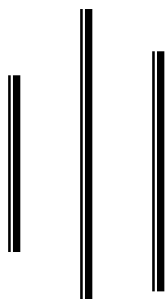


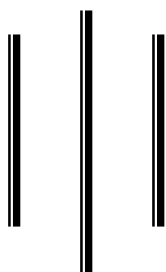
**INCOME GENERATION OF RURAL FARMERS  
THROUGH VEGETABLES AND FRUITS CO-  
OPERATIVES IN CHITWAN DISTRICT**



**A Thesis**

**Submitted in Partial Fulfillment of the  
Requirements**

**For the Awards of the Degree of Master of Arts  
In Rural Development**



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**November 2008**

# Recommendation Letter

This thesis entitled **“INCOME GENERATION OF RURAL FARMERS THROUGH VEGETABLES AND FRUITS CO-OPERATIVES IN CHITWAN DISTRICT”**, has been prepared by Youg Raj Osti under my supervision in partial fulfillment of the requirement for the Degree of Master of Arts in Rural Development at Tribhubal University. To my knowledge this work is his original and no part of this thesis is replication of other theses.

I forward this thesis for final evaluation and approval.

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Ratna Mani Nepal  
Thesis Supervisor  
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Date: .....

# Approval Letter

This thesis entitled **“INCOME GENERATION OF RURAL FARMERS THROUGH VEGETABLES AND FRUITS CO-OPERATIVES IN CHITWAN DISTRICT”**, submitted by Youg Raj Osti has been accepted in partial fulfillment of the requirements for the Degree of Master of Arts in Rural Development.

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## **Acknowledgement**

Research work is a time consuming and painstaking task, and never gets completed only by the efforts of a single individual. Multiplicity of actors should work on and off screen for its successful completion, and this work is no exception. So, I would like to take a moment to appreciate the most deserving guidance and supports here.

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Youg Raj Osti

November, 2008

## ***Abstract***

*The study was conducted to assess the role of the fruits and vegetable producers' cooperatives in the income generation of the rural farmers. The study primarily aimed to figure out the efforts that the cooperatives were making in marketing the product of the concerned farmers and the profit they had earned from the sale of their product by subtracting the expenditures. During the study sampled farmers and stakeholders were asked different questions in order to collect the information about the above mentioned concerns. Primary as well as secondary, both, type of methods were applied to collect the data. Primary method included closed ended and open-ended questionnaire, structured as well as unstructured interview schedules and field observation; and secondary data were collected from various publications, journals, research reports, minute books etc.*

*After the processing, data was analyzed by using the computers and through manual works. The study showed that fruits and vegetable cooperatives had not been helping the farmers much in marketing their products, which is a basic requirement for income generation: only one of the cooperatives had maintained its own collection center; none of them had been able to manage the chilling facility, and transportation facility. Only one of them had maintained sales depot; and only one of them had assigned sales agent in the market. Advertising had never been done; and quality control had occurred only on the desire and skill of the farmers themselves.*

*However, farmers had been able to earn some profit, out of the total samples 91.9% had been able to earn profit and only 8.1% of them had to bear loss. But the level of earning was very nominal; 32.3% of them earned only less than 25,000NRs or bore loss, and 45.2% earned only less than 50,000NRs.*

*In spite of these figures 51.6% of farmers were satisfied from the role of their cooperatives in their income generation. Out of remaining other, 9.7% said that they were normally satisfied, and another 9.7% said that they were not much satisfied from the role of their cooperatives. Number of those who said they were not satisfied was also considerable; it was 22.6% out of total respondents.*

*It seems that such cooperatives can be important tool of poverty reduction but conceptual and procedural training should be given to the stakeholders and farmers of the concerned cooperatives in order to familiarize them to the spirit and the principles of the cooperatives.*

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## **Acronyms/ Abbreviation**

BNP	:	Bharatpur Nagar Palika
CBS	:	Central Bureau of Statistics
CTC	:	Cooperative Training Centre
CCTC	:	Central Cooperative Training Centre
CTDO	:	Cooperative Training and Division Office
DAO	:	District Agricultural Office
DDC	:	District Development Committee
DEO	:	District Education Office
Fig	:	Figure
GO	:	Government Organization
Ha	:	Hector
ICA	:	International Cooperative Alliance
ICF	:	International Cooperative Federation
INGO	:	International Non Governmental Organization
Km	:	Kilometer
NCB	:	National Cooperative Board
NG	:	Nepal Government
NGO	:	Non Governmental Organization
NRs	:	Nepalese Rupees
RNP	:	Ratnanagar Nagar Palika
Sq. km	:	Square Kilometer
TU	:	Tribhuban University
US	:	United States
USDA	:	United States, Department of Agriculture
VDC	:	Village Development Committee



# CHAPTER I

## Introduction

### 1.1 Background of the Study

Cooperatives are one of the most effective tools of rural development. At the time when globalization is imposing horrible threat to the ordinary and ignorant people of village area, especially for those who are of low and medium income status, cooperatives enable them to organize the dispersed funds and make joint and meaningful investments. Cooperatives also help strengthen the local solidarity and develop local leadership jointly exposing them to the various adversities which market economy brings; in addition to several advantages, and making them able to reveal enormous underlying opportunities.

Cooperative is not the new concept in the context of Nepal. Dhikuri of Thakali community, Guthi of Newari community and Parma/ pareli existing in almost all of the farming communities of Nepal are the traditional and indigenous cooperatives of Nepal. As such, modern cooperatives were first established in Rapti valley Chitwan in 2013B.S. Bhakahnpur Credit Cooperative Committee (now Bakhanpur Cooperative Limited) is said to be the first cooperative of Nepal. Twelve more such organizations were established at that time.

After the establishment, cooperatives have gone through several metamorphoses in terms of name and concepts. Mushrooming growth took place in the cooperative organization after the restoration of multiparty system in 2046. Diversification of cooperatives, in fact, occurred only in this period. Revival of the democratic system opened the corridor for the development of production cooperatives. Now, many such cooperatives are in function through out the country.

There were altogether 359 cooperatives in Chitwan district by the fiscal year 2064/65BS. Out of them 93 were multipurpose cooperatives, 14 fruits and vegetable cooperatives and remaining 23 were operating with other objectives.

#### 1.1.1 High-value Crops for Small-scale Farmers

Fruit and vegetable production is usually lucrative compared to staple crops. Horticultural produce has high value-added and income generation potential, and due to a relative lack of economies of scale (compared to grain production and livestock) the production is attractive especially for small-scale farmers. The production of fruits and vegetables has a comparative advantage particularly under conditions where

arable land is scarce, labor is abundant and markets are accessible. Farmers engaged in the production of fruits and vegetables often earn higher net farm incomes than farmers that are engaged in the production of cereal crops alone. Studies from developing countries frequently show higher average net farm incomes per household member among horticultural producers. (Weinberger and Thomas, 2005)

### **1.1.2 Possibility of Fruits and Vegetable Production in Chitwan**

Fruits and vegetable production demands some favourable conditions like fertile soil with irrigation facility, good climatic condition, easy availability of transportation facility, availability of technical manpower and comfortable town hinterland linkage. Chitwan meets almost all of such criteria: fertile plain and tropical climate provide the favourable conditions for the growth of tropical fruits and vegetables; transportation facility can easily be used in this place as the landscape is plain; establishment of Institute of Agriculture and Animal Science (now university) in Rampur long ago has provided the enormous opportunity of technical expertise and researches; and situation of Narayangarh city in the district is another positive factor that encourages the effective rural urban interactions.

As a result many people are engaged in fruits and vegetables production in this area. A large part of product is sold to Kathmandu and some amount is consumed in Narayangarh. Narayangarh and Ratna Nagar are nearby towns to the local farmers. These town supply farm inputs and equipments to the farmers and also provide the market for the farm products. In addition to these big towns there are other small markets like Chanauli, Jayamangala, Kholesimal, Sharadanagar, Gitanagar, Patihani etc. which work as the bridge between these town and villages.

It had been long since farmers were engaged in fruits and vegetables production in Chitwan. But commercial production started when the demand of fruits and vegetables increased in capital city Kathmandu and local city Narayangarh before some years. As the profit and challenges increased in the production and marketing of such horticultural products farmers felt the need of organized efforts. As a result fruits and vegetables cooperatives were established in the district. Cooperatives of this type first established in Chitwan only after 2058BS, even though Chitwan is the place where cooperatives started for the first time in the history of Nepal.

Fruits and vegetables producers' cooperatives have been operating in several village development committees (VDC) and two municipalities of this district. However, the study has included only those cooperatives which are being conducted by fruits and vegetables farmers in the village development committee area, and especially those cooperatives which have passed at least six years of their functioning.

**Table 1.1**

**Name of the Fruits and Vegetable Producer's Cooperatives Operating in Chitwan District along with their Location and Date of Establishments:**

<b>S.N</b>	<b>Name of the Cooperatives</b>	<b>Address by VDC/ Municipality</b>	<b>Date of Establishment</b>
1	Puspanjali Taja Tarkari Tatha Falful Sahakari	Ratna Nagar Municipality	2058/11/3
2	Gramin Taja Tarkari Tatha Falful Sahakari	Chainpur VDC	2058/11/5
3	Ratnanagar Taja Tarkari Tatha Falful Sahakari	Ratna Nagar Municipality	2058/11/8
4	Ganeshwor Taja Tarkari Tatha Falful Sahakari	Mangalpur VDC	2058/12/6
5	Amrit Taja Tarkari Tatha Falful Sahakari	Shukranagar VDC	2058/12/19
6	Shivajyoti Taja Tarkari Tatha Falful Sahakari	Gunjanagar VDC	2058/12/25
7	Jilla Taja Tarkari Tatha Falful Sahakari	Bharatpur Municipality	2059/2/13
8	Kerunga Taja Tarkari Tatha Falful Sahakari	Jagatpur VDC	2062/12/23
9	Sadabahaar Taja Tarkari Tatha Falful Sahakari	Gunjanagar VDC	2063/2/25
10	Panchakanya Taja Tarkari Tatha Falful Sahakari	Ratnanagar Municipality	2063/5/8
11	Navajyoti Taja Tarkari Tatha Falful Sahakari	Birendranagar VDC	2063/5/25

12	Neuroni Taja Tarkari Tatha Falful Sahakari	Shaktikhor VDC	2063/6/8
13	Janajagriti Hariali Taja Tarkari Tatha Falful Sahakari	Bhandara VDC	2061/5/8
14	Narayangarh Taja Tarkari Tatha Falful Sahakari	Bharatpur Municipality	2064/3/10

Source: CTDO, Chitwan, 2065BS.

## 1.2 Statement of the Problem

Cooperative is being recognized as one of the effective tools of poverty reduction from the long time. Establishment of credit cooperative in Rapti Valley Chitwan, following the resettlement program was regarded a landmark event in the history of Nepalese cooperative movement, and in the organized effort of poverty reduction. Since then, various types of cooperative with diverse objectives and working procedures have been operating throughout the country.

Chitwan, being the first place in having the cooperative organization established, has sought the development of various types of cooperatives since long time. At the right moment 359 cooperatives are operating in this district including one of the oldest cooperatives of the country.

Now, the question is, have these cooperative organizations been really able to reduce the poverty level by creating more jobs, and thereby more income? Question can also be asked like what roles have such cooperatives played in encouraging the saving, in providing the credit facilities, and in developing the entrepreneurial skills of the concerned people?

Such questions have remained unanswered as the researches in this field are badly lacking.

Development of fruits and vegetables cooperatives are latest diversification of cooperatives in Nepal. In the special context of Chitwan such cooperatives were established only after 2058BS. The first cooperative of this type was established in Ratna Nagar Municipality in 3<sup>rd</sup> Falgun 2058BS. with the name of Puspanjali Taja Tarkari Tatha Falful Sahakari (CTDO, Chitwan 2065).

With comfortable town-hinterland linkage, plain and fertile land, huge possibility of transportation facilities, and possibility of ground water irrigation (if not surface

irrigation) Chitwan holds a huge possibility of horticultural development. To reap these potentials fruits and vegetable cooperatives, thus established, must be effective. Even though it is still early to put the role played by such cooperatives in to thorough scrutiny, it does seem irrational to make an attempt to identify some of the benefits that the general public have attained from the establishment of such organizations as seven years have already elapsed since the establishment of some of the cooperatives of this type.

Thus it seems apparent that a study on the effectiveness of such cooperatives in income generation is needed. The result of this study will hopefully answer the following specific questions:

How are the products of the farmers collected for marketing?

Is there any chilling facility so that farmers can store their product when needed?

Is there any sales depot in the market centre through which farmers can sell their product easily?

Have any measures been used for quality control so that sustainable marketing be ensured?

How are the farm product transported to the market centers?

Is advertising done to promote marketing?

Are farmers able to sale their product always?

What amount of money do the farmers have to spend for different farm inputs, irrigation, transportation, packaging etc. and do they really earn profit from this occupation?

Are the farmers really satisfied about the role of the cooperatives that they are involved in?

It is expected that answers to such questions will be helpful in formulating the organizational policies and to assist the national goal of poverty reduction.

### **1.3 Objective of the Study**

#### **General Objective:**

The general objective of this study is to find out the role of fruits and vegetable producers' cooperatives in the income generation of the rural farmers in Chitwan District.

**Specific Objectives:**

- 1) To identify the efforts made by such cooperatives in marketing the products of the members (farmers).
- 2) To find out the total earnings of the farmers from the sale of vegetable and fruits over the total production cost.

**1.4 Rationale of the Study**

Poverty alleviation/ reduction has become the main objective of three consecutive plans, and government has given due priority to the establishment of cooperatives, especially as the sectors for creating self employment and thereby generating income so that rural poor's capacity to meet their basic needs would improve. As a result, as in other parts of country, various kinds of cooperative organizations have been operating in Chitwan districts. Study of impact of such cooperatives in income generation provides a deeper insight to the policy makers to estimate and determine how much important tools the cooperatives have become to reduce the cases of poverty, and also allows them to devise their policy if needed. The study also aims to make some constructive recommendations to the concerned farmers and policy makers for the improvement and proper functioning of cooperative societies. In this way, the rationale of the study can be justified in four different dimensions: one, the researcher will be benefited being able to determine the importance and effectiveness of such cooperatives, and being able to conduct further research on the related topics. Two, the farmers will be benefited as they will be able to know about the effectiveness of such cooperatives and make corrections in the organization and operational procedures if required. Three, the policy makers will also be able to determine the outcome of the policies adopted in the past and they will get the further ideas regarding plans and policies. Fourth, this study is expected to add a valuable resource to the students and other researchers in the future.

