			Buffalo-milk		
		Min.	Max.	Average	Min.	Max.	Average
<b>Surkhet : district total</b>	<b>150,000</b>	<b>55.00</b>	<b>65.00</b>	<b>60.00</b>	<b>65.00</b>	<b>75.00</b>	<b>70.0</b>
Bheriganga municipality	160,000	55.00	70.00	55.00	75.00	70.00	65.0
Barahtal rural municipality	140,000	55.00	60.00	55.00	60.00	80.0	75.0
<b>Nawalpur: district total</b>	<b>234,000</b>	<b>55.00</b>	<b>60.00</b>	<b>57.50</b>	<b>67.50</b>	<b>75.00</b>	<b>71.25</b>
Gaidakot municipality	62,500	60.00	65.00	62.50	70.00	75.00	72.50
Devchuli municipality	48,000	50.00	55.00	52.50	65.00	75.00	70.00
Kawasoti municipality	52,500	50.00	55.00	52.50	65.00	75.00	70.00
Hupsekot rural municipality	71,000	60.00	65.00	62.50	70.00	75.00	72.50
<b>Kavre : district total</b>	<b>215,000</b>	<b>59.33</b>	<b>77.67</b>	<b>68.50</b>	<b>89.17</b>	<b>101.67</b>	<b>95.42</b>
Dhulikhel municipality	70,000	43.00	48.00	45.50	65.00	70.00	67.50
Panchkhal municipality	75,000	40.00	60.00	50.00	70.00	90.00	80.00
Mandan Deupur municipality	70,000	40.00	65.00	52.50	65.00	70.00	67.50
<b>Ilam</b>	-	-	-	<b>50.00</b>	-	-	<b>65.00</b>
<b>Bardiya</b>	-	-	-	<b>45.00</b>	-	-	<b>75.00</b>
Average (five districts)	-	-	-	54.20	-	-	71.53
<b>Both combined</b>					<b>Rs. 62.86</b>		

### Costs of milk production

Assessment of costs to produce one unit (liter) of milk is crucial component of this study. The milk producing farmers do not have proper record of the expenses they incur to produce milk from their cows or buffalos. They need to incur fixed costs such as construction of sheds, purchase of milking cows/buffalos, utensils, land etc. Similarly, they have to incur lots of expenses as known as variable costs such as costs incurred on paying interest on loan, premium on animal insurance, expenses on water, electricity, animal feeds, fodder, grass, wages for the hired labor as well as medicines, nutrients and technical assistance extended by veterinary professionals.

In the present study the cost of milk production per liter is estimated on the basis of variable costs incurred across the study locations by 300 farmers in all three districts. The variable costs does not include interest on bank loan as no one has taken loan from formal financial institutions

and premium on animal insurance as no one yet has benefited from premium highly subsidized by the government.

With slight variations across five districts and nine study locations, the average cost of producing one liter of milk is estimated to be Rs. 53.03 (Table 3.7). Expenses on animal feeds including grass constitutes highest share (over 75%) in total variable costs.

Table 3.7: Costs of milk production per liter

<b>District/ Local bodies</b>	<b>Total Fixed Costs</b>	<b>Total Variable Costs (Rs.)</b>	<b>Cost Per Liter (Rs.) of Milk against variable costs</b>
<b>Surkhet : district total</b>	<b>2,900,000</b>	<b>35,438,040</b>	<b>56.93</b>
Bheriganga municipality	1,500,000	20,033,200	63.72
Barahtal rural municipality	1,400,000	17,232,320	55.93
<b>Nawalpur: distriket total</b>	<b>3,248,883</b>	<b>31,506,760</b>	<b>52.11</b>
Gaidakot municipality	Not availble	14,059,664	57.93
Devchuli municipality	2,843,300	6,119,232	57.93.00
Kawasoti municipality	3,150,000	6,910,198	58.92
Hupsekot rural municipality	3,753,350	7,910,916	56.93.00
<b>Kavre : District total</b>	<b>3,729,667</b>	<b>18,749,945</b>	<b>58.13</b>
Dhulikhel municipality	4,092,900	8,140,764	57.93
Panchkhal municipality	2,447,800	3,852,403	57.53
Mandan Deupur municipality	4,648,300	6,780,516	58.92
<b>Ilam district</b>	-	-	<b>48.00</b>
<b>Bardiya district</b>	-	-	<b>50.00</b>
<b>Average five districts</b>			<b>53.03</b>

#### Income from the sale of milk and milk products

The income of the farmers is essentially derived from the sale of milk; differences between selling price of milk per liter and cost to produce. They were found to have earned Rs. 18.0 per liter of milk. Other items of milk-based products such as ghee, butter, cheese; calves, buffaloes, straw and manure etc. are also farmers' sources of income. However, despite provisions for such information in the questionnaires, the sample farmers did not mention any of these as their sources of income.

### Milk pricing system and payment schedule

Almost all respondents (milk producers) in all sturdy locations suggested using both FAT and SNF systems in fixing the price of milk. Similarly, 75% of the milk producers opted for fortnightly payment system from the Cooperatives. However, 25% felt comfortable in having payment on monthly basis.

