CHAPTER -I
Introduction

1.1 Backgrounds of the study

Nepal being a mountainous country has both problems and opportunities. The country has high potentiality of the water resources. Several perennial streams and rivulets are flowing towards south and many traditional water mills are developed on the banks of these streams which are operated for grinding cereals. A rough estimate shows that there are 25,000 traditional water mills (Ghattas) in Nepal, one mill typically servicing 20-50 households. However, Ghatta has very low efficiency producing only 0.5 KW of power and takes long time for agro-processing. Hence, the life of rural people is still difficult and monotonous while working with these traditional Ghattas.

As the human poverty rate is highly concentrated in the rural areas, the development scholars developed the idea in 1990s that the development strategy should focus on improving informal sectors of developing countries, especially, in rural areas to improve their livelihood. Improved Water Mill (IWM) programme represents one of such idea which tends to improve rural livelihood through minimizing their workload, increasing efficiency and motivating them for developing entrepreneurship. Compared to traditional Ghattas, IWM can be used for a longer period in the dry season as well.

The IWM is an intermediate technology that increases the efficiency of traditional water mills resulting in increased energy output thus saving the time of the millers as well as beneficiaries. The improved mill service is translated to higher agro processing capacity as well as diversified range of services such as hulling, oil expelling, saw milling etc. In addition to that it offers the opportunity to generate electricity for lighting purpose.

Knowing the benefits and use of this traditional technology, the Government of Nepal through Alternative Energy Promotion Centre (AEPC) and Dutch Government through Directorate General for Foreign Cooperation (DGIS) through Netherlands Development Cooperation (SNV) is implementing Improved Water Mill Programme since 2003. Additionally, SNV has also been providing technical inputs through its advisory services in the sector.

IWM Programme is one of the components of the Renewable Energy Sector Programme (Designed from 2003-2010 June) having aim to improve the living conditions of rural households and reduce environmental pollution through further development and dissemination of improved water mills, biogas and other Renewable Energy Technologies such as improved cook stoves, solar, etc in rural Nepal.

The implementer of IWM Programme is a national Non Government Organisation-Centre for Rural Technology, Nepal and the Programme has covered 16 hill districts of Nepal. Till June 31, 2009, altogether 5,215 IWMs have been installed and among them 683 are Long Shaft IWMs having end use diversification opportunities.

Most of the water millers are engaged in processing of flours like maize, wheat and millet as a mainstream of their work. The millers are getting the remuneration for grinding of different flours in kinds and they are using this for their subsistence in over the years.

1.2 History of water Mill

Water wheel is one of the earliest types of machine that uses the flowing water energy and rotating shaft power is produced as mechanical output. By 200 BC, water powered gristmills began to appear in substantial number in Egypt and by the first century C.E. water wheels and water powered mills were common through out the Mediterranean literature.

In general there are two types of vertical water wheels, undershoot and overshoot. Oral history tells that, Ghattas technology was transferred from Tibet to Nepal many years ago during the time of Newar Dynasty. After some practice, some Nepalese who belong to the Nakarmi (Metal workers) caste could develop the working Ghatta in Nepal. The technology was found to be suitable for many rural areas and spread from one corner of the country to another**. (Marita, 2007, P. 5)**

1.3 Improved Water Wheel

Improved water wheel is an impulse type vertical shaft mechanical device used for converting hydrological power into the useful mechanical output. It is a means of interacting energy from falling water.

Water wheel runs under the impulse actions of water jet coming from nozzle at the bottom end of penstock. It works best under the condition of low and medium flow.

Improved Water wheels have advantages. Firstly, they are reasonably easy to manufacture (through welding process) and secondly low cost of manufacturing. This makes it to use for many micro-hydro site (200W – 3kW). Thirdly, the water wheel can be used for a range of heads and flows.

The improved water wheel consists of hub around which buckets are attached by welding along with the help of guide rings. The buckets are curved blade (plate) designed to deflect the water jet coming from nozzle and hence, in turn it rotates the hub. The hub is coupled with shaft to transmit power into either the grinding stone or vertical transmission shaft from which the related machine is driven. The bottom end of the coupled shaft is supported by metal base plate.