**1.5 Limitation of the Study**

Resource and time constraints, desire, interest and fixed standard of the related institution, individual willingness, characteristics of the population and physical setting of the study area impose various limitations on every study, and this study is no exception. Following are the major limitations of this study:

- i) The study will only include the Village Development Area of Chitwan District, i.e. it will not include municipality area.
- ii) The study will only include the vegetable and fruit producers' cooperatives but not other kind of cooperatives.
- iii) The research will only include the income dimension of the vegetable and fruit procedures' cooperatives but not about other aspects like organizational structures, membership compositions etc.
- iv) The study will include only the transaction of fiscal year 2064/065.
- v) The study will include only those income related activities of the concerned farmers which occur through cooperatives but not the income/income related activities from other sectors.
- vi) The study will not include multipurpose cooperatives even though they may be involved in fruits and vegetable production.

### **1.6 Organization of the Study**

The overall report has been divided into eight chapters. The first chapter includes the introduction of the study. Second chapter includes the methodology applied to meet the objectives of the study. In the third chapter details about the background and the conceptual ideas obtained from the different literatures has been included under the heading 'literature reviews'. Fourth chapter contains the information about the study area. Fifth chapter describes the socio-economic characteristics of the respondents. Sixth and seventh chapters contain the findings of the study. And an eighth chapter includes the conclusion of the study and the recommendation of the researcher to the concerned governmental stakeholders and the executive members as well as to the farmers of the study area.

## **CHAPTER II**

### **Research Methodology**

To meet the set objectives some relevant and precise research methodology are needed to be applied. Application of the wrong method always leads to the misleading results. Following methodologies have been applied for the completion of the study.

#### **2.1 Research Design**

“...A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy and procedure....” (Kothari, 2004)

Exploratory and descriptive research designs have been applied for this study. The study is exploratory because it has to explore the role of fresh fruit and vegetable producers' cooperatives in different aspects of farm production and thereby in the income generation of the rural farmers. It is also descriptive in nature as it aimed to have the clear picture of the phenomena or it aims to present the real situation but without bothering to know about causes and effects. To contextualize, it is a descriptive research in the sense that it only aims to describe what roles fresh fruits and vegetable cooperatives play in income generation but it has not explained other underlying causes and effects.

#### **2.2 Selection of the Study Area**

Gramin Taja Tarkari Tatha Falful Sahakari, Chainpur, Shivajyoti Taja Tarkari Tatha Falful Sahakari, Gunjanagar and Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur were selected for the study basically because these are the oldest of the cooperatives of this type, all of them being established in 2058BS. Doing otherwise would not meet the objective of the study effectively because almost all of the remaining ones were established only before three or four years, and study on them would have become too early. And secondary reason for the selection of these areas was also accessibility.

#### **2.3 Sampling**

The study was, primarily, conducted on the farmers involved in the above mentioned cooperatives. There are 144 members in Gramin Taja Tarkari Tatha Falful Sahakari,



Chainpur VDC, 43 members in Shivajyoti Taja Tarkari Tatha Falful Sahakari, Gunjanagar VDC and 63 members in Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur VDC (Official Record of Gramin Taja Tarkari Tatha Falful Sahakari, Chainpur, Shivajyoti Taja Tarkari Tatha Falful Sahakari, Gunjanagar and Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur, 2065).

It was conceived before the field survey that simple random sampling method would be used for the selection of the sample. But deeper insight into the field situation compelled to change this technique as it became apparent that this technique would not help to meet the objective. It was because some of the members of the cooperatives could not be involved in the study as they were not involved in fruits and vegetable production at the time for which survey was conducted, and some of the farmers were too small producers that their product generally would not go to market but was sufficient only for household consumption.

So, at last researcher was compelled to adopt purposive sampling technique. Only those member farmers have been included in the study that had produced marketable product in terms of quantity and quality, and had sent to the market.

This is how, samples were selected in three basic criteria: one, the farmers were the members of the selected cooperatives, two, they had been producing fruits and vegetables, three; their product was substantial enough to be sent to the market.

Adopting these procedures 22 samples were selected from Chainpur VDC, which represents 15.3% of its population; 20 samples were selected from Gunjanagar, which represents 46.5% of parent population. Like wise 20 samples were selected from Mangalpur VDC that represents 31.7% of the population.

In the context of Chainpur VDC the inhabitants of ward no. one, two, three, four and nine were the members of the concerned cooperative, in Gunjanagar the inhabitants of four, five, eight and nine and in Mangalpur the inhabitants of four, five, six, eight and nine were the members of the concerned cooperatives. So these specified wards of the three VDCs were the study area specifically.

#### **2.4 Nature and sources of the Data**

Both primary and secondary data were used for the study. Secondary data, especially, helped in establishing the background idea and primary data helped in achieving the specific objectives set by the study. Primary data was collected through field observation, unstructured and structured interviews and basically questionnaire. And,

secondary data was collected from the publications of district Development committee, Chitwan; publications of cooperative related organizations in the district and national level, publications of governmental and non governmental organizations and thesis works.

## **2.5 Data Collection Tools and Techniques**

### **2.5.1 Methods of Primary Data Collection**

#### **Questionnaire:**

This was the most important tool of data collection of the study. Several structured and unstructured questions were designed to collect the information about the service provided by the cooperatives to the farmers, about the expenditure of the farmers on different farm inputs, equipments and services like seeds, fertilizer, insecticides/pesticides, micronutrients, labour, transport, tractor, irrigation, packaging etc. and about the attitude and expectations of the farmers from the cooperatives. Such questionnaire was administered to the individual respondents and data was collected. The response rate was very high as the researcher himself administered the questions, or got filled them up on the direct supervision.

#### **Interview**

Interview as a tool of data collection was used especially to collect the data about the different services that the cooperative was providing to the member farmers and about the socio economic setting of the study are along with some organizational information. Structured as well as unstructured questions were involved in the interview.

#### **Field Visit and Observation**

Field visit and observation occurred frequently during the study. At first field visit was done to select the study area, Secondly it was done for the pre-testing of the questionnaire, thirdly it was done at the time of data collection. However separate observation form was not developed for the observation. In this way observation as a tool of data collection is less important for this study compared to questionnaire.

### **2.5.2 Methods of Secondary Data Collection**

Wide varieties of secondary sources of data collection were adopted for the study. Such sources included publications, reports and other documents of DDC, Chitwan, official documents of District Education office Chitwan, publication of Cooperative Division Office, Bharatpur, Chitwan, publication of Institute of Agricultural Education and Animal Sciences, Rampur, Chitwan, Publications of National Cooperative Board, publications of Central Cooperative Training and Division Office, Kathmandu, thesis reports of the pass outs, research reports, many internet sites, visual encyclopedias, minute books of concerned cooperatives etc. Such data were mainly used for conceptual clarity and verification of the research activities and result. Some of the data collected from these sources were also used to sketch the socio- economic scenario of the study areas.

### **2.6 Data Collection Procedures**

Purposive sampling technique was to be adopted for this study. So, the respondents were selected from the universe based upon the set criteria. Study was basically conducted in ward no. one, two, three, four and nine of Chainpur VDC; ward no. four, five, eight and nine of Gunjanagar, and ward no. four, five, six, eight and nine of Mangalpur VDC. It was not much difficult to collect the information related to the first objective as it was related to the general information, and would simply be obtained from stake holders of the concerned cooperatives. But in the case of the second objective the individual respondents were to be visited and asked to give the information. The questions were related to the expenditures and sale. It appeared in the field that almost none of the respondents had mentioned any record of the expenditures. Some of them had collected the information about the sale but not expenditures. So, many practical problems were to be faced in the data collection. In order to collect the information they were requested to recall the amount of money that they had to pay for different inputs and services that they had applied to the farm for the products which had been already sold in the market. It was really annoying task. But, one good thing is that none of the respondents showed reluctance to take part in the study when they were requested to do so. The study had aimed to collect the information related to the five main crops which the sampled farmers had grown and sold in the market in the previous seasons. But those who had been growing only two or more crops, too, were not excluded if their sale was sufficient enough to be

sent to the market. In this way the study roughly covered the production activities of fiscal year 2064/065BS.

## **2.7 Methods of Data Processing**

Data processing task of the study was done at different levels and stages. At first editing was done to enhance the accuracy of the data.

Questions included for data collection were both open ended and closed ended. In case of closed ended questions editing was done in two ways:

At first the raw data was checked for completeness, i.e. some responses which were not recorded properly or parts of which were missing were corrected by adopting suitable procedures. Some of the responses were conflicting to each other. In such condition some corrections were made by inferences. However necessary pre-cautions were adopted to avoid biasness.

And, in case of open ended questions, too, the editing was done by help of 'recall' and 'references' where it was necessary.

## **2.8 Methods of Data Analysis**

After editing was over, the data was classified. The data were of different types like qualitative, quantitative, and descriptive. For quantitative and categorical data code book helped in analysis. But in case of descriptive data, especially for responses for the open ended questions content analysis was done at first, which after all helped to categorize the data into some specific types.

Information related to collection centre, chilling facility, sorting of fruits and vegetables, sales depot, marketing agents, cooperative managed transportation facility, and advertising was easily derived as it would simply be obtained by three sheets of interview schedule used for three cooperatives. But information related to socio- economic aspects of the individual respondents and their attitude and expectations toward the cooperative really needed more detailed and complicated procedure for analysis.

Information related to expenditure on seeds, fertilizers, insecticides/pesticides, micronutrients, labor costs, irrigation costs, transportation costs, packaging cost and other expenditure and the total sale amount were numerical. Such values were also divided into various categories and put for analysis. These all the tasks were performed either by help of computer or manually.

The final result from the analysis was introduced based upon the frequency of the occurrence of the responses. Such frequency calculation was done either based upon individual responses, or for category. Such obtained values have been either presented as they are or in percentage or in cumulative percentage.

## **2.9 Data Presentation**

Verbal description, tabular methods, bar graphs, pie charts have basically been used for data presentation. The unit of such plotting has been core value itself along with percentage and cumulative percentage.

## **CHAPTER III**

### **Literature Review**

Cooperative being a part of global movement, plethora of books, journals, research papers, project reports etc. are available; encyclopedia too, provide enormous opportunities in acquiring the knowledge about cooperatives. So, journals, research reports, books, project reports and encyclopedias have been consulted to prepare the theoretical framework of the study. However, the literatures regarding conceptual aspects are considerably scanty. So, conceptual ideas of the study are based upon the review of the available official documents of the concerned cooperatives and scholarly discussions with the officials and farmers of the cooperatives.

#### **3.1 Historical perspective of the cooperative**

Concept of cooperative developed when industrial revolution matured in the second half of the 18<sup>th</sup> century. Concepts of cooperative at that time emerged in response to the effort of some social workers and thinkers to bring ease in the life of those who were suffered by the negative effects of industrialization. Robert Owen was the most important among those who had launched a campaign against the negative effects of industrialization (CTC, 2056BS).

“...Cooperative philosophy originated with the revolutionary writing and activities of Robert Owen and Charles Fourier...” (Shrestha, 2007), In modern form, cooperatives began establish from 1844, when a group of 28 impoverished weavers of Rochdale, England, founded a mutual-aid society, called the Rochdale Society of Equitable Pioneers. (Encarta, 2008). Cooperative movement got momentum in Germany when Franz Schulze established organization based upon the cooperative principles in 1852. Later activities of Schulz and his friend promoted cooperative banking which got a huge popularity. In 1867 Schulz took initiative to get first Cooperative Act passed to legalize his work. In 1877 “The Grand Union of Rural Cooperative Societies” was established in Germany on the initiative of F.W. Raiffeison (Thakuri, 2008). He developed the concept “all for one and one for all”, which is now regarded as the spirit of cooperatives. In 1882 Dairy cooperatives started in Denmark with unique functioning procedures, which can be still noticed in Denmark. The need of cooperative organization was felt in India in 1880s. As a result then Indian government sent intellectuals to study the cooperative movement of Europe. Later

government formed a committee to study the need and type of cooperative societies in India. On the recommendation of the committee Indian government promulgated the 'Credit Cooperative Act 1904'. (CTC, 2056BS).

Modern agricultural cooperatives started in China in 1912. Three different kinds of organizations based upon the cooperative principles were established in China: Mutual Aid Teams, Agricultural Producers' Cooperatives and Advanced Producers' Cooperatives or Peoples' Commune (ibid).

Cooperatives movement started in Japan in the beginning year of the later half of 19<sup>th</sup> century, being inspired by the European cooperative movement. Credit cooperatives were influenced by the Raifeision model and consumer cooperatives by Roachdale model. The first cooperative act was passed in Japan in 1900 (ibid).

### **3.2 Development of Cooperatives in Nepal**

"...Nepal has a long-standing history of informal community based cooperatives...." (Nepal, 2007). "... Manka Khala is an association formed by *Jyapu*, especially of Kathmandu Valley in their locality to help each other in various activities. It is an oldest form of cooperative institution. *Manka –Jya* is composed of two *Newari* words *Manka* and *Jya*. *Manka* means group and *Jya* means work (Pokharel, 2004). "...*Parma* related to agricultural sector is a free labour exchange among the rural households of particular localities and thus wage saving. *Gumba* is related to cultural protection in Buddhism. *Dharmabhakari* literally means a religious storage of grains that is often used to protect social welfare activities and natural calamities. *Guthi* is an institution of immovable property set aside for religious purpose in the care of some persons without having any kinds of alienable rights.... (Nepal, 2007). "...in order to enable the members of the clan to set up their own business, *Thakali*, a trading community, organize themselves into *Dhikuri* which is similar to 'Chit Fund'. At Baglung, each member of the *Dhikuri* contributes RS. 100. The head of the group is known as *Ghoga*. Loan is advanced to members at 10 percent interest. An honorarium is paid to the *Ghoga* at the rate of 2 to 5 percent of the total advance depending upon the volume of business transacted by the group during the year...." (Sinha, 1964, quoted from Pokharel, 2004).

"...Nepal does not have a long history of modern cooperative. The cooperative movement began only since the last five decades. It saw the formal cooperative for the first time in 1953 through establishing the Cooperative Department. However, the

cooperative programme adhering to the globally recognized cooperative principles and values started in the country only in 1956 when 13 credit cooperatives were established in Chitwan Valley. The objective of the cooperative societies (registered under an executive order of the Government as there was no Cooperative Act at that time) was to provide agricultural credit to flood-stricken people resettled in the valley. Following the successful delivery of the agricultural credit by these cooperatives, the cooperative societies were initiated in other parts of the country. To regulate these cooperative societies, the first Cooperative Societies Act was promulgated in 1959. After this, many legal and other reforms have been made to continue the cooperative movement in the country....” (Nepal, 2007).