### Milk producers on problems and ways to increase milk production and sale

As depicted in Table 3.8, the farmers have expressed a number of problems they are facing in producing milk and marketing. With differing priorities, the farmers opted to mention increasing cost of feeds, grass, shed management and technical assistance as one of the problems they confront with.

Table 3.8: Types of problems being faced by milk producers in rearing cows/buffalos

Problems	Number of Responses of Milk Producers				
	Priority 1	Priority 2	Priority 3	Priority 4	Total
High cost of feeds	100	75	50	75	300
High interest rate on loan and difficult loan payment schedule	150	50	50	50	300
Grass not available in required quantity and when needed	150	25	75	50	300
Small/inadequate animal sheds	75	25	100	100	300
Private sector veterinary services are expensive, government-services not always available	100	50	50	100	300

Similarly, majority of the farmers expressed increasing transportation costs, increasing costs of veterinary service, lack of bank loan on subsidized interest rates and milk prices not adjusted with costs as the main obstacles in the expansion/up scaling of milk production in the study locations (Table 3.9).

Table 3.9: Types of problems being faced by milk producers for marketing milk and milk products

Problems	Number of Responses of Milk Producers				
	Priority 1	Priority 2	Priority 3	Priority 4	Total
High transportation cost in bringing feeds and transporting milk	50	100	75	75	300
Milk prices not adjusted as per increasing transportation cost	125	75	50	50	300
During rainy season sellers of feeds and buyers of milk are difficult persons to reach	50	50	100	100	300
Inactive milk producers' Cooperatives	75	25	100	100	300

The milk producers appeared to have clear vision on how to increase milk production (Table 3.10). They suggested the following measures in this regard:

- Opening of new collection centers/ cooperatives
- Opening of new chilling centers
- Improving veterinary services
- Reasonable prices of paddy and grass seeds
- Active role of Milk Producer's Cooperatives

Table 3.10: Milk producers' perceptions of possible measures to increase milk production

District	Number of responses				Total
	Opening of new collection centers/ cooperatives	Opening of new chilling centers	Improving veterinary services	Reasonable prices of paddy and grass seeds	
Surkhet	50	20	20	10	100
Nawalpur	25	35	20	20	100
Kavre	30	30	20	20	100
Total (three districts)	105	85	60	50	300

## 2.2 RESULTS OF KII

### Prevailing wage rates

Although, the farmers during household survey were not very vocal on cost of hiring labor, the key informants furnished information about daily wage rates; surprisingly much lower for women (Rs.1,000 maximum) as compared to their male counterparts (Table 3.11).

Table 3.11: Daily wage rates of females and males (KII results)

District	Female		Male	
	Minimum (Rs.)	Maximum (Rs.)	Minimum (Rs.)	Maximum (Rs.)
Surkhet	750	800	850	900
Nawalpur	800	900	800	1,000
Kavre	800	1,000	1,000	1,200

### Price of milking cow and buffalo

KII was also designed to generate information on prices of local and improved cows and buffalos across the districts and study locations. Prices of improved cows and buffalos are reported to be much higher than those of local varieties (Table 3.12).

Table 3.12: Purchasing price of milking cow and buffalo (KII results)

District	Cow			Buffalo		
	Breed	Minimum Cost	Maximum Cost (Rs.)	Breed	Minimum Cost	Maximum Cost (Rs.)
Surkhet	Local	30,000	40,000	Local	60,000	62,000
	Jursy	57,000	62,000	Murra Cross	65,000	80,000
	Holystone	00	00	Murra	85,000	95,000
Nawalpur	Local	30,000	35,000	Local	55,000	65,000
	Jursy	55,000	65,000	Murra Cross	65,000	85,000
	Holystone	70,000	85,000	Murra	85,000	100,000
Kavre	Local	45,000	55,000	Local	65,000	80,000
	Jursy	60,000	70,000	Murra cross	90,000	100,000
	Holystone	00	00	Murra	0.0	0.0

### Selling price of cows and buffalo after milking period

The stakeholders of KIIs also suggested prevailing prices available for the sale of calf after milking period; it ranges from the lowest of Rs.8,000 for calf of buffalo male to the highest Rs. 22,000 for the female calf of buffalo.

Table 3.13: Selling price cows and buffalo after milking period (KII results)

District	Cow			Buffalo		
	Type/sex	Minimum Cost	Maximum Cost (Rs.)	Type/sex	Minimum Cost	Maximum Cost (Rs.)
Surkhet	Calf (Male)	10,000	17,000	Calf (Male)	12,000	15,000
	Calf (Female)	15,000	18,000	Calf (Female)	17,000	22,000
Nawalpur	Calf (Male)	11,000	15,000	Calf (Male)	10,000	15,000
	Calf (Female)	13,000	15,000	Calf (Female)	15,000	20,000
Kavre	Calf (Male)	10,000	20,000	Calf (Male)	8,000	12,000
	Calf (Female)	12,000	15,000	Calf (Female)	10,000	15,000

#### Availability of grass and fodder

It was reported that improved grass (local corn) available during (May 16-November 15); local Jai during May 16-November 15) and local grass during November 16- May 15.