Types of IWM system

1. Short shaft: It is used only for grinding purpose.
2. Long shaft: It is used for multi purpose.

1.3.1 Working Principle of IWM

The atmospheric water has kinetic and potential energy. When this water falls from a height (i.e. penstock) and exits through nozzle, all the water energy is converted into the kinetic energy in the form of high velocity jet. This high velocity jet when strike on the blade of runner, the jet not only reduced in it's velocity but also get deflected. So due to this impulse action, the blade experiences a tangential force that is responsible to rotate the runner. Hence the fluid (water) energy is converted into mechanical (rotating) energy. This rotating energy is transmitted by coupled shaft into either the grinding stone or vertical transmission shaft from which the related machine is driven. Hence the food processing is possible from waterpower in IWM.

1.3.2 Technical Aspects of IWM

IWM needs less repair & maintenance and can be run by less amount of water compared to traditional one and on the other hand it can be generate more mechanical power of kinetic energy of same available water sources. Generation of more mechanical power has resulted into possibility for adding others end uses services such as paddy hauler, oil expeller, wood sawing, electrification etc.

Several efforts have been made till now or technical improvement suggested improving the performance and to diversify the end use applications of the improved water mill.

1. Improvement by increasing flow and head of water, hence the total water force into the runner will be increased.
2. Replacement of wooden runner by metal type. This increased the turning speed at least two fold, enhances the torque, power and availability of the runner is substantially improved.
3. Replacement of wooden chute with smooth plastic HDPE pipe having a nozzle. Closed plastic have pressure flow and water jet with low friction loss. **(Marita, 2007, P. 6)**

1.3.3 Components of IWM

1.3.3.1 Civil Components

Civil Components are those components which includes the following constructions:

1. Weir: It is the dam required to obstacle the river flow and hence the water flows into the canal.
2. Trash rack: It prevents from logs, stones, leaves etc coming to canal during flooding.
3. Intake: It divert the river water into the canal
4. Canal: It carries the water from intake to penstock.
5. Fore bay: It is the place to collect the water coming from canal at the top of the penstock. It helps to sediments small particles.
6. Spill way: It is portion of canal from which enters water is diverted to river.
7. Mill house: It consists of components of mill.

1.3.3.2 Mechanical components

Mechanical Components are those components which includes the following mechanical parts:

1. Penstock: It is a closed conduit at elevation that carries water from fore bay to the runner. It carries water at high pressure and this water exits through nozzle at high velocity.

2. Runner: It is the prime mover that converts the kinetic energy into the rotating shaft output power.

3. Other: Shaft, Rynd (Phalli), Pivot, Base Plate, Pivot pin, Belt etc. **(CRT/N, 2005, P.9)**

1.4 Kathmandu Valley

The Kathmandu Valley, the capital, is the political, commercial and cultural hub of Nepal. Spread across an area of 360 square kilometers and at an altitude of 1336 meter above the sea level, Kathmandu is an exotic and fascinating showcase of a very rich culture, art and tradition. The valley, roughly oval bowl measuring 24 km east-west and 19 km north-south, is encircled by a range of green terraced hills and dotted by compact clusters of red tiled-roofed houses.

A remarkable legend speaks that the valley was once covered by a lake until the Bodhisattva Manjushri raised his sword of wisdom and sliced a passage through the mountain walls, draining the water and creating the first settlements.

The valley embraces most of Nepal's ethinc groups, but Newars are the indigenous inhabitants and the creators of the valley's splendid civilization.

Not very long ago, it was said that there were just as many houses as there were temples and shrines in Kathmandu valley. Now, of course, that fact does not hold true because of the rapid urbanization and population growth in the last three decades. Nevertheless, the valley still exhibits a living, breathing entity,a vital culture that has miraculously survived till now.

The valley consists of three fabulous cities of great historic and cultural interest. These legendry cities go by the names of:

1. Kathmandu
2. Lalitpur or Patan
3. Bhaktapur

1.4.1 Lalitpur or Patan

Just across the holy Bagmati river stands another ancient city called Lalitpur. A twenty-minute cab ride from Kathmandu city, Lalitpur is a charming city which has still retained its tranquil ambience. Walking down the quiet, narrow streets of the city, you would come across traditional building, exquisite temples and tiny shops of artists, metalworkers, wood workers and stonecutters. The city is indeed renowned for its fine craftmanship.

1.4.2 Bhaktapur (Bhadgaon)

Situated at an altitude of 1401 meter, Bhaktapur covers an area of 4 square miles. Shaped liked a conch-shell, Bhaktapur means the city of devotees. Pottery and weaving are its traditional industries. The city lies about 14 km east of Kathmandu city and can be reached by public transport and by trolley (electric) buses.