Cooperative Development Bank was established in 1963. A separate cooperative branch was established in the District Panchayat. In 1966 Cooperative Department came under the Ministry of Land Reform, Agriculture and Food. Sahakari Bank changed into Agricultural Development Bank in 1967. In 1969 Cooperative Department came under the Ministry of Land Reform. In the same year the Agricultural Development Bank got the management responsibility of the cooperatives. In 1972 cooperative movement changed into Sajha Krayakram. In 1978 the responsibilities of the Sajha were from Agricultural Development Bank to the Steering Committees once again. Sajha Sanstha Act was promulgated to increase the efficiency of Sajha Program in 1984. In the next year Cooperative Department was changed into Sajha Development Department (CTC, 2056BS).

The restoration of multiparty democracy in 2056BS brought a new era in the development of cooperatives. Eighth and Ninth periodic plans and the yearly budget made several attempts to give ‘new and improved’ shape to then Sajha program (Dahal, 2006). Then Koirala government brought new Cooperative Act 1992. After that the name of Sajha Development Department was changed into Department of Cooperative. In 2049 Cooperative Societies Regulation was promulgated. After that mushrooming growth of cooperatives occurred throughout the country (CTC 2056BS).

### **3.3 Definitions**

“...The word cooperative has been derived from the Latin word ‘cooperate’, which means working together. It is a firm of economic as well as social organization based on certain values....” (Nepal, 2007). “...Cooperatives, system of economic action and



business enterprise, characterized by the absence of the profit motive and involving, as its primary function, the distribution of goods and services.... (Encarta, 2008). “...A cooperative is an autonomous economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise...” (ICF, 1995, quoted from CTC, 2056BS). Dahal has mentioned that cooperatives are “...non governmental and non state enterprises or organizations. Cooperatives are considered as those voluntary non political organizations which are formed to fulfill certain common goals by institutions/organizations which are formed to fulfill certain common goals by their members who form them....” (Dahal, 2006). Pokharel has said that cooperative “...is a form of voluntary organization for a joint operation of some work on equal terms and with common objectives....” (Pokharel, 2004).

### **3.4 Principles of Cooperatives**

Various principles have been developed about the cooperative organizations. But most frequently mentioned ones are that of Roachdale Society and that developed by the International Cooperative Alliance (ICA), which are as follows:

Roachdale Society has explained the principles of cooperative as follows:

(1) democratic control, with each member entitled to only one vote, regardless of the number of his or her total shares; (2) membership open to all, irrespective of race, creed, class, occupation, or political affiliation; (3) payment of limited interest on invested capital; and (4) distribution of net profits, usually called savings or earnings, to cooperative members in proportion to the amount of their patronage (Microsoft Encarta 2008, Microsoft Corporation).

ICA has adopted following seven principles in The ICA Congress held in Manchester, UK, on 23<sup>rd</sup> September 1995:

- (i) Voluntary and Open membership
- (ii) Democratic Member Control
- (iii) Members’ Economic Participation
- (iv) Autonomy and Independence
- (v) Education, Training and Information
- (vi) Cooperation Among Cooperatives
- (vii) Concern for the Community.

Talking about the cooperative principles Rural Business-Cooperative Service, US Department of Agriculture has highlighted three basic principles: ownership, control and beneficiary. “... only in the cooperatives are all three interests vested directly in the hands of users. These interests are commonly referred to as the cooperative principles....” (USDA, 2002)

### **3.5 Typology of the Cooperatives**

Dahal (2006) has classified cooperatives in the following ways:

Based upon the function- (i) Single Purpose (ii) Multipurpose

Based upon the region- (i) Rural (ii) Urban (iii) Eastern, Western, Northern, Southern etc.

Based upon the sector they cover (i) Agricultural Cooperative (ii) Non agricultural cooperative (iii) Economic Cooperative (iv) Production/producers Cooperative (v) Consumption/consumers' Cooperative (vi) Cooperative Related to Service Delivery

Based upon the financial status (i) Financially Well Equipped (ii) Financially Weak Cooperative

### **3.6 Conceptual Review**

#### **3.6.1 Income Generation**

The term income generation is composed of two English words: 'income' and 'generation'. According to Oxford Advanced Learners' Dictionary 'income' means 'money received over a certain period, especially as payment for work or as interest on investments', and 'generation' means 'the production of something'. So, literally income generation means earning of money over the investment.

"...Income refers to consumption opportunity gained by an entity within a specified time frame, which is generally expressed in monetary terms. However, for households and individuals, income is the sum of all the wages, salaries, profits, interests payments, rents and other forms of earnings received... in a given period of time. For firms, income generally refers to net-profit: what remains of revenue after expenses have been subtracted. In the field of public economics, it may refer to the accumulation of both monetary and non-monetary consumption ability, the former being used as a proxy for total income...." (<http://en.wikipedia.org/2008/10/22>)

Income is "...money or other gain or return resulting from goods or services produced in a given period of time, usually measured annually. Income may be received by an individual or by an entity, such as a corporation or a government...." (Encarta, 2008).

'Generation' generally in this sense means creation of income. So, income generation, in our context means creation of profit subtracting the production cost from the total earning obtained from the sales of fruits and vegetable by the concerned members farmers.

### **3.6.2 Producers' Cooperatives**

Thakuri (2008) has stated that Producers' cooperatives include diary co-operatives, vegetable and fruits producers' cooperatives, bee keepers' cooperatives, handicrafts producers' cooperatives etc. Such cooperatives produce goods and services and sell such products. The main objective of such cooperatives is to support the members by providing necessary tools and equipments and in marketing their products.

### **3.6.3 Fruits and Vegetable Producers' Cooperatives**

No readily definitions about the fruits and vegetables cooperatives are available. However the Cooperative Department of Nepal regards fruits and vegetables producers' cooperatives as the cooperatives which help farmers to supply the farm inputs, especially related to the production of fruits and vegetables and help in marketing the products of the farmers.

## **3.7 Development of Cooperatives in Chitwan District**

) The first modern cooperatives started in Chitwan. "...thirteen credit cooperatives started in Rapti Valley (Chitwan) in 2013 B.S. under Rapti Development Program with the support of United States of America...."(CTC, 2056 BS). Altogether there are 359 cooperatives now in Chitwan District. Out of them there are 93 multipurpose cooperatives, 123 diary cooperatives, 106 saving and credit cooperatives, 14 fruits and vegetable cooperatives, and 23 others.

### **3.7.1 Development of Fruits and Vegetable Cooperatives in Chitwan District**

Even though the cooperatives were established for the first time in Chitwan in 2013BS, the official record of Cooperative Division Office shows that fruits and vegetables cooperatives were established in Chitwan only after 2058 BS. By Shrawan, 2065BS.14 such cooperatives have been registered in Cooperative Division Office, Chitwan. (CTDO, 2065BS)

## **3.8 Summary of Literature Review**

Various studies have taken place regarding the history, principles, typology and other institutional and financial aspects of cooperatives. Every year International

Cooperative Alliance organizes research conferences. But the study in the particular field of fruits and vegetables cooperatives are almost nil even in the international level. If we talk in case of Nepal such cooperatives are still to be defined, and the role of such cooperatives have not been studied. That is why it is hoped that this study will help to fulfill the gap in national and international level.

### **3.9 Operational Definitions of the Variables**

**Income Generation:** Creation of surplus money derived by subtracting the total expenditure from the total money obtained from the sale of the fruits and vegetables

**Rural Farmers:** Farmers who live in Village Development Area of Chitwan District

**Fruits and Vegetable Cooperatives:** Those cooperatives which have been established by the farmers who are involved in fruits and vegetable production

**Marketing:** The act of selling the product of the farmers in the market with the objective of earning profit

**Collection Centre:** A fixed area, building or any other organized place, managed by the cooperatives, where the fruits and vegetables are collected and supplied to the markets

**Sorting:** The act of separating the poorly grown, improper sized and infected fruits and vegetables from the good quality product in order to confirm quality control

**Sales Depot:** A fixed place, managed by the concerned cooperatives in the market centre from where the collected fruits and vegetables of the farmers are sold.

**Marketing Agent:** A person or an institution which has been assigned the responsibility of supporting farmers in selling their products in the market.

**Advertising:** The act of informing and persuading the potential buyers and traders to buy the fruits and vegetables produced by the farmers

**Fertilizer:** Any biotic as well as chemical substances that the farmers mix in the soil of their farm in order to increase their product

**Insecticides:** Any chemical as well as biotic substances that farmers use to kill the insects that harm the fruits and vegetables

**Pesticides:** Any chemical as well as biotic substances that farmers use to kill the pests that harm the fruits and vegetables

**Micro nutrients:** Any chemical substances that the farmers apply to the plants over the ground to boost up the production.

**Transportation cost:** Money that the farmers have to spend to transport their products to the markets

**Irrigation cost:** Money that the farmers have to spend to pay the electricity charge or the rent of the diesel generator while irrigating their farm

**Labour cost:** The wage that farmers have to pay to the labor in return of their work at farm.

**Tractor cost:** Total cost that the farmers have to pay to the service provider for using the tractor in tilling the farm

**Packaging cost:** Total amount of money that they need to spend to buy the packaging tools like thread, needle, sacks, crate etc.

**Other costs/ expenditure:** That amount of money which farmers have spent from the time of farm preparation to marketing of the product which has not been specified under separate sub-headings

**Farmers:** Those people who have grown the crops for house hold consumption and commercial purpose and are members of the fruits and vegetable producers' cooperatives

**Expenditure:** Money or any other monetary value that farmers have to apply in different phases of production and marketing

**Sale:** The act of selling the farm product and the money obtained from it

**Profit:** Total amount of money obtained from sale by subtracting all the expenditure

# CHAPTER IV

## Description the Study Area

This chapter includes the physical and socio-economic setting of the study area. Especially the general ideas like the geo-physical setting of the Chitwan district and the concerned VDCs and socio-economic characteristics of the people have been explained in this chapter.

### 4.1 Physical Settings

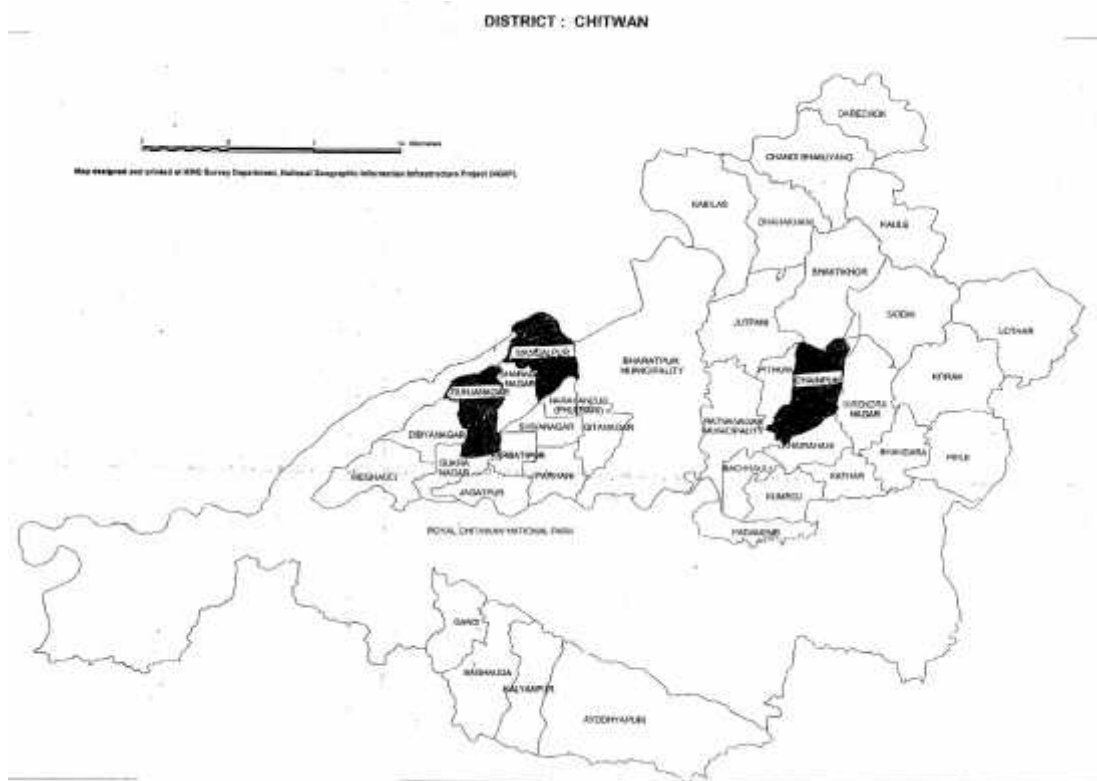
Situated almost in the middle part of the country Chitwan lies in 27°21'E to 27°52'E and 83°48'N to 84°48' N in the world. It covers 1.52 % of the total area of the country. Lying between Mahabharat and Churya range from north and south respectively chitwan is bordered by Gorkha and Dhading district from the north, Bihar Province of India in the south, Makawanpur and Parsa in the east and Nawalparasi and Tanahau in the west. Height of this district ranges from 148m to 1948m from sea level (DDC, Chitwan). Total area of Chitwan is 266191ha. Out of which 142,422ha is forest land; 46,894ha is cultivatable on which 44,391ha is under cultivation; 18,882ha is pasture land and 13, 602ha of land is used for other purposes.

### 4.1 Map of Nepal



Climate of this district is tropical and subtropical type. Average maximum temperature of this district ranges around 36°C and average minimum temperature ranges around 8°C. Average annual rainfall for the year 2064 was 2465.1mm. (DAO, Chitwan, 2064/065). All of the three VDCs where the survey was conducted lie in the plain area of Chitwan.

#### 4.2 Map of Chitwan District



**Chainpur** VDC lies in the eastern part of the district. Its area is 15.38sq km. and is boarded by Shaktikhor and Siddi VDC in the North, Pithuwa VDC and Ratna Nagar municipality in the west, Khairahani VDC in the south and Birendranagar VDC in the east. As mentioned above it has tropical climate. Summers are hot and wet and winters are cold and dry. Southern part of this VDC is either cultivated or settled, where as forest and bushy area have covered the northern part of the VDC. However, this forest is not as important as the forest of Chitwan National Park in terms of quality and the economy it generates.

Extended in 16.20 km area **Gunjanagar** lies in the western part of the district. It is bordered by Dibyanagar VDC in the west, Shukranagar and Parbatipur VDC in south, Sharadanagar VDC in the east and River Narayani in the North.