#### Costs of grass, feeds and shed construction

The respondents of KIIs were able to furnish prices of grass, feeds, *choker*, grass and straw that constitute variable costs. They also provided information on costs required to construct a comfortable/suitable sheds (Table 3.14).

Table 3.14: Costs of improved/modern grass, feed and construction of sheds (KII results)

District	Estimated Cost P Per Kg.					Cost (Per Sq. Ft.) of shed construction	
	Grass	Feed	Chokar	Grass	Straw	Minimum	Maximum
Surkhet	900	38	36	30	30	300,000	350,000
Nawalpur	1,000	40	40	25	45	350,000	450,000
Kavre	500	45	45	30	35	100,000	150,000

#### Selling price of milk

The selling prices of cattle milk and buffalo milk furnished by KII respondents slightly differ from those expressed by milk producing farmers sampled in the sampled locations in all study districts.

Table 3.15: Selling price of milk per liter (KII results)

District	Cow's milk selling price (Rs./liter)			Buffalo milk Selling Price of Milk (Rs. Per Liter)		
	Minimum	Maximum	Average	Minimum	Maximum	Average
Surkhet	20.00	21.00	20.25	45.00	52.00	51.00
Nawalpur	16.00	18.00	17.00	45.00	52.00	48.50
Kavre	16.00	18.00	17.00	45.00	52.00	48.50

### 2.3 RESULTS OF FGDs

The participants of three events of FGDs conducted in three sample districts were enthusiastic in expressing various issues concerning production of cattle/cow and buffalo milk. The suggestions they expressed on how to upgrade/up-scale dairy development in the study locations were similar to those expressed by respondents of KIIs.

#### Prevailing wage rates

Prevailing daily wage rates suggested by FGD participants are similar to those indicated by KII respondents and reconfirm lower wage rates for women against their male counterparts. Such wage differentials between women and men were reported to prevail in all study locations (Table 3.16).

Table 3.16: Daily wage rates of females and males (FGD results)

District	Female		Male	
	Minimum (Rs.)	Maximum (Rs.)	Minimum (Rs.)	Maximum (Rs.)
Surkhet	900	1,100		
Nawalpur	900	950	850	950
Kavre	800	1,000	1,000	1,100

#### Price of milking cow and buffalo

Table 3.17: Purchasing price of milking cow and buffalo (FGD results)

District	Cow			Buffalo		
	Breed	Minimum Cost	Maximum Cost (Rs.)	Breed	Minimum Cost	Maximum Cost (Rs.)
Surkhet	Local	35,000	40,000	Local	60,000	65,000
	Jursy	60,000	65,000	Murra Cross Local	70,000	85,000
	Holystone	00	00	Murra	80,000	95,000
Nawalpur	Local	30,000	35,000	Local	55,000	70,000
	Jursy	55,000	65,000	Murra Cross Local	65,000	85,000

	Holystone	70,000	85,000	Murra	85,000	90,000
Kavre	Local	45,000	55,000	Local	65,000	80,000
	Jursy	60,000	70,000	Murra	90,000	1000,00

#### Selling price of cows and buffalo after milking period

Management of animals after milking period has been a problem for the milk producers.. They have to incur costs to feed them without getting any cash benefit from them. However, female calves are assets as they are potential for milking. Male buffalo calves are potential for meat production. Male cow and buffalo calves are potentials for agricultural activities i.e. plow the farm land. All these considerations fetches considerable amount from the sale of male and female calves of cow and buffalo.

Table 3.18: Selling price of cows and buffalo after milking period (FGD results)

District	Cow			Buffalo		
	Type/sex	Minimum Cost	Maximum Cost (Rs.)	Type/sex	Minimum Cost	Maximum Cost (Rs.)
Surkhet	Calf (Male)	11,000	14,000	Calf (Male)	12,000	15,000
	Calf (Female)	10,000	18,000	Calf (Female)	14,000	18,000
Nawalpur	Calf (Male)	0	0	Calf (Male)	10,000	1,5000
	Calf (Female)	10,000	15,000	Calf (Female)	15,000	20,000
Kavre	Calf (Male)	10,000	20,000	Calf (Male)	8,000	12,000
	Calf (Female)	8,000	15,000	Calf (Female)	10,000	15,000

The discussions during FGD sessions also thrashed out issues related to availability/use of grass, fodder and other animal feeds, costs the milk producers have to incur on grass, feeds and shed construction. In general, the discussions are reported to have resembled with those expressed by the KII respondents as outlined above.

## **CHAPTER IV**

### **SUMMARY OF FINDINGS AND RECOMMENDATIONS**

#### **4.1 Summary of findings**

The results of the study and associated analysis presented in this report are derived from the information generated from nine project locations (seven municipalities and two rural municipalities) selected from three districts (Surkhet, Nawalpur and Kavre) and key information collected through telephonic conversations from two districts (Ilam and Bardiya) where field visits were not conducted due to outbreak of Corona virus (refer to Methodology). Household surveys were conducted in 300 sample households involved in the production of milk and their marketing that was followed by KIIs with 26 key stakeholders and three events of FGDs consisting of 33 respondents concerned with milk production in project locations either as producers or consumers of milk of cows and buffalos.