1.4.2.1 Major Tourist Attractions

1. Bhaktapur Durbar Square
2. Nyatpola Temple
3. Bhairavnath Temple
4. Dattatraya Square
5. Potter's Square
6. Surya Vinayak
7. Thimi
8. The Bronze and Brass Museum **(www.nepalhomepage.com)**

1.5 Statement of the Problem

Although IWM has improved the milling efficiency and eased the rural livelihood in many ways including the electricity generation from long shaft schemes, the millers or their organisation Ghatta Owners'Organisation (GOA) has not found the proper market for their milled products. The primary problem is lack of proper marketing knowledge among the stakeholders of IWM programme. Similarly, there is no market study related to demand of the product and different marketing tools to create the demand. The producers or their association at local or community level naturally lack such expertise. GOA or Ghatta owners were also found lacking skills to enter and retain into the market as a part of their marketing strategy. Hence, the key problems is identified as creating market of these products targeting Kathmandu's urban consumers as potential market.

As a member of GOA is a small producer and GOA a small organisation and their perspective buyers like department stores, groceries, bakeries or restaurants have numerous options in the market IWM products are likely to enter into the buyer driven market. However, the idea of introducing IWM products into the buyer driven market seems a challenging schemes as the producer may need to fulfil numerous standards of the retailers including the quality of the products and product differentiation. Further, these small scale products shall also compete with large scale and branded formal sector products.

In connection to this by the intervention of the Programme, the millers, its groups and their association- Ghatta Owners Associations are also been engaged to encourage millers for the grinding of flours and via marketing steps to sell in near by markets. Similarly some Ghatta Owners Associations also tried to bring the flours in the market having support from IWM Programme in the past. But due to lack of proper marketing knowledge and market study among the stake holders of the programme, the efforts have been halted at the moment. Therefore, this study is focused to see the feasibility and prospect for these IWM Products. Addressing the key issues, the study tries to answer the following questions:

1. What is the present market structure of improved water mill in Kathmandu Valley?
2. What is the potential market size of IWM products?
3. What are the problems and prospects of IWM Products

1.6 Objectives of the study

The overall objective of this study is to look the market for IWM Products mainly in Kathmandu Valley and possible ways to market the products in potential segments of the market.

The specific objectives of this study are:

1.6.1 To analyze the market for IWM Products especially for maize, wheat and millet flour in Kathmandu.

1.6.2 To find out the present market size and potential market share of IWM products.

1.6.3 To identify problems and prospects of IWM products

1.6.4 To apply the suggestions based on this research work to respective organization, government and all concerned authority.

1.7 Limitations of the study

This research is the requirement for the partial fulfillment of master's degree in Management. The researcher being a student and having a limited time and resources, so this research work is not free from limitations. A research is a full blaze and vast investigation study for the settlement of the problems. It needs full time, adequate amount of money and authentic information. So these factors are assumed to be the limit of this study. Some others are:

1. This is small study covers to a small portion of the survey in the Kathmandu valley particularly Kathmandu Metropolitan City and Lalitpur Sub-Metropolitan City. So that the conclusion of this study may not be coincide with the other urban areas of the country.
2. This study will not give more attention to the data outside the Kathmandu valley due to limit time and resources.

1.8 Organization of the Study

This study has been divided into five chapters, namely Introduction, Review of Literature, Research methodology, Data Presentation and Analysis and Summary, Conclusion and Recommendation.

The first chapter i.e. Introduction has been focused on the explanation of general background of the study. It contains introduction, objectives and limitation of the study.
The second chapter is designed to examine the review of literature especially conceptual framework, study of various literatures relevant to this study and review of previous study.
The third chapter describes the methodological aspects of the study and it contains research design, nature and source of data, population and sample, data collection technique and methods of data analysis.
The fourth chapter is the main body part of the study in which data presentation, analysis and their interpretation is included. Major findings of the study are also presented in this chapter.
Finally a summary, conclusions and some recommendations are presented in fifth chapter. The bibliography and appendices are presented at the end.