**Mangalpur** is surrounded by Bharatpur Municipality and Phulbari and Sharadanagar VDCs from the east, south and west south respectively and Narayani River in the north. There is a small forested area in the northern side of this VDC. A huge part of the VDC is cultivated

Even though forest is one of the important resources of Chitwan all of these three VDCs do not own much important forested areas. Mangalpur and Gunjanagar VDCs are adjacent to Narayani River, which would have provided them with enormous opportunity of development. But the irrational treaty signed with India in the past has refrained the people to reap any major benefits from this river. Chainpur VDC neither has the abundant forest resources nor important water resources but it is blessed with being situated at East- West Highway.

All the three VDCs have fertile soil for cultivation and have huge possibility of groundwater irrigation.

#### **4.2 Change and Development**

Chitwan is recently inhabited land. In the past only some indigenous groups like Tharu, Bote and Majhi were living in this area and their number was too small. But after the Malaria Eradication Campaign of the government many people from the nearby hilly districts like Gorkha, Lamjung, Tanahu, Dhading, Nuwakot, Sangja, Baglung, Parbat, Gulmi etc. have poured into this place. Such massive inflow of population caused the massive destruction of the forest, changing the forest land into cultivate able land. Starting especially from 1950s, the population inflow increased very high in 1970s; it rose to much higher point after 1990s when State-Maoist conflict reached in to its climax and hit hard those hilly districts.

Now, Chitwan has become the blend of the almost every cast and ethnic groups, immigrated here from different parts of the country. Likewise people from almost all parts of the country are residing in this district. So, it is sometimes called seventy sixth district of Nepal.

Being situated almost in the middle part of the country and connected by the East-West Highway and other highways; and being inhabited by the varieties of people development possibility of Chitwan has always remained abundant. As a result its rate



of development is one of the highest in the country. Plain and fertile land has provided an enormous opportunity of agricultural development; Chitwan National Park, rich Tharu and Chepang culture, Narayani River, Devghat, Siraichuyli, Upardanggadhi, Someshwor gadhi are some of the places that have provided the opportunity of tourism development. As a result Chitwan has been developing as the third most important tourist destination of the country after Kathmandu and Pokhara. Chitwan is also developing as the transit point for the western and eastern part of the country.

More recently headquarters of Chitwan has been developing as the Medical and Educational city. Two medical collages, three important hospitals including a cancer hospital and an eye hospital, one university etc. are some of the major medical and educational establishments of this district.

All the three VDCs where study has been conducted are the participants and beneficiaries of such developments.

#### **4.3 Infrastructures and Facilities**

Compared to many other parts of the country the level of infrastructure development in Chitwan district is much better. Excepting some of the VDCs of north eastern part almost all parts of Chitwan have been connected with road facility. Not only the municipality area but VDCs have also been linked to the pitched road; all of the three selected VDCs have been touched by the blacktopped roads. As mentioned earlier, there is huge development in the educational infrastructures in this district. In case of the selected VDCs, Chainpur VDC had five primary schools, one lower secondary school and two secondary schools; Gunjanagar VDC had four primary schools, two lower secondary schools, and two secondary dchools; and Mangalpur VDC had four primary schools, one lower secondary school and three secondary schools at the time of study. Mangalpur also had a Higher Secondary School (DEO, Chitwan, 2065)

Chitwan is also better developed than many other parts of the country in terms of health infrastructures too. There are two medical collages, two governmental hospitals including one eye hospital, and many private and public hospitals. It also has a cancer hospital and several other allopathic, homeopathic and Ayurvedic clinics. All of the three VDCs had at least one health post at the time of study. Except some areas of north east part and Madi Valley in the south other areas of Chitwan is electrified.

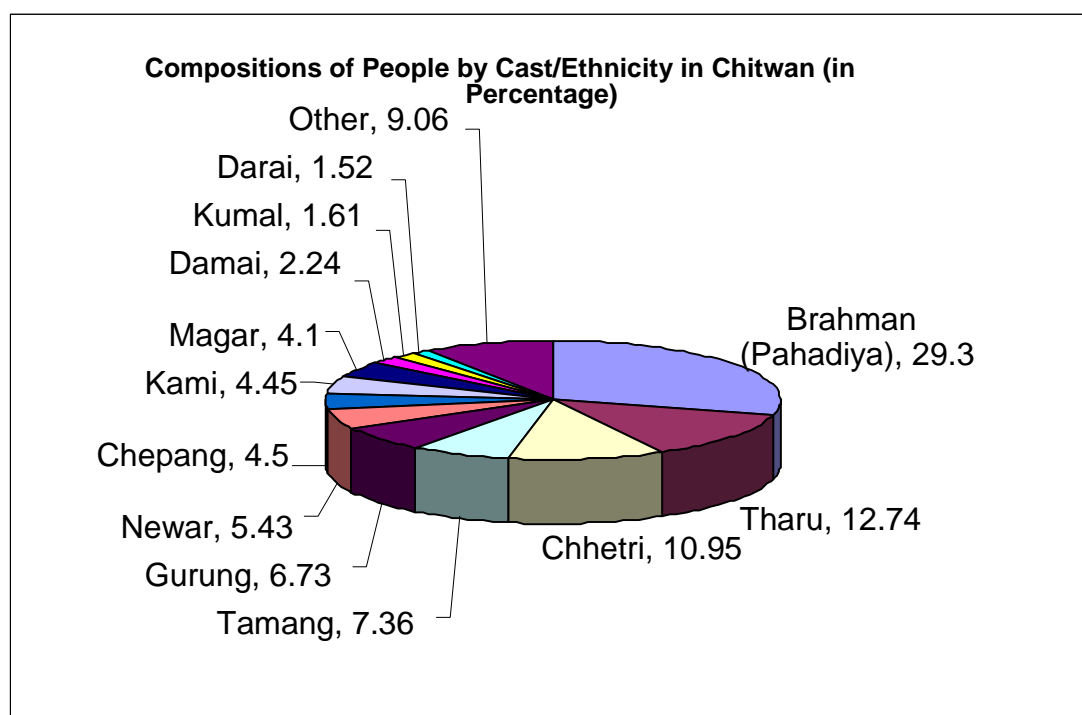
People use tap, tube well and well water for drinking purpose. But, only few of the people have opportunity for safe drinking water.

#### 4.4 Socio Economic Setting

Chitwan is inhabited by the people of different colours and contrasts. Out of total 468,699 population 236,842 are female and 231,857 are male. Majority of people live in rural area. Rural population represent 72.45% and 27.55% live in urban area. People following different religions live in this district. Out of the total population 82.74% are Hindu, 15.47% Buddhist, 0.77% Muslim, 0.07% Kirant, 0.0015% Jain, 0.74% Christian, 0.05% Shikh, 0.05% Bahai and 0.16% other.

Chitwan is also a multi ethnic society. The major ethnic and cast groups are Brahman (Pahadiya), Tharu, Chhetri, Tamang, Gurung, Newar, Chepang, Kami, Magar etc.

**Fig. 4.1 Compositions of People by Cast/ Ethnicity in Chitwan**



Source: District Profile, Chitwan, 2063 BS

In social development Chitwan is better privileged than many other parts of country. Literacy rate of Chitwan is 65.08% out of which literacy rate of the male is 70.62% and that of female is 51.94%, which is much better than national average. Students can earn master degree in different faculties like Physics, Management, Agriculture, Humanity, and Education from the university and colleges of the district. There are

many institutes that impart technical education including two medical collages. Institute of Agriculture and Animal Sciences, Rampur is being developed as an agricultural university of the country.

In many other parts of the country people have to walk for a long time to fetch drinking water but 53% of the people, here, have private sources of drinking water. Other 45% fetch the water from the public source. Only 2 percent of people use the water from the natural sources.

Except the people of Madi Valley and Hilly parts other people have a good access to the health facility. There are many hospitals, medical collages, allopathic and homeopathic clinic to provide the health facility to the people.

Major occupation of the people living in Chitwan district is agriculture. It is the primary occupation for 66.96% of people and secondary occupation for 27.14%. Five percent of people are involved in government service and 4.58% of people are involved in trade. The percentage of people doing house hold job is 11.26 and following other different occupation is 10.27% (District Profile, Chitwan, 2003).

**Table 4.1**

**Sector Wise Involvement of the Economically Active People in Chitwan District**

<b>Occupation Type</b>	<b>Primary Occupation (%)</b>	<b>Secondary Occupation (%)</b>
Agriculture	66.96	27.14
Govt. Service	5	7.11
Trade	4.58	5.56
House Hold Job	11.26	42.89
Other	10.27	16.51

**Source: District Profile, DDC, Chitwan 2063BS.**

Poultry Farming is being developed as one of the most important economic activities in Chitwan. Even though the climate is not much favourable for poultry production other factors like plain land, transportation facility, easy availability of nutrients have encouraged people to keep poultry. Chitwan represents 22% of the total poultry production of the country. (District Profile, Chitwan 2003)

Tourism is another important economic activity in Chitwan. The World Heritage Site listed Chitwan National Park, beautiful hills of the northern side, religious places like Devghat and wonderful Tharua and Chepang culture are some of the important factors that attracts tourists. Chitwan is the third most important destination in the country now.

There are many cottage and small industries being operated in Chitwan providing employment and income to the people. There are only three big industries in operation but they have huge contribution in the local economy.

Narayangarh, the main city of the district is also an important trading centre of the country.

#### **4.5 Rural Urban Linkage**

Narayangarh is the main city of this district. It supplies various farm inputs and equipments like seeds, fertilizers, insecticides, pesticides, micronutrients, spade, sickle, hoe, plough etc. And, it is also the main market for the fruits and vegetable produced in the district. All of the three selected VDCs are connected with this city by blacktopped road. Not only for the farm inputs it is also the source for various secondary and tertiary goods to the people of rural area. This city also provides the job opportunity to the family members of the farmers in the off seasons. Educational services, medical services, banking services and market for the products of the farmers are some of the factors of the city, and raw materials, foodstuffs, vegetables, labour force etc from the village are some of the factors that generate flow in rural urban linkage.

Except this comparatively big city other towns and rural marketing centers like Ratna Nagar, Jayamangala, Kholesimal, Gitanagar, Patihani, Sharadanagar, Meghauri, Chaunauli etc are also providing some primary and secondary goods and services to the local people.

## CHAPTER V

### Socio Economic Characteristics of Respondents

Special focus of this chapter is in the socio-economic characteristics of those respondents that have been involved in this study. Such aspects include description regarding the compositions of the respondents by cast and ethnicity, sex, lingual background, educational status, occupation, land hold size, livestock etc.

#### 5.1 Social Aspects

##### 5.1.1 Cast and Ethnicity

Selected Fruits and Vegetable cooperatives have been basically composed of Brahmin population, followed by Chhetri and Tharus. Out of 62 samples none of the respondents were Dalits and Mangoloids. Out of 22 samples selected from Gramin Taja Tarkari Tatha Falful Sahakari, Chainpur, 19 were Brahmins, which is 86.4% of the sub total followed by 2 Tharus (9.1%) and one Chhetry(4.5%).

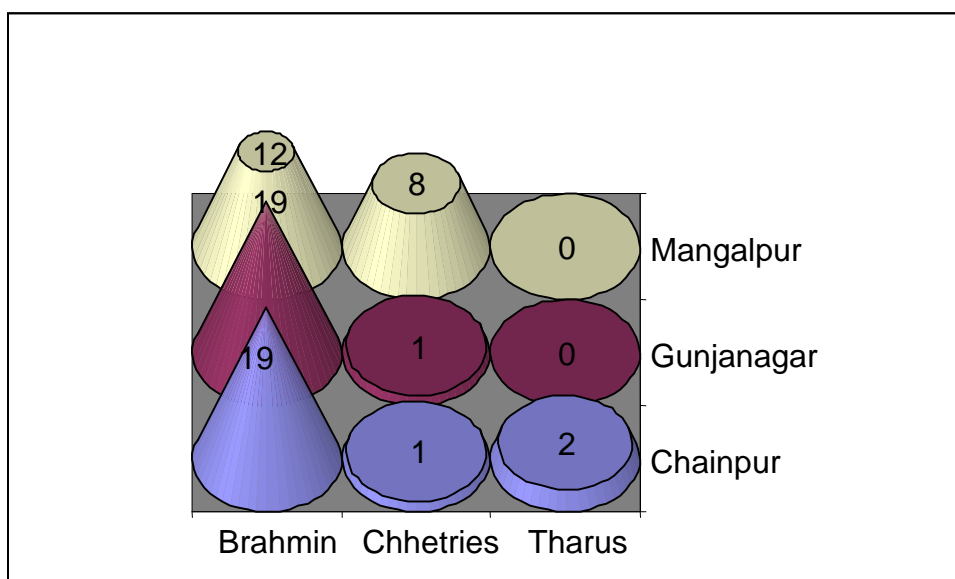
In the context of Shivajyoti Taja Tarkari Tatha Falful Sahakari, Gunjanagar, 19 out of 20 samples were Brahmins which is 95% of sub total, followed by one Chhetry (5%). Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur has comparatively higher non-Brahmin members. Out of 20 samples 12 were Brahmin (60%) followed by 8 Chhetries (40%).

Among the total 62 samples selected in the study 50 were Brahmins (80.6%), 10 Chhetries (16.1%) and 2 Tharus (3.2%). Such figure has questioned the inclusiveness of the fruits and vegetable cooperatives. (See Table 5.1 below)

**Table 5.1**  
**Composition of Respondents by Ethnic Groups**

<b>Name of the VDC</b>	<b>Brahmins</b>	<b>Chhetries</b>	<b>Tharus</b>	<b>Total</b>
Chainpur	19	1	2	22
Gunjanagar	19	1	0	20
Mangalpur	12	8	0	20
<b>Total</b>	<b>50 (80.6%)</b>	<b>10 (16.1%)</b>	<b>2 (3.2%)</b>	<b>62 (100%)</b>

**Figure 5.1 Compositions of the Respondents by Ethnic Groups represented in the Graph**



**Source: Field Survey, 2008**

### 5.1.2 Educational Status

Agriculture is basically regarded as the occupation of the illiterate and ignorant people in Nepal. But the study manifested that most of the respondents in such cooperatives were not illiterate rather a considerable proportion of the sample were educated; some of them were highly educated.

Out of 22 samples selected from Gramin Taja Tarkari Tatha Falful Sahakari, 2 were graduate (9.1%), 2 intermediate (9.1%) 6 SLC (27.3%) and remaining 12 were at least able to read and write, this group comprised of 54.5 % of total samples in this sub group. In this sub group none of the farmers was illiterate.