The study has revealed observable variations in daily milk production, its sale, selling prices and cost of milk across the districts and palikas within the district. Variations are also observed in all these indicators when comparing their relevance to cattle and buffalos. The study has come out with an estimation of costs to produce one unit (liter) of milk in the project locations. Average cost of milk production was Rs. 53.03 per liter with slight variations across the districts; in Surkhet it was Rs. 56.93, in Nawalpur Rs. 52.1, in Kavre Rs. 58.13, in Ilam 48.00 and in Bardiya Rs.50.00. This provides sound basis to fix minimum price per liter of cow milk and buffalo milk to be paid to milk producers at farm level.

Uncontrolled differences in the costs of feeds and other inputs, transport costs; scale of economy; use of types of milking cows and buffalos; management efficiency/deficiency can be contributed to the variations revealed by the study. Notably, low selling prices of milk and low cost of production in Ilam and Bardiyat as compared to those of three districts (Kavre, Nawalpur and Surkhet) can be contributed to lockdown imposed by the government in connection to Corona virus. Lock down led reduced demand for milk. There was more supply of milk than demanded. It also had implications on variable cost of producing milk as no imported/purchased feed was used and no technical assistance from private sector technical staff was sought as they were not available during the last three months of Corona virus spread.

#### **4.2 Recommendations**

Drawing upon the measures for improvement suggested by the sampled milk producers, respondents of KIIs and participants of FGDs and results of study, the following recommendations are made for the improvement/expansion of production and sale of milk:

- Price of milk to be paid to the milk producers/sellers should be increased to cover increasing cost and fair amount of profit
- Milk producers need training on construction/, management of health/suitable animal sheds and growing grass for fodder as well as keeping grass seeds properly
- Expansion/scaling up of commercial milk production seem to depend upon bank loan; the farmers are not yet able to manage investment out of their income/saving. Therefore, they should be provided bank loan on subsidized interest rates.
- Milk producing farmers were found interested to have animal insurance but felt that they were not aware of such facilities and procedures to follow. This calls for initiation for orientation program by the Milk Producers Cooperatives in consultation with local insurance companies and public sector livestock development entities.
- Fixing of price for purchasing milk from milk producers should not be limited to the cost of production incurred by them only; but should be based on value chain framework; extended up to processors and finally to the prices of milk paid by the consumers.

The respondents of sample milk producers' farming households, respondents of KIIs and participants of FGDs; by and large, opined that measures should be worked to reduce the cost of producing milk rather than increasing it prices. Anticipated economic slowdown as aftermath of Corona virus will have severe implications on people's purchasing power that will lead to reduced demand for milk as well. The following are some of the options to exercise in an effort to help milk producers to reduce costs/expense for producing milk.

- Government and large animal farms need to rationalize prices of milking cattle and buffalos; government needs to design cheapest possible shed construction with maximum use of local human and physical/kind resources.
- On fiscal measures, milk producers need to be provided with bank loan at subsidized interest rates; animal feeds at subsidized prices; reduction in import duties on animal feeds, medicines and other commodities.
- Costlier veterinary technical services provided by private sector technical personnel need to be replaced by cost free public sector technicians.
- NDDDB and other government agencies need to organize observation tours for small scale milk producers to provide them opportunities to learn how to achieve cost effectiveness and management efficiency in running dairy development activities
- On the part of milk producers, they need to be motivated to consolidate their land and other resources (sheds, equipments, utensils, vehicles etc.) and initiate joint management that will contribute to reduce costs of milk production.

# Annexes

# अधिकारका लागि पहुँच नेपाल, काठमाडौं

Study on "Cost of Milk Production in Nepal"

Questionnaire Number: .....

नमस्कार ! म यस क्षेत्रको दूध उत्पादनको मुल्य सम्बन्धी अध्ययनको लागि छलफल गर्न गैरहेको छु । यो अध्ययन राष्ट्रिय दुग्ध विकास बोर्डको सहयोगमा अधिकारका लागि पहुँच नेपालले गर्न लागि रहेको छ । यस क्षेत्रमा उत्पादित दूधको उचित मुल्य निर्धारणमा सरोकारवाला निकायलाई सहजीकरण होस् भन्नका लागि यो अध्ययन गरिएको छ ।

अब म केहि प्रश्नहरु तपाईंहरूसँग सोध्नेछु । यसबाट प्राप्त सुचना अध्ययनको नतिजा हाँसल गर्न मात्र प्रयोग हुनेछ । तपाईंहरुले दिनुभएको सूचना गोप्य राख्ने छौं । तसर्थ, सहि जवाफ दिएर अध्ययनलाई सफल बनाईदिनु होला ।

कृषक घरधुरी सर्वेक्षण प्रश्नावली

(तथ्यांक संकलन २०७६ फागुण)

क. सामान्य परिचय

१) कृषकको नाम

ठेगाना : प्रदेश नं.  जिल्ला  न.पा./उप म.न.पा./न.पा./गा.पा.