CHAPTER -II

REVIEW OF LITERATURE

The purpose of literature review is to find out what research studies have been conducted in one's chosen field of study and what remains to be done. It provides the foundation for developing comprehensive theoretical framework from which hypothesis can be developed for testing. **(Wolf and Pant: 2003,: : 35)**
This chapter reviews the concepts concerning the subject matter that are written on text books in one hand and it reviews the previous studies which are related to the subject matter of this study on the other.

2.1 Conceptual Framework

For the review purpose, the researcher has undergone conceptual aspects of marketing and different relevant terminology. Therefore the objectives of the chapter are to provide the essential knowledge of different aspects of marketing which are presented as follows:

2.1.1 Marketing

Marketing deals with identifying and meeting human and social needs. One of the shortest definitions of marketing is meeting needs profitability. **(Kotler and Keller Lane: 2007, : : 8)**
According to American Marketing Association, Marketing is the process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchanges that satisfy individual and organizational goals.
According to William J. Stanton, Marketing is total system of business activities design to plan, price, promote and distribute want satisfying products to target markets to achieve organizational objectives. **(Agrawal: 2002, : : 2)**

2.1.1.1Components of marketing mix

a. Product mix
b. Price mix
c. Place mix
d. Promotion mix

a. Product mix

A product is any offering that can satisfy customer need and wants. It can be goods, services, ideas, experiences, events, places, properties, organization and information.
Components of product mix consist of:
Product design(size, shape, colour, etc.)
Product variety: Product line and items
Quality: Standardization and grading
Features: Size and colour
Branding and trademarks: name, ark, sign, symbol
Packaging: container and wrapper
Services: presale or after sales service
Warranties: free repair and maintenance service

b. Price mix

Price is a amount of money that customer pay for the product. Components of price mix consist of:

Setting list price: It is based on pricing objective

Discount and allowance: They provide price flexibility

Terms of sale: They are credit items, payment period

c. Place (Distribution) mix

Place includes the various activities undertaken to make the product accessible and available to target customers. Components of place mix consist of:

Channel: They can be direct or middleman consisting of wholesaler, retailer etc.

Physical distribution activities consisting of:

Order processing: Receiving, handling, filing orders

Warehousing: Storage facility until the product is sold

Material handling: Movement of product

Inventory management: Control of costs and level of inventory

Transportation: Carrier type and mode of transport

d. Promotion mix

Promotion includes all the activities undertaken to communicate and promote products to the target market. The components of promotion mix consist of:

Advertising: Paid form of nonpersonal communication with buyers

Sales promotion: Short term incentive to promote sales

Public relation: Programmes to promote or project company image or product

Personal Selling: Personal communication to persuade buyers

Direct Marketing: Direct persuasion by manufacturer

(Agrawal: 2002: P 26, 27, 28)

2.1.2 Product

Product is any offering that satisfies a needs or want. Organization develop product for the target market. There are different types of product like goods, service, ideas, experience, events, persons, places, properties, organization and information. **(Kotler and Keller Lane: 2007: P: 17)**

2.1.3 Improved Water Mill

The IWM is an intermediate technology that increases the efficiency of traditional water mills resulting in increased energy output thus saving the time of the millers as well as beneficiaries. **(Programme Proposal Document: 2009, CRT/N)**

2.1.4 Market

Markets traditionally a market was a physical place where buyers and sellers gathered to buy and sell goods. Economists describe a market as a collection of buyers and sellers who transact over a particular product or product class (e.g. the housing market or gain market). Modern economies abound in such market. **(Kotler and Keller Lane: 2007: P: 10)**

2.1.5 Customer

Customer is a person or organisation which consumes other persons or organisation's services, goods by paying money.

2.1.6 Service Center

Service Center is a independent organisation/company which provides water mill related services in their district**.**

2.1.7 Ghatta Owners Association

Ghatta Owners Association is the association of ghatta owners uniting together for the common welfare of ghatta owners.

2.2 Review of Previous Theses

Mr. Purusottam Raj Chimoriya was conducted a research in "A study on Market Strategy of Kamana Prakashan Samuha" in the year 2007. The main objectives of the research were: (a) To evaluate the current marketing strategy of KPS on Nepal Samachar Patra National Daily (b) To study the customer group that usually buys different types of newspapers (c) To examine dealers opinion and target group about NSP and other national dailies (d) To identify and evaluate the effective sales promotional tools necessary for boosting the sales of newspaper (e) To make suggestions and recommendations on the basis of finding of the study

Its major findings were: (a) amongst the available national daily newspaper in the market, Kantipur is the most preferred newspaper. (b) The age group between 26-35 years represents the highest claimed readership. (c) Dharaharabata is a specific of NSP which is most likely by readers. (d) NSP covers news on every aspect however the quality of news, the language and the timing of news coverage in an area to work upon. (e) NSP is the second preferred brand of newspaper followed by AP, GKP and KP. (f) Quality of news/article, vacancies, classified, brand, family newspaper, government notices, strong distribution network and promotional schemes to both dealers and readers are the major reasons for sale of newspaper.