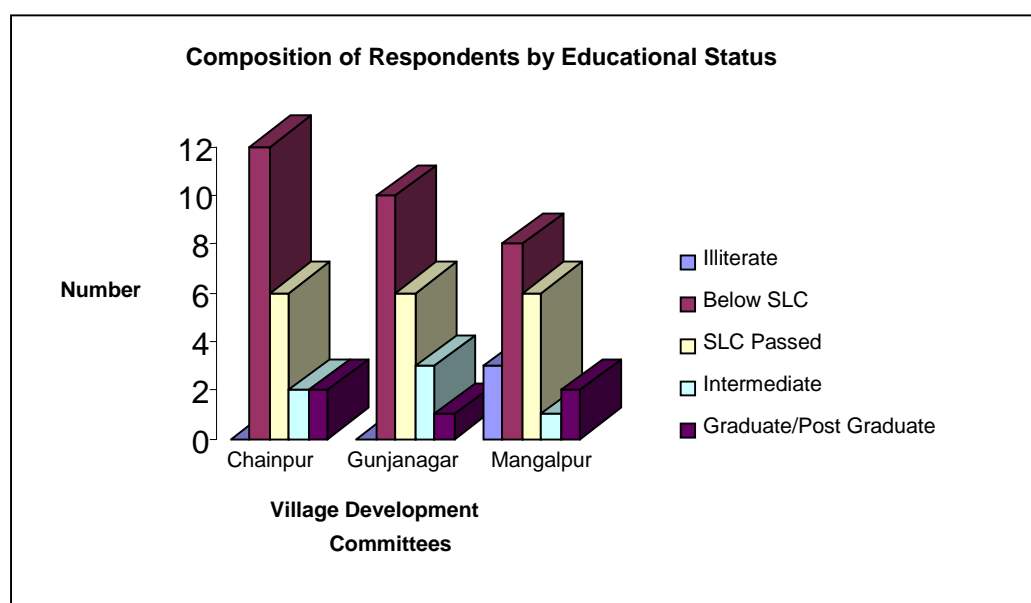
Three out of twenty respondents (15%) were illiterate, 8 (40%) were at least able to read and write, 6 (30%) were SLC passed, one (5%) was intermediate and two (10%) were post graduate in the sample selected from Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur.

Out of total 62 samples only 3(4.8%) were illiterate. Five of them (8.1%) were either graduate or post graduate, six (9.7%) were intermediate, eighteen (29%) were SLC passed and remaining thirty (48.4%) could at least read and write. (See Table 5.2 below)

**Table 5.2**  
**Educational Status of the Respondents**

VDCs	Illiterate	Below SLC	SLC Passed	Intermediate	Graduate/ P. Graduate	Total
Chainpur	0	12	6	2	2	22
Gunjanagar	0	10	6	3	1	20
Mangalpur	3	8	6	1	2	20
<b>Total</b>	<b>3 (4.8%)</b>	<b>30 (48.4%)</b>	<b>18 (29%)</b>	<b>6 (9.7%)</b>	<b>5 (8.1%)</b>	<b>62 (100%)</b>

**Fig. 5.2 Educational Status of the Respondents represented in the Chart**

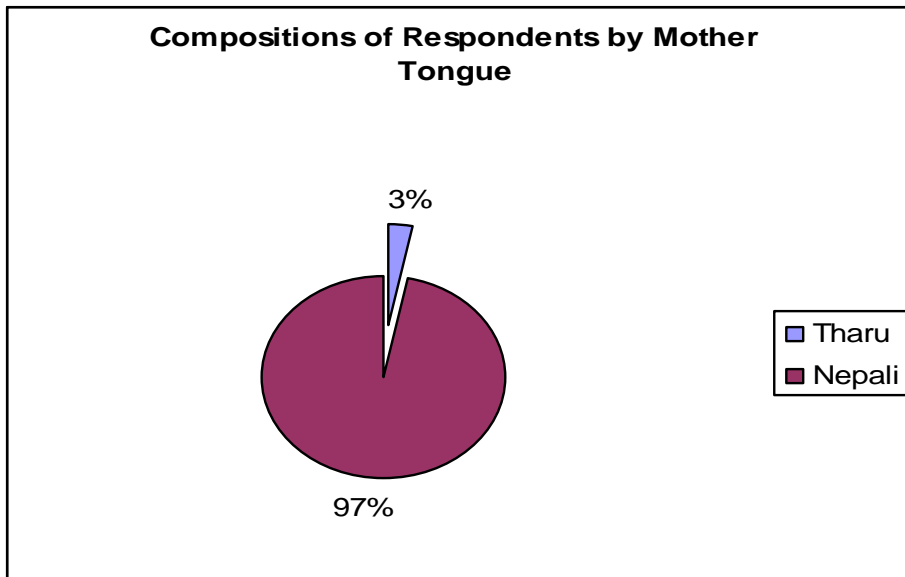


Source: Field Survey 2008

### 5.1.3 Language

The study showed that Nepali is the main language of communication for the farmers in such cooperatives. All the respondents could communicate in Nepali while the researcher asked the questions to them. Out of 62 respondents only two of them spoke Tharu language as the mother tongue otherwise Nepali was the mother tongue for remaining 60 respondents. (See Fig. 5.3 below)

**Fig. 5.3 Compositions of Respondents by Mother Tongue**



**Source: Field Survey 2008**

#### **5.1.4 Electrification**

The development in rural electrification is better in Chitwan district compared to many other parts of the country. All the three V.D.Cs. where sampled cooperatives lie are electrified. Farmers have now been able to use the electricity to run the water pump as well as to light their home.

#### **5.1.5 Drinking Water Facility**

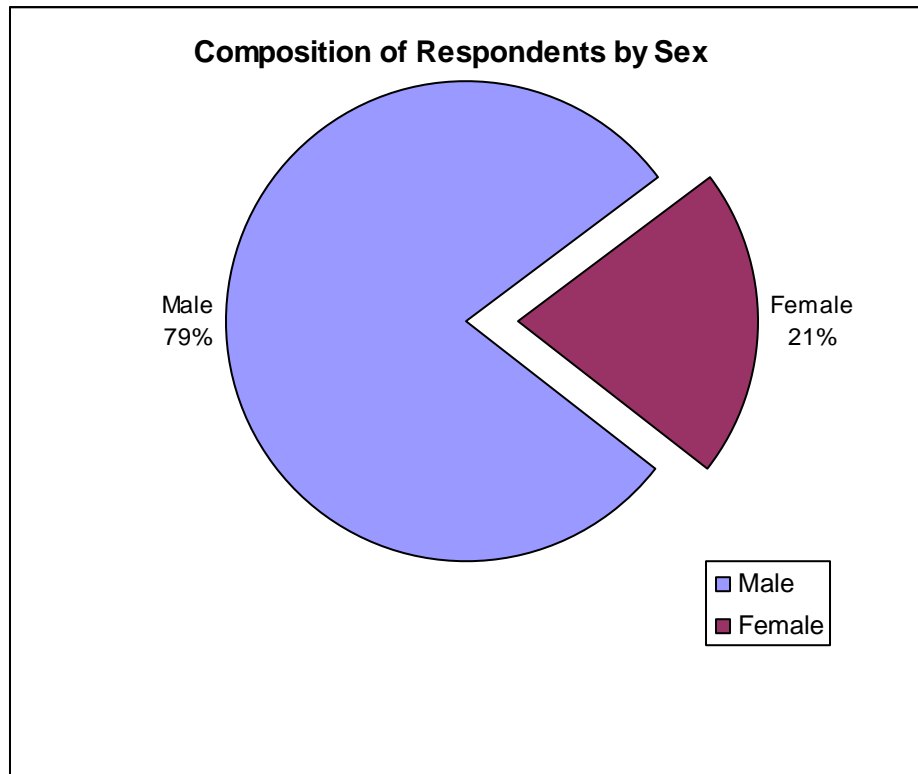
Piped water supply is available in all the three V.D.Cs but still a huge population is dependent on the tube well for the drinking water. The purity of tube well water is frequently questioned in Terai districts, but still severe cases of water born disease have not been reported.

#### **5.1.6 Composition of the Respondents by Sex**

Most of the respondents of such selected co-operatives were male. Out of 62 respondents 49 were male (62.9%) and only 13 were female (37.1%). It shows that participation of the female in the cooperative activities is still not encouraging. (See Fig. 5.4 below)



**Fig. 5.4 Compositions of respondents by Sex**



**Source: Field Survey 2008**

### **5.1.7 Types of Houses**

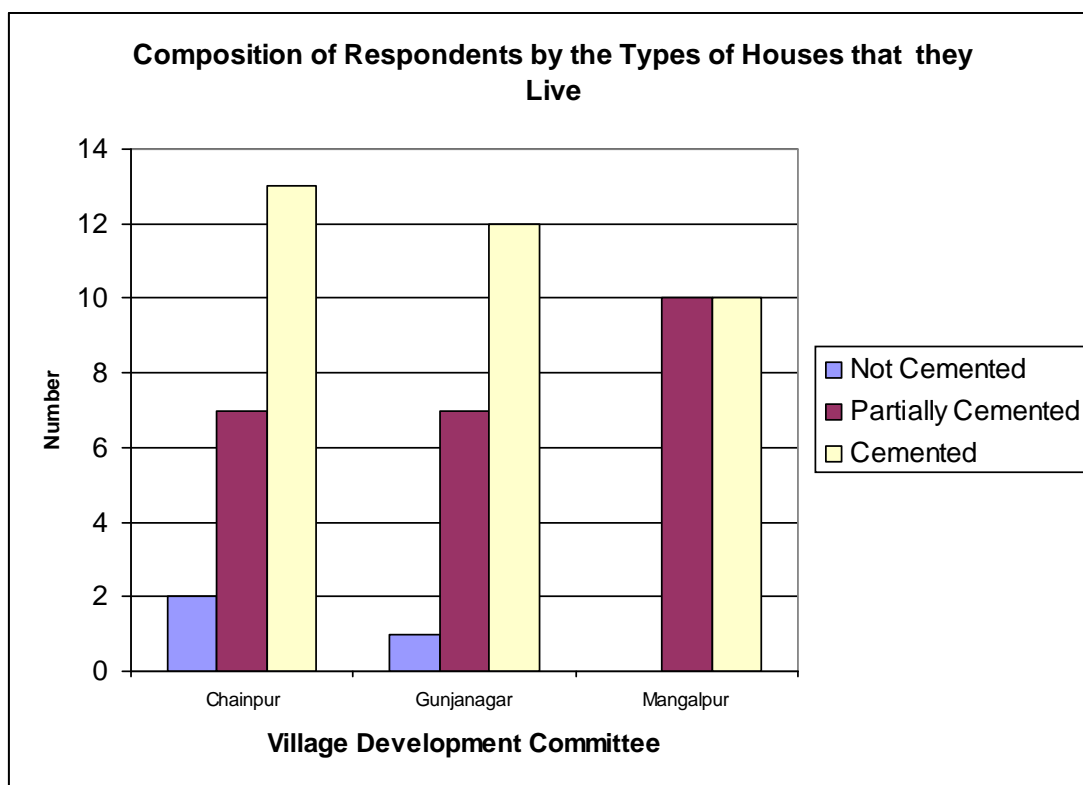
Latest poverty survey has considered the types of the houses as one of the variables to measure poverty. So this study has included this variable to describe the social status of the concerned farmers in the conviction that cemented, partially cemented and completely not cemented houses can represent different levels of poverty. The study manifested the following results:

Most of the sampled farmers representing all the three sampled cooperatives live in either cemented house or partially cemented house. Thirteen respondents out of sixty two (59.1%) from Gramin Taja Tarkari Tatha Falful Sahakari lived in cemented house. Other 7 (31.8%) live in partially cemented house and only two of them (9.1%) lived in the house which is not cemented. Likewise only one of the sampled respondents from Shiva Jyoti, Gunjanagar lived in the house which is not cemented. Seven (35%) of the houses, there, were partially cemented and remaining twelve (60%) were finely cemented. Out of 20 samples selected from Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur none of them lived in the house that was

not cemented; 50% of them were living in the cemented house and remaining 50% were living in partially cemented house.

Out of the sampled sixty two households only three (94.8%) lived in the houses which were not cemented, twenty four (38.7%) lived in partially cemented and thirty five (56.5%) were living in cemented house. (See Fig 5.5 below)

**Fig 5.5 Compositions of the Respondents by the Types of Houses**



Source: Field Survey 2008

## 5.2 Economic Aspects

### 5.2.1 Occupation

The primary occupation of the selected respondents is farming as the study was solely concerned with farmers. However, some of the respondents had other secondary occupation like teaching, running agri-shop and groceries too. At the time of data collection they showed their desire to be distinguished as farmers. That is why this study has so considered them.

### 5.2.2 Land Holdings

Land hold size of the sampled farmer has appeared to be much smaller than that is really desired for the commercial horticultural production. Small parcel of the land neither can host the technology nor does it allow for the real control over the means of transportation and marketing. Only two farmers out of sixty two samples owned more than two bighas (40 Kattha) of land. Nineteen of them (30.6%) owned less than 40 katthas and more than 20 katthas. The respondents, which comprised the largest group, i.e. 37.1% owned less than twenty katthas and more than 10katthas of land, out of them three (4.8%), owned less than 5 katthas. (See Table 5.3 below)

**Table 5.3**  
**No. Respondents by Land hold Size (in Kattha)**

VDCs	0-5	5-10	10-20	20-40	More Than 40
Chainpur	1	6	9	4	2
Gunjanagar	2	0	6	9	3
Mangalpur	0	2	8	6	4
<b>Total</b>	<b>3 (4.8%)</b>	<b>8 (12.9%)</b>	<b>23 (37%)</b>	<b>19 (30.6%)</b>	<b>9 (14.5%)</b>

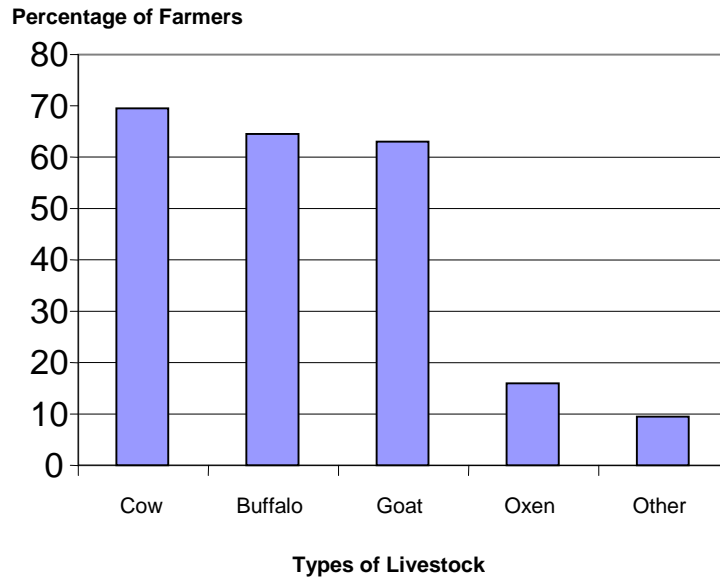
Source: Field Survey 2008

### 5.2.3 Livestock

Horticulture and livestock rearing have got close interrelationship. Livestock are reliable and unavoidable source of biotic manure for the farmers. On the other side such livestock, too, can feed on the byproducts of vegetables and fruits.