वडा नं.  टोल

२) फार्म भए: फर्मको नाम

दर्ता नं. र मिति  दर्ता भएको कार्यालय

सम्पर्क मोबाईल नं.

(३) तपाईंको जम्मा जमीन कति रोपनी/विघा छ ?

(क) खेत  रोपनी/विघा

(ख) पाखो  रोपनी/विघा

(४) कति जमिनमा घांस खेती गर्नु भएको छ ?  रोपनी/विघा

(५) गोठ/फार्मको प्रकार:  क्षेत्रफल

कच्ची  पक्की  अर्ध पक्की

(६) घांस खेतिका लागी जग्गा भाडामा लिएको भए, क्षेत्रफल  रोपनी/विघा वार्षिक भाडा रु

(७) कुन कुन घांस लगाउने गर्नु भएको छ

(८) तपाईंले कतिवटा गाई/भैसी पाल्नु भएको छ ?

(क) जम्मा गाई  दुहुना गाई  कोरली  जात

(ख) जम्मा भैसी  दुहुना भैसी  कोरली  जात

(ग) थारा गाई/भैसी (केही भए)

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

(९) तपाईंको गाई/भैंसीले एक दिनमा कति लिटर दूध दिन्छ ?

(क) गाई: पहिलो २ महिना  २ महिना देखि ६ महिना सम्म  ६ महिना देखि माथि  लि

(ख) भैंसी: पहिलो २ महिना  २ महिना देखि ६ महिना सम्म  ६ महिना देखि माथि  लि

(१०) सालाखाला व्यापछि कति महिना दुहुनु हुन्छ ?

गाईमा  महिना

भैंसीमा  महिना

(११) औषतमा एक पटक व्याएको कति समयमा अर्को पटक व्याउछ ?

गाई

भैंसी

(१२) तपाईंले उत्पादन गरेको दूध के गर्नुहुन्छ ?

(क) घरमा नै खाने (लिटर)  (ख) बेच्ने (लिटर)

(ग) अन्य (खुलाउनुहोस्)

(१३) तपाईंले गत साल कति लिटर दूध बेच्नु भयो ?  लिटर

(१४) कुन कुन महिनामा सबभन्दा बढि तथा कुन कुन महिनामा सबभन्दा कम दूध बेच्नुहुन्छ ?

बढि बेचिने महिनाहरु:

कम बेचिने महिनाहरु:

(१५) तपाईं दूध कहाँ बेच्नु हुन्छ ?

(क) स्थानीय चिया पसल/होटल

(ख) छिमेक

(ग) दुग्ध उत्पादक सहकारी संस्था

(घ) ग्वाला

(ङ) निजी डेरी

(च) अन्य (खुलाउनुहोस्)

(१६) तपाईंले दूध बेच्ने ठाउँसम्म पुऱ्याउन कति समय लाग्छ ?

(१७) तपाईं कति रुपैया लिटरमा दूध बेच्नुहुन्छ ? गाईको रु  भैंसीको रु

(१८) तपाईं कसलाई दूध बेचन रुचाउनुहुन्छ ? किन ?

(क) स्थानीय चिया पसल/होटल

(ख) छिमेक

(ग) दुग्ध उत्पादक सहकारी संस्था

(घ) घरघरमा लागि विक्री गर्ने व्यक्ति

(ङ) अन्य (खुलाउनुहोस्)

किन ?

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

(१९) सोभै उपभोक्तालाई विक्री गर्दा र सहकारीहरुमा विक्री गर्दा प्रति लिटर दुधको मुल्यमा कति फरक पर्छ ?

(२०) दूध वाहेक अन्य दुग्ध पदार्थहरु पनि विक्री गर्नुहुन्छ की ?

(क) यदि विक्री गर्ने भएमा

(ख) दुग्ध पदार्थ

(ग) वार्षिक विक्री परिमाण

(घ) विक्री बाट वार्षिक आय, रु

(२१) तपाईंले पशु लाई के के खुवाउनु हुन्छ ?

दाना प्रयोग गर्ने भए बजारको की ?  आफै बनाउने ?

आफै बनाउने भए, के के मिसाउनु हुन्छ ?

### ख. खर्च सम्बन्धि विवरण

#### १. पुँजीगत खर्च

क्र.स.	पुँजीगत विवरण	स्थापना वा खरीद साल	ईकाई मूल्य	जम्मा रु.
१	गोठ/फार्म निर्माण			
२	घाँस खेति (लिजमा भए)			
३	उपकरण तथा मेशीनरीहरु			
४	Milking machine			
५	Generator			
६	Milk can			
७	अन्य कुनै भए			
	(क)			
	(ख)			
	(ग)			
८	दूधालु गाई (संख्या.....)			
९	दूधालु भैसी (संख्या.....)			