The most popular livestock kept by the sampled farmers of selected co-operatives are cow, buffalo and goat. Out of total 62 samples 43 of them (69.4%) had kept cow, forty (64.5%) had kept buffalo and thirty nine (62.9%) had kept goat. Other animals kept by the farmers are oxen, hen and duck. Ten farmers out of total sixty two (16.1%) had kept oxen. Numbers of farmers keeping oxen was considerably higher in Gunjanagar: eight out of 20 sampled household (40%) had kept oxen there. Only six of the sixty two farmers (9.7%) had kept other kind of live stocks like hen and duck. (See Fig. 5.6 below)

**Fig. 5.6 Compositions of the Respondents by the Livestock that they have Kept**



**Source: Field Survey 2008**

## **CHAPTER VI**

### **Role of Co-operatives in Marketing**

This chapter is concerned with the major findings related to the specific objective no. 1. The role of the concerned cooperatives in marketing the products of the member farmers have been explained here.

#### **6.1 Different Factors of Marketing and the Role of the Concerned Cooperatives**

Real changes in the life of rural farmers can only be realized when their products get the reasonable price in the market. The charm of vegetable and fruit production really declines when the farmers' products fail to reach to the market or when they obtain the money less than their expenditure from the sale. Such problems occur in various situations like:

- i) There is a lack of collection centre where farmers can assemble the products and can call the traders to buy their products
- ii) There is lack of chilling facility where fruits/ vegetables can be stored if in case some problems occur while marketing the products
- iii) Fruits/ vegetables are not sorted so that the charm of the products declines because of adulteration of the low quality product with the high quality marketable products
- iv) In the important centers there is not any fixed place where farmers can sale their products in the reasonable price
- v) Farmers lack the transportation facility either in the lack of road facility or in the lack of means of transportation
- vi) Or, the potential consumers or sale agents do not know about the product in the lack of sufficient advertisement

For these reasons, this study primarily aimed at identifying the efforts made by the concerned co-operatives in marketing the products of the farmers. Following are the major findings:

##### **6.1.1 Collection Centers**

It is sometimes impracticable and always costly to have the means of transportation to their farm. In such circumstances at least one collection centre either in the middle of

the major agricultural area, or in the rural market centre or on the side of the nearest roadways would cause a great ease in the marketing endeavors. But the study showed that only one out of three selected cooperatives, i.e. Gramin Taja Tarkari Tatha Falful Sahakari, Chainpur had managed such collection centre. However, this collection centre, too, was not in operation at the time of study. Field observation also revealed that this collection centre was very poorly equipped. The need of collection centre in other two cooperatives seemed very much apparent. When the farmers were asked what they wanted their cooperatives to do for them 16 out of 40 (which exclude the respondents from Chainpur) stated the need of a collection centre. Where as the farmers of Chainpur wanted their cooperatives to become well managed in terms of regularity and necessary equipments.

### **6.1.2 Chilling Facility**

It is not that farmers' products always get the market on the correct time easily. Sometimes because of natural disaster and sometimes because of 'Bandas' and 'Chakkajam', which are very common phenomena in Nepal, the marketable products decay in the farm or in the home of the farmers or in the collection centers. In such condition the need of collection centre is vigorously felt. Sometimes delay in marketing of the product is intentional; for an example a condition may be created that two days delay in marketing of the product reduces the intensity of competition in the market as the volume of the alien product reduces and, so that, the product is likely to get the better price. Chilling facility, sometimes, is also desired in the artificial quality enhancement of the horticultural products.

But, unfortunately it was revealed from the study that none of the sampled cooperatives had been able to manage this facility.

It is not only that the farmers lacked this facility but they were unaware of the need of this facility. Out of sixty two respondents answering to the question what they wanted their cooperatives to do for them, only five of them (i.e. 8.1%) stated the need of chilling facility.

### **6.1.3 Sorting of the Fruits and Vegetable**

It is always rational to sort the rotten, improperly grown, and infected and fade up fruits/ vegetables from the healthy and properly sized products. Such sorting on the one hand ensures the business profitability and it also makes the concerned

responsible toward the public health on the other. But, however, this work is to be done by cooperatives itself. This can be comfortably done by the individual farmers on their own, but direction and training should be given by the concerned cooperatives.

To the question whether their products were sorted before they were sent to the market all the respondents answered that it had been done. But, field observation easily verified that sorting was not sufficiently done in the case of any of the three selected cooperatives.

#### **6.1.4 Sales Depot**

Generally sales depot refers to the place, often located in the market centers, where the buyers and sellers meet to fulfill their trading needs. In the case of this study sales depot refers to the sales depots located in the market centre where farmers can sale their fruits and vegetables.

Well managed sales depots, run by the cooperatives, in the market centers ensures the sale of the products of the farmers. Such sales depots on the one hand can work as a bridge between potential costumers and producers and on the other hand can save the farmers from unhealthy competitions. But only one of the sampled cooperatives, i.e. Ganeshwor Taja Tarkari Tatha Falful Sahakari, Mangalpur did have a sale depot in the major market (i.e. Narayangarh). Another cooperative, Shivajyoti Taja Tarkari Tatha Falful Sahakari, Gungjanagar had assigned some traders to sale the products of the member farmers even if it lacked the sale depots.

Six farmers out of 22 samples (27.3%) in Chainpur demanded the sale depots to be managed in Kathmandu and Narayangarh when they were asked what they wanted their cooperatives to do for them.

#### **6.1.5 Transportation**

Cheap and reliable means of transportation decreases the production cost of the farmers on the one hand and increases the competitive efficiency of the farmer on the other, as the relative price of the farmers' product may increase in the market if they have to have to use the expensive means. This study, so, attempted to figure out how their cooperatives helped them in transporting their goods in order to determine the role of cooperatives in marketing.

A gloomy figure appeared at the completion of the study: none of the sampled cooperatives had their own means of transportation, neither they had been able to manage the transportation facility. As a result farmers had to spend a huge sum of money in the transportation. Farmers of Chainpur VDC reported that transportation cost per sack of product was even higher than 50 rupees when they had to go to the market to sell product to sell their product. While average transportation cost for the farmers of Mangalpur and Gunjanagar VDCs was 35 rupees per sack.

But the farmers did not seem much conscious about this problem. Out of the sixty two respondents asked what they wanted their cooperatives to do for them only nine of them (9.7%) pointed the need of transportation facility. (See table 6.1 below)

**Table 6.1**  
**Transportation Cost of the Respondents**

<b>Village Committee</b>	<b>Development</b>	<b>Transportation Cost in Monetary Value(NRS)</b>	<b>Representation in the Total Expenditure</b>
Chainpur		88105	6.9%
Gunjanagar		182712	10.8%
Mangalpur		227490	15.9%
<b>Total</b>		<b>498307</b>	<b>11.33%</b>

**Source: Field Survey 2008**

### **6.1.6 Advertising**

Advertising is integral part of modern marketing technique. An effective advertising informs the potential consumers about the product, raises the curiosity towards the product and persuade them to buy their products. But, here advertising may be more used to attract the wholesalers to buy the farm products. When such wholesalers are informed and convinced to buy the product of the farmers the risk of the farmers not being able to sell their products decreases on the one hand and they are also likely to get the reasonable price on the other. But, none of the sampled cooperatives had any programs of advertising. So many times they got quite less price for their products, and very often they had to wait for good luck to get better price.

### **6.2 Attitude of the People toward their Cooperatives**

Only seven years have passed since the fruits and vegetable cooperatives have been operated in Chitwan. Field survey showed that all the three selected cooperatives were



poorly managed. Only one of them, i.e. Gramin Taja Tarkari Tatha Falful Sahakari had kept the record in its own office. In the context of other two, chairmen and secretaries of the cooperatives had kept the official documents in their own home or workplace. Members had several complains about the distributions of the available opportunity and the creation of new ones. But still, majority of the members were satisfied toward role of their cooperatives.

During the survey an open-ended question was asked to examine their attitude toward the role of their cooperatives. And the responses were classified into four different categories through content analysis.

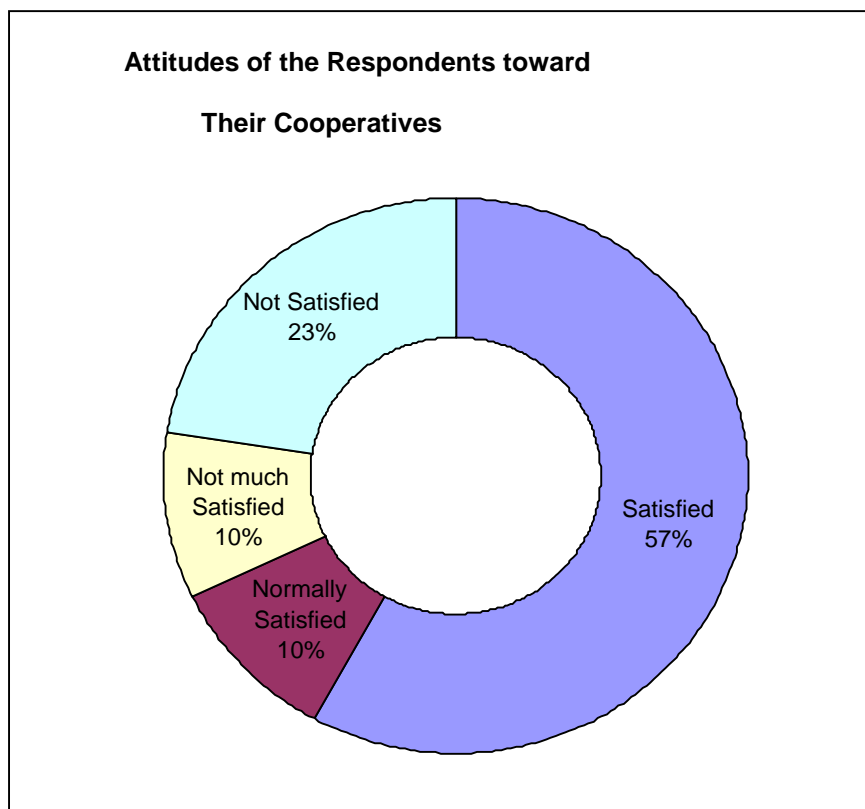
Out of sixty two samples, 36 respondents which represent 58.1% said that they were satisfied toward the role of the cooperatives. Six of them (9.7%) were normally satisfied and other six (9.7%) of them were not much satisfied. Fourteen of 62, however, said that they were not satisfied from the role of their cooperatives. This group represents 22.6% of the total. It seems that the concerned stake holders of the cooperatives should have to address the points of their dissatisfaction on time for the proper organizational management. (See Table 6.2 below)

**Table 6.2**  
**Attitude of the Respondents toward their Cooperatives**

<b>VDC</b>	<b>Satisfied</b>	<b>Normally Satisfied</b>	<b>Not much Satisfied</b>	<b>Not Satisfied</b>
Chainpur	10	2	3	7
Gunjanagar	11	2	3	4
Mangalpur	15	2	0	3
<b>Total</b>	<b>36 (57%)</b>	<b>6 (10%)</b>	<b>6 (10%)</b>	<b>14 (23%)</b>

**Source: Field Survey 2008**

**Fig. 6.1 Attitude of the Respondents toward their Cooperative shown in the Chart**



**Source: Field Survey 2008**

### **6.3 Expectations of the Farmers from their Cooperatives**

During the field survey sampled farmers were asked what they further expected their cooperatives to do for them. Their answers to these questions were varied and very important. Some of the expectations were general while other were very genuine. But none of them was less important. Largest number of the respondents wanted their cooperatives to take some special initiative in improving and ensuring market. Number of respondents with this expectation was 38 representing 61.3%. Thirty two respondents (51.6%), the second largest group, expected their cooperatives to improve their role in easy and cheap supply of good quality seeds, fertilizers, insecticides/pesticides and micronutrients. Sixteen of the sixty two respondents (25.8%) expected proper management of collection centre. Twelve respondents (19.4%) wanted their cooperatives to take some initiatives for soil test. Eleven of the sixty two respondents expected irrigation facility to be properly managed and other group of eleven expected sales depots to be managed. Each of these two groups represents 17.7%, and are 5<sup>th</sup> largest groups. Nine members expected transportation facility to be properly managed and five members wanted trainings. Some other

wanted regular meetings to be organized to fill up the communication gap, some expected credit facility. Awareness about less use of insecticides/ pesticides, proper maintenance of production calendar, researches, development of agricultural road networks, and provision of technician were other concerns and expectations of the respondents.

For the proper functioning of the cooperatives and success of the poverty reduction program such expectations must be addressed.

The role of cooperatives in marketing the product of the concerned rural farmers was studied keeping in mind the six different factors of marketing: collection center, chilling facility, sorting of the products, sale depots, transportation facility and advertisement.

The study showed that none of such factors were much positive which would really support marketing. Only one of the cooperatives had managed collection centre, only one of them did have sale depot in the market and none of them had chilling facility at the time of study. Sorting of the products for quality control had only been done by the concerned farmers, which is quite disorganized as it occurs completely on the desire and skill of farmers, but not on a fixed standard so determined by the cooperatives themselves. None of the sampled cooperatives owned any means of transportation, so, farmers were forced to use public means of transportation which are very costly and unreliable. It seemed that idea of advertising and entrepreneurial trainings have never entered the action plans of the cooperatives. For these all reasons it can be concluded that overall role of cooperatives in income generation of rural farmers through marketing was not satisfactory at the time of study.

## **CHAPTER VII**

### **Expenditure and Profit Analysis**

This chapter includes the findings related to the second objective of the study. It specially describes the different expenditures and the profit earned by the farmers. It has also analyzed the level of profit they have earned.

#### **7.1 Expenditures**

Expenditure is basic pre-requisite for any profit oriented activities. Often expenditure and profit remain directly proportional to each other if other variables remain constant. However, the study did not aim at finding such correlations, but only identifying the expenditure under different headings and the money obtained from sale.

##### **7.1.1 Expenditure on Seeds**

When the farmers make decisions to grow vegetables/fruits on their farm they have to think very carefully about the seed that they have to grow on their farm. Production from the farm and resulting profits depends upon the quality and quantity of the seeds that they apply in the form of input.

Expenditure on seeds was third largest among all the expenditures. It represented 11.44% of the total. Expenditure on seeds was comparatively higher in Gunjanagar. It may be because this VDC is little bit farther from the main city Narayangarh and main road. Study showed that farmers of Chainpur spent least in the seeds compared to other two VDCs.

##### **7.1.2 Expenditure in Fertilizers**

Biotic as well as chemical fertilizers are indispensable parts of every farm activities. Expenditure on this sub-heading was largest in the study area, which represented 29.2% of the total expenditure. Expenditure on fertilizer was largest in Gunjanagar, second largest in Chainpur and smallest in Mangalpur. However, a huge amount of fertilizer applied in the farm of the sampled farmers was obtained from the livestock that they had kept on their own. The tentative price has been assigned for such fertilizers, and is included in the gross expenditures. But one important thing to be noted is that farmers do not have to pay to anybody for the fertilizers that they have

obtained from their own livestock. Other fertilizers that sampled farmers used include sulfi, DAP, Euria, Potas, Borex, Zinc etc.

### **7.1.3 Expenditure on Insecticides/ pesticides and Micronutrients**

Study revealed that a considerable amount of money is spent on insecticides, pesticides and micro nutrients. Expenditure under this heading represented 5.04% of the total expenditure. Farmers seemed quite unaware of the negative effect of use of such chemicals. At the time of field discussion very few farmers seemed interested in reducing such use.

### **7.1.4 Expenditure on Irrigation**

Irrigation is another very important farm need. If the farm work is to be commercialized and the farm product is to be increased irrigation facility should be very cheap and reliable. But, irrigation facility in the study area was neither cheap nor reliable. The study showed that the source of water for irrigation was underground water for all the farmers, even though one of the largest river systems of the country flows near to this area. And, only few of the farmers had got subsidies and support in the use of electric motor for irrigation.

Irrigation in the study area represented 6.93% of the total expenditures, which is the 6<sup>th</sup> largest among different sub-headings. Study showed that irrigation cost in Gunjanagar VDC for sampled farmers was considerably lower compared to other VDCs and highest in Chainpur.

### **7.1.5 Expenditure on Labor**

Only the provision of seeds, fertilizer, insecticides and other nutrients including water is not the sufficient condition for the farm production. More important thing is that such inputs should be applied in the appropriate place, at the right time and on the right way. Such combination is only obtained with the support of labor force. A large number of labors from the time of preparation of the nursery to the marketing of the product should be used. So, the expenditure on labor often remains high in the farm activities. Less mechanized farm increases the labor intensive technique of farming, so that, it increases the expenditure on labor.

The study revealed that expenditure on labor was second highest representing 20.82% of the total expenditure after the fertilizers. Expenditure on the labor was highest in Chainpur VDC and smallest in Mangalpur.

#### **7.1.6 Expenditure in Tilling the Field**

Farmers have to use either oxen pulled plough or tractor to till the field. Such tilling occurs especially when the farmers have to prepare their farm for the growing of the crops. As the land surface of the study area is plain, people extensively use tractors to plough their field. But some farmers still use oxen.

Expenditure under this sub-heading is 5<sup>th</sup> largest representing 11.33% of the total.

#### **7.1.7 Expenditure in the Transportation**

People have to use different means of transportation for two basic reasons: one, when they have to go to the market centers to buy various farm inputs and equipments and next, when they have to sell their products. But the study has included only the second types of expenditures because the expenditure of first type is either too small or too fragmented to be calculated with accuracy. It has been also assumed that the sub-heading 'Other Expenditures' will include such fragmented expenditures.

Expenditure on transportation was fourth largest, representing 11.33% of the total expenditure. It was highest in Mangalpur VDC and smallest in Chainpur.

#### **7.1.8 Expenditure in Packaging**

Farmers need to buy plastic bags, jute/plastic sacks, crates, thread, needle etc. to make the product transportable. Such expenditure has been identified as packaging expenditure in this study.

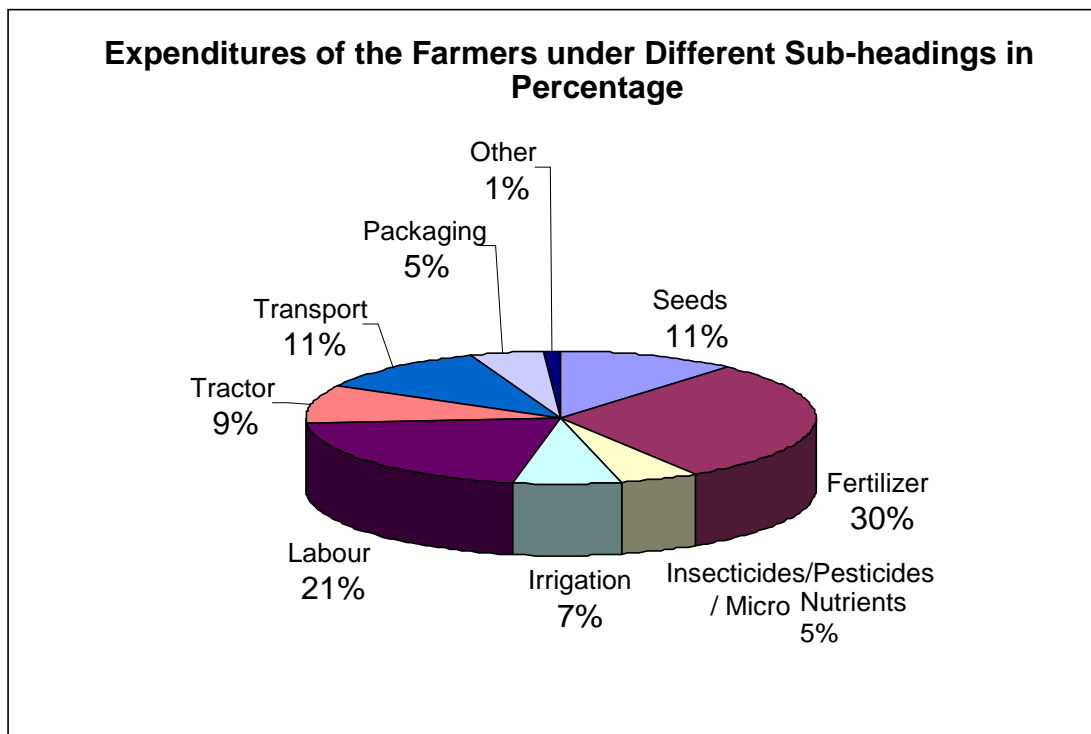
Expenditure in packaging was smallest among the eight sub-headings describing expenditures. It represented only 4.66 percent of the total. It was largest in Mangalpur and smallest in Chainpur.

#### **7.1.9 Other Expenditures**

Several other unidentified expenditures occur while producing the crops. Such expenditures are often petty and fragmented to be calculated separately. However, neglecting such expenditure questions the accuracy and validity of the research work. So, an attempt had been made to obtain the overall figure (if not specific) of such

expenditures. At the time of field survey respondents were asked to mention the figure of the expenditure other than those which were clearly listed. But many of the respondents could not produce such figure saying that the cost of such expenditures are normally equal to the profit which is obtained in the form of by products or other different ways. Still, some of the respondents had mentioned total amount of such expenditure, which represented 1.16% of the total expenditures. (See Fig 7.1 below)

**Fig. 7.1 Expenditure of the Farmers under Different Sub-headings**



Source: Field Survey 2065BS.

## 7.2 Profit Earned by the Farmers in Monetary Value

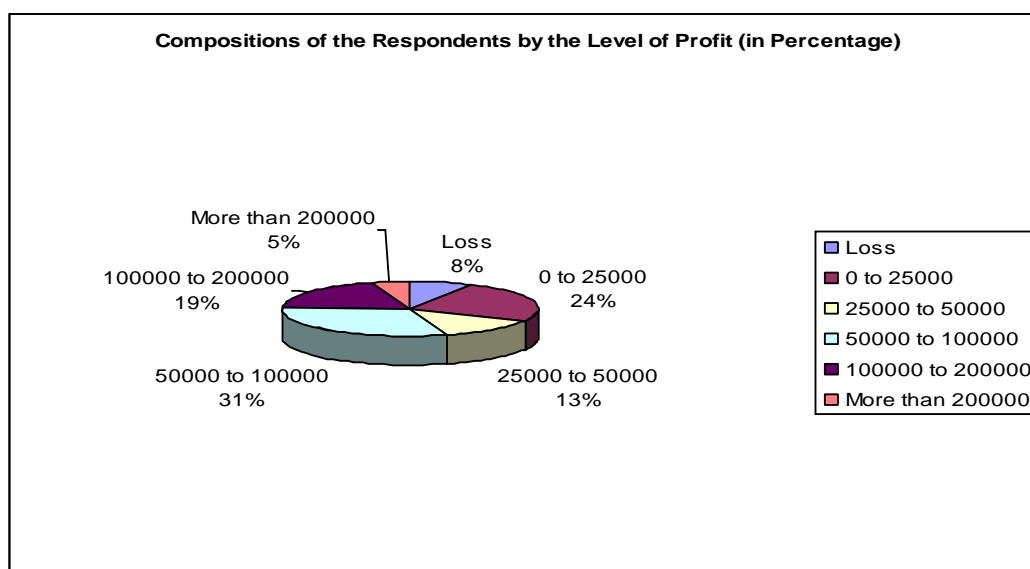
One of the primary objectives of this study was to find out whether the farmers, involved in fruits and vegetable cooperatives, were able to earn profit or not.

Profit is obtained when cost is subtracted from the total sale amount. Profit, for this study, has been derived by subtracting the total expenditure from the total money earned from the sale.

During the field survey sampled farmers were asked to mention the expenditure under different sub-headings as mentioned above, along with the total money that they obtained from the sale. Later, the total expenditures of individual respondents were subtracted from the total sale.

Such analysis revealed that more than 90% of the farmers were able to earn profit. Out of the sixty two respondents three were able to earn more than two hundred thousand in one season. This group represented 4.8% of the total; twelve other farmers' income was in between one hundred thousand to two hundred thousand rupees. This group represented 19.4%. Nineteen farmers which forms largest group representing 30.6%, earned the profit in between fifty thousand to one hundred thousand. Eight respondents (12.9%) earned in between twenty five thousand to fifty thousand and 24.2% earned less than 25 thousand. Out of total respondents five had to bear loss. (See Fig 7.2 below)

**Fig. 7.2 Composition of the Respondents by the Level of Profit they have Earned**



Thus, it seems that most of the farmers have been able to earn profit. But one important thing to be noted is that very large group of farmers earned only less than 25000NRs; 32.3% had earned only less than 25000NRs or they were in loss. Likewise, 45.2% of the farmers earned less than 50000NRs or they or in loss. In fact this is very nominal income. From this calculation it can be concluded that involvement of farmers in fruits and vegetable production through fruits and vegetable producers' cooperative has helped to raise their income level but contribution of such income in their life is very nominal. Generally, above mentioned incomes represent annual income of the concerned household. If this income is divided by the average household size of the country the figure will definitely appear horrible. So, the contribution of such cooperatives is very nominal in the daily life of farmers.



## **CHAPTER VIII**

### **Summary, Conclusion and Recommendation**

#### **8.1 Summary**

One of the set objectives of the study was to check the role of cooperatives in marketing the product of those farmers who were the members of concerned fruits and vegetables producers' cooperatives.

The farmers were not sufficiently helped in marketing their products. As supporting in marketing for a cooperative means managing a well equipped collection centre, where the products of the farmers can be collected and thereby sent to the market in an organized way so that the bargaining power of the farmers increases and they will not be cheated in the market by the brokers. Or, in other words, sale of the product can occur in a reasonable price. The study showed that only one of the three selected cooperatives only had been providing this facility, which, too, was not well managed. Chilling facility is another indispensable factor of horticultural marketing. But none of the selected cooperatives had been providing this facility to their members. In the lack of this facility the fruits and vegetables can not be stored for longer time when needed, so that, it has to be sent to the market even for quite low price. Only one of the cooperatives had sales depot in the market, and none of them had been able to manage transportation facility. Neither of the cooperatives had any advertising program nor they had conducted any market search. As a result, on the one hand wholesalers remained uninformed about the product and on the other hand the farmers could not change the style and items of production as per the need of the markets.

Field observation gave an insight that even if the production and productivity was high farmers could not earn good amount of profit or they had to bear a loss due to the lack of good marketing. Some of the farmers even reported that they could not even raise the half of the production cost from the sale of some crops.

Another objective of the study was to check whether the farmers involved in such cooperatives had been able to generate income.

More than 90% of the respondents had been able to earn the profit in the time included in the study. Out of total respondents 4.8% were able to earn more than 200,000NRs for one season. And 23.2% earned more than 100,000NRs in that time. Highest amount of profit was earned by the farmers of Gunjanagar and lowest by that of Chainpur.

Even though farmers had been able to earn profit the number of those who were in loss or who had earned quite nominal income was also noteworthy. Out of total, 8.1% of the farmers were in loss and 32.3% of the farmers were either in loss or their earning was less than 25,000 NRs. Out of total, 45.2% of the farmers were earning less than 50,000NRs or they were in loss. (See appendices 3 and 4)

## **8.2 Conclusion**

Even if the farm work is modernized and the farmers are able to produce in large amount, the farmers' lives can never improve if their products are not sold in the market in the reasonable price. It is often noticed that governmental and non governmental organizations, working around the country, are only focusing on the production. They customarily focus in increasing the farm inputs and mechanization, ignoring the entrepreneurial efficiency and the potential demand in the market. The same type of trend was prevalent in the study area. Concerned cooperatives had badly ignored the marketing dimension of their overall activities. As mentioned above most of the basic conditions were not fulfilled to promote marketing. As a result the farmers had to spend a huge amount of money while sending product to the market. Or sometimes, in the lack of transportation facility their product could not go to the market and, so that, they had to bear a heavy loss. An effective marketing also demands a wide knowledge about the possible demand and the capacity of production. An unplanned production, done without studying the possible future demand, always leads to the reduced cost to the farm product, which after all leads to the low return, or no return. Concerned stakeholders and the bureaucrats seemed quite unaware, if not indifferent, about these facts.