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

१०	कुल स्थिर पुँजी			
११	ह्रास कट्टी			
१२	ऋण लिएको भए रकम र ब्याजदर			
१३	जम्मा ब्याज रकम			
	जम्मा			

### २. चालु खर्च:

क्र.स.	खर्च विवरण	एकाई	प्रति एकाई खर्च	मासिक खर्च	जम्मा वार्षिक	कैफियत
१	आहार खर्च					
	पराल					
	दाना					
	चोकर					
	पिठो					
	ढुटो					
	भिटाभिन, लवण					
	साईलेज					
	अन्य					
२	हरियो घाँस					
	घाँस उत्पादन खर्च					
	जोताई/सिंचाई					
	मल/बिउ					
	कटानी/ढुवानी					
३	औषधी उपचार					
	खोप					
	प्राविधिक					
	औषधि					

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

	अन्य					
४	प्रजनन खर्च					
	ए. आई					
	साढे/रागो					
	अन्य					
५	कामदार ज्याला					
६	पानी					
७	बिजुली					
८	जग्गाको भाडा (Lease) खर्च					
९	पशु विमा खर्च					
१०	अन्य सामग्री					
	बाल्टी, दाम्लो, सावेल आदि					
	ठेला गाडा					
	कुल संचालन खर्च					

#### ग. आम्दानी सम्बन्धी विवरण

#### उत्पादन

कूल मासिक दूध उत्पादन (लि.)  वार्षिक दूध उत्पादन (लि.)

कूल मासिक गोबर उत्पादन (केजी)  वार्षिक गोबर उत्पादन (केजी)

#### वार्षिक आम्दानी

क्र.स.	विवरण	ईकाई	कूल रकम रु.
१	विक्री योग्य दूध		
२	घर प्रयोजनको लागि खाएको दूध		
३	दुग्ध पदार्थ बिक्रि		
४	जम्मा दूध तथा दुग्ध पदार्थ बिक्रिबाट		

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

	पाएको मूल्य		
५	गोबर उत्पादन (के.जी.)		
६	गोबरको मूल्य		
७	पाडा/पाडी/बाच्छा/बाच्छी बिक्रि		
८	माउ/लैनो पशु बिक्री		
९	थारा पशु बिक्री		
जम्मा आम्दानी			

#### घ. अन्य विवरण

(१) दुधको मुल्य कसरी निर्धारण हुने गर्दछ ?

- (क) फ्याट/एस.एन.एफ दुवै  (ख) फ्याट मात्र   
 (ग) आपसी समजदारी  (घ) एस.एन.एफ मात्र

(२) दूधको रकम भुक्तानी प्रक्रिया

- क) दैनिक  ख) साप्ताहिक  ग) अर्धमासिक   
 घ) मासिक  ड) अन्य

(३) गाईभैसी पालनमा तपाइले भोग्नु परेका प्रमुख समस्याहरु (प्राथमिक क्रमको आधारमा)

१. <input style="width: 95%;" type="text"/>	३. <input style="width: 95%;" type="text"/>
२. <input style="width: 95%;" type="text"/>	४. <input style="width: 95%;" type="text"/>

(४) तपाईंको विचारमा खर्च कटाएर लगानीको कति प्रतिशत नाफा जोडी मुल्य पाउनु पर्छ ?

(५) तपाईंलाई के कस्तो सहयोग भएमा दुध उत्पादन बढ्छ जस्तो लागेकोछ?

- (क) नयाँ संकलन केन्द्र/सहकारी खोलेर   
 (ख) चिस्यान केन्द्र खोलेर   
 (ग) पशुलालन तथा पशु स्वास्थ्यमा सेवा थपेर   
 (घ) धान तथा घाँसको विउ सुलभ मुल्यमा वितरण गरेर   
 (ड) अन्य (खुलाउनुहोस्)

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

(६) दूध तथा दुग्ध पदार्थको बजार व्यवस्थापनमा भोग्न परेका प्रमुख समस्याहरु के के हुन् ?

१.	३.
२.	४.

(७) पशु पालन तथा दुग्ध व्यवसायको बिकास र बिस्तारका लागि के भए राम्रो होला ?

तथ्यांक उपलब्ध गराउनेको नाम:

सम्पर्क नं:

मिति .....

दस्तखत .....

तथ्यांक संकलकको नाम:

मिति .....

दस्तखत .....

तथ्याङ्क उपलब्ध गराई सहयोग गरिदिनुभएकोमा धन्यवाद ।

# अधिकारका लागि पहुँच नेपाल, काठमाडौं

## Study on "Cost of Milk Production in Nepal"

नमस्कार ! म यस क्षेत्रको दूध उत्पादनको मुल्य सम्बन्धी अध्ययनको लागि छलफल गर्न गैरहेको छु । यो अध्ययन राष्ट्रिय दुग्ध विकास बोर्डको सहयोगमा अधिकारका लागि पहुँच नेपालले गर्न लागि रहेको छ । यस क्षेत्रमा उत्पादित दूधको उचित मुल्य निर्धारणमा सरोकारवाला निकायलाई सहजीकरण होस् भन्नका लागि यो अध्ययन गरिएको छ ।

अब म केहि प्रश्नहरु तपाईंहरूसँग सोध्नेछु । यसबाट प्राप्त सुचना अध्ययनको नतिजा हाँसिल गर्न मात्र प्रयोग हुनेछ । तपाईंहरुले दिनुभएको सूचना गोप्य राख्ने छौं । तसर्थ, सहि जवाफ दिएर अध्ययनलाई सफल बनाईदिनु होला ।

दूध उत्पादन सम्बन्धी (Key Informant / अन्तरक्रिया)

(तथ्यांक संकलन २०७६ फागुण)

१. यस भेगमा श्रमिकको दैनिक ज्यालादर

महिला रु.  पुरुष रु.