Many of the respondents reported loss from many of the crops, which had reduced their interest toward the production activity on the one hand and their faith toward the cooperatives had also been badly declining.

Chitwan district holds environmental and geo-physical potentials for fruits and vegetables production. Cooperatives can be the effective tool to initiate and organize commercial production. The study indicates that such cooperatives can be reasonable and reliable tools of income generation. But, massive change in the institutional and functional procedures is a must.

Even if in the too small amount, most of the farmers had been able to earn profit. So, it can be concluded that the involvement of farmers in cooperatives as fruits and

vegetable producers had helped in income generation, even though in the small amount. But it is clear that the role of cooperatives in marketing of the product was quite less supportive for them to earn. However, it is not to be concluded that such cooperatives are ineffective means of poverty reduction. The stakeholders should be much concerned about the empowerment of such cooperatives in terms of physical facilities and the procedural efficiencies. Such amendments and revitalization can establish such cooperatives as the effective means of income generation not only in Chitwan District but in the whole country.

### **8.3 Recommendation**

The recommendations are based upon the findings and the practical field experiences. It is expected that these recommendations will be helpful for the cooperative related governmental organizations, executive members of the concerned cooperatives and the member farmers in their activities.

#### **Recommendations related to the Governmental Stakeholders**

- ) Fruits and vegetables producers' cooperative is latest diversification of cooperatives in Chitwan. The executive members as well as other concerned farmers are not well trained about the principles and the functioning procedures of the cooperatives. So, frequent conceptual and procedural trainings are to be given to the concerned in order to improve their functioning.
- ) Official records, including accounts of such cooperative are very poorly maintained. So, the concerned stakeholders are required to follow them up actively in this regard.
- ) Field experience showed that approach to the governmental subsidies in irrigation is not proportional. Only the elites and executive members have been getting the facilities. Such partiality in distribution of services should be avoided.

#### **Recommendation related to Concerned Cooperative**

- ) Cooperatives can better function only with the organized efforts. But field experience showed that there was no uniformity and coordination even in the

production pattern. Because of this supply of seeds, fertilizers, insecticides have not been effective.

- ) Market demands a certain product at a fixed time. Earlier or late supply will have to suffer either more competition or reduced demand. So, a scientific production calendar based upon the market survey and soil and climate study is to be introduced every year and farmers' activities should be guided by it.
- ) Supply of hygienic product is on the one hand pre-condition for sustainable marketing and it is a social responsibility on the other. So the farmers should be reducing the use of insecticides, pesticides, micronutrients and chemical fertilizer replacing them by the organic methods of production like IPM, use of bio-fertilizers etc.

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## APPENDICES

Appendix 1: Interview schedule (meant for the officials of the concerned cooperatives)

Appendix 2 : Questionnaire (meant for the individual farmers)

Appendix 3 : Expenditure of the Respondents under different Sub-headings:

Appendix 4 : Expenditures and Profit Analysis

Appendix 5 : Photos showing some of the Glimpses of the Study Area

### Appendix 1

#### Interview schedule (meant for the officials of the concerned cooperatives)

1. Questions related to the study area:

1.1 Name of the VDC:

1.2 Area in Sq km:

1.3 Population:

1.4 Schools (Please mention in numbers)

Primary: -----Secondary: ----- Higher Secondary: -----

1.5 Total no. of health posts/centers in the study area: -----

1.6 Road facility (To be ticked): Motor able/ non motor able

1.7 Types of motor able road, if any (to be ticked): Earthen/ graveled/  
blacktopped

2. Questions related to objectives of the study.

2.1 Related to marketing (to be ticked)

2.1.1 Is there any collection centre, managed by your cooperative, in order to  
facilitate marketing? Yes  No

2.1.2 Is there any chilling facility inside/ outside the collection centre,  
managed by the cooperative to keep vegetables/ fruits fresh?  
Yes  No

2.1.3 Are the fruits/ vegetables sorted before they are marketed?  
Yes  No

2.1.4 Is there any sales depot in the market managed by your cooperative to  
sale the farm products? Yes  No

2.1.5 If not, does your cooperative work with other marketing agents/ depots  
to market the products? Yes  No

2.1.6 How do the farmers transport their products to the markets?

Cooperative manages the transportation

They have to manage on their own

2.1.7 Does your cooperative conduct advertising activities to market the products?

Some time it does  It has never done

It does, but not sufficiently

3. Total no. of members in the cooperatives -----

## Appendix 2

### Questionnaire (meant for the individual farmers)

1. Questions related to particular respondents:

1.1 Name:

1.2 Sex: Male/ female

1.3 Occupation:

1.4 Education:

1.5 Religion:

1.6 Types of house: Cemented/ partially cemented/ not cemented

1.7 Land owned by the households (in kattha)

Khet----- Bari-----

1.8 Livestock owned by the households (please tick if you own)

a) Buffalo  b) Cow  c) Ox

d) Goat  e) Sheep  f) Other

1.9 Religion:

1.10 Types of house: Cemented/ partially cemented/ not cemented

1.11 Land owned by the households (in kattha)

Khet----- Bari-----

1.12 Livestock owned by the households (please tick if you own)

a) Buffalo  b) Cow  c) Ox

d) Goat  e) Sheep  f) Other

2. Name of the concerned cooperatives -----

3. Are your products always sold in the market?

What ever we have produced can be sold in the market

Most of our products can not get market

Most of our product can be sold

4. Questions related to objective no. 2

4.1 Would you please provide a brief description of the seeds of five most important fruits and/or vegetables as shown in the following table?

S.N.	Seeds of Fruits/vegetable	Unit	Quantity	Rate	Total
1					
2					
3					
4					
5					

4.2 Would you please provide a brief description of the fertilizers you have applied for the above mentioned fruits/ vegetables as shown in the following table?

S.N.	Fertilizers/Manure	Unit	Quantity	Rate	Total
1					
2					
3					
4					
5					

4.3 Would you please provide a brief description of the insecticides/ pesticides/Micro nutrients, if you have applied any, in your fruits/ vegetable farm as shown below?

S.N.	Insecticides/ Pesticides	Unit	Quantity	Rate	Total
1					
2					
3					
4					
5					



4.4 Would you please provide a brief description about the irrigation cost for the above mentioned crops as shown in the following table?

S.N.	Crops	Land (in Kattha)	Irrigation cost/hour	Total time (in hour)	Total
1					
2					
3					
4					
5					

4.5 Would you please provide a brief description about the labour cost for the above mentioned crops as shown in the following table?

S.N.	Crops	Total no. of labour	Rate	Total
1				
2				
3				
4				
5				

4.6 Would you please provide a brief description about the tractor cost for the above mentioned crops as shown in the following table?

S.N.	Crops	Crops Area	Time Unit	Rate	Total
1					
2					
3					
4					
5					

4.7 Would you please provide a brief description about the transportation cost for the above mentioned crops as shown in the following table?

S.N.	Crops	Unit	Quantity	Rate	Total
1					
2					
3					
4					
5					

4.8 Would you please provide a brief description about the packaging cost for the above mentioned crops as shown in the following table?

S.N.	Crops	Total Packaging Cost

4.9 Would you please mention the rate and quantity of the above mentioned fruits and vegetables on which you sold in the market as shown below?

S.N.	Fruits/ Vegetable	Unit	Quantity	Rate	Total
1					
2					
3					
4					
5					

5. Please mention if there are any other costs excepting ones mentioned above -----

6. Are you satisfied with the role of cooperative in improving your income status?

7. Please mention what your cooperative should do to improve your income status further?

### Appendix 3

#### Expenditure of the Respondents under different Sub-headings:

Resp*	Seeds	Fertilizers	Insecti**	Irrigation	Labour	Tractor	Transport	Packing	Other	Total
A	4000	7194	4365	4250	16500	9000	2660	3278	1340	52587
B	5660	28020	2290	9900	20040	7500	640	770	1700	76520
C	23740	52500	9580	658	28270	13700	32000	10900	0	171348
D	4105	20500	2545	2880	12840	5400	3340	1580	0	53190
E	1890	8890	10000	800	4000	700	2900	1900	0	31080
F	7060	3600	1150	1960	27190	4200	430	1800	1900	49290
G	3380	1300	4000	4050	11400	11200	2600	2600	0	40530
H	4820	1300	2500	2124	23920	6800	5050	3600	0	50114
I	5080	8785	1932	5700	18360	9450	800	2244	640	52991
J	9090	25120	6240	4000	11400	4800	1000	0	0	61650
K	4175	16460	3530	3600	15240	10240	2740	4270	1520	61775
L	8790	25750	3250	8970	26900	9000	2100	2460	800	88020
M	5090	7440	3378	1350	9880	10245	3340	2938	720	44381
N	805	6130	2940	2280	6000	2976	950	1080	450	23611
O	5000	13770	1528	1800	8400	3240	0	0	1500	35238
P	3130	5960	2400	12000	19200	12800	5850	4240	800	66380
Q	3245	12004	2590	8280	15500	10200	3010	4120	525	59474
R	1200	5100	2990	2430	9240	1550	3750	3990	50	30300
S	3600	21760	2300	3240	6100	6470	660	2100	1100	47330
T	1350	10250	2400	1650	10000	2600	1860	1220	0	31330
U	6200	26300	7650	5400	16080	4550	4850	2900	2840	76770
V	5428	17490	4010	5100	21960	5100	7575	2675	0	69338
<b>Total</b>	<b>116838</b>	<b>325623</b>	<b>83568</b>	<b>92422</b>	<b>338420</b>	<b>151721</b>	<b>88105</b>	<b>60665</b>	<b>15885</b>	<b>1273247</b>
A'	7380	25410	3600	847	20680	7425	6200	2120	0	73662
B'	13250	40160	2300	650	8000	2000	5040	2000	0	73400
C'	80600	127660	18100	1716	33100	11650	89950	33800	0	396576
D'	6300	23685	3085	0	7260	3685	1015	377	0	45407
E'	1560	8730	700	150	4025	2000	700	260	0	18125
F'	3940	12790	1835	8640	7590	1430	1855	689	0	38769
G'	8060	43215	6200	1536	34500	7670	10400	4360	2500	118441
H'	17540	38500	1830	804	27600	6000	902	1038	1200	95414
I'	2280	1165	5090	42	11900	3400	1030	260	0	25167
J'	5150	21520	3360	144	15500	9200	12390	4602	15000	86866
K'	3750	9128	3375	22	10200	1815	2800	1040	0	32130
L'	4940	28780	5310	950	11110	2090	700	260	0	54140
M'	1270	13150	2350	800	11800	3700	2600	1047	5000	41717
N'	6130	45800	3500	2200	9350	18000	6500	2300	0	93780
O'	12990	54390	9550	896	22590	7080	12425	4260	10000	134181
P'	9000	25767	4020	638	13000	3900	9800	3360	0	69485
Q'	8100	59200	7000	1500	24000	11000	8325	4425	0	123550
R'	11960	19200	1425	110	6500	3300	1960	616	0	45071
S'	12880	36400	2440	396	15900	5500	3850	1540	0	78906
T'	2980	21570	542	111	9600	6300	4270	1830	0	47203
<b>Total</b>	<b>220060</b>	<b>656220</b>	<b>85612</b>	<b>22152</b>	<b>304205</b>	<b>117145</b>	<b>182712</b>	<b>70184</b>	<b>33700</b>	<b>1691990</b>
A''	9750	7825	1775	6660	6500	2460	4340	1303	0	40613
B''	3550	6850	1200	182	4500	2784	3745	1190	0	24001
C''	7400	10960	1950	7500	13000	2880	9450	2000	0	55140
D''	4420	9705	798	4860	3200	960	2975	890	0	27808

E"	7590	21060	3960	7650	11500	7740	10325	3053	0	72878
F"	11600	14300	4910	16800	13000	6000	15600	6760	0	88970
G"	6820	28050	4700	42800	19500	23040	20850	7670	0	153430
H"	7050	5504	775	1500	14300	8516	6700	2340	0	46685
I"	5615	11370	870	14000	22300	5700	8755	3815	0	72425
J"	5350	14350	790	4800	14700	6500	4175	1840	0	52505
K"	5540	10800	870	14000	22300	5700	9300	4100	0	72610
L"	5100	19200	1240	12800	20000	7000	14750	5900	0	85990
M"	6165	10150	3280	6540	16000	3850	11200	4160	0	61345
N"	6880	11070	1180	9600	18300	1634	8730	2964	0	60358
O"	6840	11380	1450	8800	14700	9960	8225	2515	0	63870
P"	10410	14290	4194	4000	7400	5400	21350	6490	0	73534
Q"	12805	23340	5953	8200	5600	7200	9655	3100	1200	77053
R"	24490	42430	2200	2304	20700	22680	42000	9480	0	166284
S"	7080	13460	6280	5880	6500	5040	5950	2035	0	52225
T"	11800	15750	4040	11200	18750	10311	9415	2585	0	83851
<b>Total</b>	<b>166255</b>	<b>301844</b>	<b>52415</b>	<b>190076</b>	<b>272750</b>	<b>145355</b>	<b>227490</b>	<b>74190</b>	<b>1200</b>	<b>1431575</b>

Note: \* respondents:

A-V respondents of Chainpur VDC; A'- T' respondents of Gunjanagar VDC;

A''- T'' respondents of Mangalpur VDC

\*\* Insecticides/pesticides/ micronutrients

## Appendix 4

### Expenditures and Profit Analysis

Respondents	Total Expenditure	Total Money Obtained from Sale	Profit
A	52587	124746	70885
B	76520	142560	66040
C	171348	355410	184062
D	53190	78708	25518
E	31080	163000	131920
F	49290	137022	87732
G	40530	78100	37570
H	50114	110710	60596
I	52991	73968	20977
J	61650	90000	28350
K	61775	197010	135235
L	88020	95956	7936
M	44381	104692	60311
N	23611	46160	22549
O	35238	48000	12762
P	66380	356500	290120
Q	59474	68900	9426
R	30300	136471	106171
S	47330	55000	7670
T	31330	83370	52040
U	76770	184000	107230
V	69338	193380	124042
<b>TOTAL</b>	<b>1273247</b>	<b>2923663</b>	<b>1649142</b>



## Appendix 5

### Photos showing some of the Glimpses of the Study Area



**Hari Devkota, a farmer in Gunjanagar, giving support to Bean**



**A Sponge Gourd Farm in Chainpur**



Baburam Lamichhane, farmer of Gunjanagar VDC weeding the nursery.  
Preparing Nursery is often expensive and tedious task for Farmers.



**Researcher Collecting Data**

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