२. हाल यस भेगमा दुध उत्पादनको लागि पालिएका गाई/भैंसीहरुको मुल्यको विवरण:

➤ पहिलो पल्ट व्याएको अवस्थामा भैंसीलाई पर्ने मोल रु (जात अनुसार) :

भैंसीको जात	मुल्य
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>

➤ भैंसीले दुध दिन छाडे पछि विक्री गर्दा पाउने मोल (हालको अवस्थामा) रु.

पाडाको विक्रि मुल्य रु.

पाडीको विक्रि मुल्य रु.

➤ पहिलो पल्ट व्याएको अवस्थामा गाईलाई हालको मुल्यमा पर्ने मोल (जात अनुसार).

गाइको जात	गाइको मुल्य
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>

➤ गाईले दुध दिन छाडे पछि विक्री गर्ने अवस्थामा विक्री मोल (हालको मूल्यमा) रु.

वाच्छाको विक्रि मुल्य रु.  वाच्छीको विक्रि मुल्य रु.

# अधिकारका लागि पहुँच नेपाल, काठमाडौं

## Study on "Cost of Milk Production in Nepal"

३. मल सम्बन्धी

गोठमा दैनिक कति मल तयार हुन्छ ? अनुमानित (के.जी.)

गाई  के.जी. भैसी  के.जी.

हाल मल विक्री गर्दाको प्रचलित मुल्य रु  के.जी./क्वी

४. यस क्षेत्रमा पाइने भूईं घांस, डाले घांस र कृषि उप-पदार्थहरूको विवरण

घास र डाले घांसको नाम	पाइने मौसम ( ✓ ) मार्क लगाउने		
	असार - असोज	कार्तिक - माघ	फागुण - जेठ
उन्नत भूईं घांस			
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स्थानीय खेतवारी, कान्जामा पाइने घांस			
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डाले घांस			
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पशुलाई खूवाउने कृषिजन्य उप-पदार्थहरू			
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## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

५. उन्नत भूईँ घाँस उत्पादन गर्ने गरेको भए प्रायजसोले कति जमीनमा रोप्ने गरेको ?

रोपनि/कट्टा/विघा

सालाखाला भाडा रु

६. अनुमानित लागत (प्रति के.जी.)

क. दाना रु

ख. चोकर रु

ग. घाँस रु

घ. पराल रु

७. अनुमानित गोठ निर्माण लागत (प्रति स्क्वायर फिट )

८. ऋण लिदा चलनचल्तीको ब्याजदर

९. उत्पादित दूधको विक्री मुल्य

१०. दुध उत्पादक कृषकहरुको प्रमुख समस्याहरु:

११. समाधानका उपायहरु:

तथ्यांक उपलब्ध गराउनेको नाम/ठेगाना:

आवद्ध संस्थाको नाम र पद:

सम्पर्क नं:

मिति .....

दस्तखत .....

तथ्यांक संकलकको नाम:

मिति .....

दस्तखत .....

तथ्याङ्क उपलब्ध गराई सहयोग गरिदिनुभएकोमा धन्यवाद ।

## अधिकारका लागि पहुँच नेपाल, काठमाडौं

Study on "Cost of Milk Production in Nepal"

मुख्य सूचनादाताको सम्भावित व्यक्ति तथा क्षेत्रहरु निम्न अनुसार हुनसक्नेछन् ।

- जिल्ला पशु सेवा कार्यालयका प्रतिनिधि ।
- जिल्ला दुध उत्पादक सहकारी संथाका प्रतिनिधि ।
- दुग्ध विकास सस्थानका प्रतिनिधि ।
- निजी तथा सहकारी डेरीका प्रतिनिधि ।
- सक्रिय कृषक समुहका प्रतिनिधि ।
- गै.स.स प्रतिनिधि ।
- जे.टी/जे.टी.ए ।
- दुग्ध सहकारी वा अन्य सहकारीका प्रतिनिधि ।
- शिक्षक ।
- अगुवा महिला कार्यकर्ता ।

# अधिकारका लागि पहुँच नेपाल, काठमाडौं

## Study on "Cost of Milk Production in Nepal"

नमस्कार ! म यस क्षेत्रको दूध उत्पादनको मुल्य सम्बन्धी अध्ययनको लागि छलफल गर्न गैरहेको छु । यो अध्ययन राष्ट्रिय दुग्ध विकास बोर्डको सहयोगमा अधिकारका लागि पहुँच नेपालले गर्न लागि रहेको छ । यस क्षेत्रमा उत्पादित दूधको उचित मुल्य निर्धारणमा सरोकारवाला निकायलाई सहजीकरण होस् भन्नका लागि यो अध्ययन गरिएको छ ।

अब म केहि प्रश्नहरु तपाईंहरूसँग सोध्नेछु । यसबाट प्राप्त सुचना अध्ययनको नतिजा हाँसिल गर्न मात्र प्रयोग हुनेछ । तपाईंहरुले दिनुभएको सूचना गोप्य राख्ने छौं । तसर्थ, सहि जवाफ दिएर अध्ययनलाई सफल बनाईदिनु होला ।

लक्षित समुह छलफलका लागि प्रश्नावलीहरु

(तथ्यांक संकलन २०७६ फागुण)

१. यस भेगमा श्रमिकको दैनिक ज्यालादर कति छ ?

महिला रु.  पुरुष रु.

२. हाल यस भेगमा दुध उत्पादनको लागि पालिएका गाई/भैसीहरुको मुल्यको विवरणः

➤ पहिलो पल्ट व्याएको अवस्थामा भैसीलाई पर्ने मोल रु (जात अनुसार) :

भैसीको जात	मुल्य
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>

➤ भैसीले दुध दिन छाडे पछि विक्री गर्दा पाउने मोल (हालको अवस्थामा) रु.

पाडाको विक्रि मुल्य रु.

पाडीको विक्रि मुल्य रु.

➤ पहिलो पल्ट व्याएको अवस्थामा गाईलाई हालको मुल्यमा पर्ने मोल (जात अनुसार).

गाईको जात	गाईको मुल्य
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>
<input type="text"/>	रु. <input type="text"/>

➤ गाईले दूध दिन छाडे पछि विक्री गर्ने अवस्थामा विक्री मोल (हालको मूल्यमा) रु.

वाच्छाको विक्रि मुल्य रु.  वाच्छीको विक्रि मुल्य रु.

# अधिकारका लागि पहुँच नेपाल, काठमाडौं

## Study on "Cost of Milk Production in Nepal"

३. मल सम्बन्धी

गोठमा दैनिक कति मल तयार हुन्छ ? अनुमानित (के.जी.)

गाई  के.जी. भैसी  के.जी.

हाल मल विक्री गर्दाको प्रचलित मुल्य रु  के.जी./क्वी

४. यस क्षेत्रमा पाइने भूईं घांस, डाले घांस र कृषि उप-पदार्थहरूको विवरण

घास र डाले घांसको नाम	पाइने मौसम ( ✓ ) मार्क लगाउने		
	असार - असोज	कार्तिक - माघ	फागुण - जेठ
उन्नत भूईं घांस			
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स्थानीय खेतवारी, कान्लामा पाइने घांस			
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डाले घांस			
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पशुलाई खूवाउने कृषिजन्य उप-पदार्थहरू			
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## अधिकारका लागि पहुँच नेपाल, काठमाडौं

### Study on "Cost of Milk Production in Nepal"

५. उन्नत भूईं घांस उत्पादन गर्ने गरेको भए प्रायजसोले कति जमीनमा रोप्ने गरेको ?

रोपनि/कट्टा/विघा

सालाखाला भाडा रु

६. अनुमानित लागत (प्रति के.जी.)

क. दाना रु

ख. चोकर रु

ग. घांस रु

घ. पराल रु

७. अनुमानित गोठ निर्माण लागत (प्रति स्क्वायर फिट )

८. ऋण लिदा चलनचल्तीको ब्याजदर

९. उत्पादित दूधको विक्री मुल्य

१०. दुध उत्पादक कृषकहरूको प्रमुख समस्याहरु:

११. समाधानका उपायहरु:

उपस्थितहरूको हस्ताक्षर:

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तथ्यांक संकलकको नाम:

मिति .....

दस्तखत .....

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तथ्याङ्क उपलब्ध गराई सहयोग गरिदिनुभएकोमा धन्यवाद ।

**Annex - 5**  
**सर्भेक्षणसंग सम्बन्धि फोटोहरु**



गैडाकोट न.पा., नवलपरासीमा कृषकहरूसंग सर्भेक्षण फारम भर्दै सर्भेक्षणकर्ता प्रकाश भट्ट ।



गैडाकोट न.पा., नवलपरासीमा कृषकहरूसंग सर्भेक्षण फारम भर्दै सर्भेक्षणकर्ता टिका आले मगर ।



गैडाकोट न.पा., नवलपरासीमा कृषकहरुसंग सर्भेक्षण फारम भर्दै सर्भेक्षणकर्ता टिका आले मगर ।



देवचुली न.पा., नवलपुरमा कृषकहरुसंग सर्भेक्षण फारम भर्दै ।



देवचुलि, नवलपरासीमा कृषकहरूसंग सर्भेक्षण फारम भदैँ सर्भेक्षणकर्ता टिका आले मगर ।



कावासोतीको दुग्ध संकलन केन्द्र ।



केराघारी, धुलिखेलको दलदले दुग्ध सहकारी संस्था ।



मण्डन देउपुर, कुन्तावेशीमा रहेको कृषि उपज संकलन केन्द्रमा सर्भेक्षण गर्दै । (