Another similar study on "Buying attitude of consumers towards "Mero and Nepal Telecom mobile" was conduced by **Mr. Dinesh jung Regmi** in the year 2007. The main objectives of the research were: (a) To identify the direction, degree and intensity of consumers' buying attitudes towards Mero Mobile and Nepal Telecom Mobile service.(b) To evaluate strength and weakness of Mero Mobile and Nepal Telecom on the basis of consumers' attitude and their particular perception. (c) To compare and analyze the essential variables that play significant role to alter consumers' perception and attitudes toward Mero Mobile and Nepal Telecom.(d) To suggest and recommend to the concerned organization on the basis of major findings of the study.
His findings were: (a) the data obtained form respondents showed that Mero mobile SIM card was not high price compared to NTC SIM card and the higher price for mobile SIM card was disliked by most of the consumers. (b) The service charge including tariff rate charged by SNPL were perceived as higher than that of Nepal Telecom and the

respondents were found against that higher charge (c) Regarding reliability (dependability) of mobile services, it was found that Nepal Telecom is more and more reliable than Mero mobile and most of the respondents liked a reliable service (d) Most of the consumer perceived Mero mobile has not clearly audible service and in case of NTC audible service consumers were found in favour of its clear audible service (e) A significant number of respondents were found unknown ore indifferent to additional services available in Mero and NTC mobile. The reason may be lack of information oriented effective.

Mr. Mohan Khanal was conducted a research in "A study on problems and challenges in marketing of botique products in Lalitpur district" in the year 2009. The main objectives of the research were: (a) to study the brand loyalty of customers (due to repeated purchases of the customer in the same boutique) (b) To assess the effectiveness of advertisement on the sale of boutique. (c) To examine and analyze the problems in the marketing of boutique products. (d) To make recommendations for the effective marketing of boutique products.

His findings were: **:**(a) As people are fast embracing modern culture inclination of the customers to buy boutique products is increasing gradually. (b) Marketing aspects is average and boutique owners have good relationship with customers. If customers don't comes frequently then some boutique owners call and make an inquiry, this gives importance to customers. (c) Discount is given if customers stitch is bulk quantity. Similarly, regular customers usually prefer same boutique.(d) Customers are influenced by friend and of latest design. Living style of people it changing so boutique products are gaining popularity. (e) Boutique owners are not much aware about marketing. Good marketing uplifts the profit of boutique products. Government does not show any interest towards: boutique products, so this is also hampering boutique products. Finance, pricing and market condition changes according to economic condition of the country. (f) Surviving all problems, boutique products are emerging as a good business. Nepalese customers are attentive to advertisement, so they are inclined to buy the products recommended by friends, which is also considered to be a strong advertisement means. (g) Most of the boutique customers are brand loyal.

Another similar study on "Problems and Prospects of fruit marketing in Kathmandu district" was conducted by **Ms. Shova Paudel** in the year 2008. The main objectives of the research were: (a) to review the situation of production and consumption of fruits in Kathmandu district. (b) To examine the demand for and supply of fruits in Kathmandu district.(c) To analyze the problems and prospects of fruits marketing in Kathmandu district.(d) To draw conclusions and recommend suggestions for the improvement of fruits marketing in Kathmandu district based on the findings of the study.
Her findings were: (a) The production of fruits in Kathmandu district is 5021 tm. in case the consumer consumes fruits 2kg. at a time. (b) The consumers invest less than 5% in fruits buying. (c) The sellers have problem in selling fruits as it perishes due to lack of proper cold storage, lack of export in production, lack of proper marketing channels, lack of proper infrastructure for market. (d) The low income level and less purchasing power of consumers effect the fruits consumption. There is competition among sellers in price

and quality. (e) The increasing population and increasing population and increasing demand for fruits clearly indicate the potential market and prospects of fruits market in Kathmandu district.

Nepal is an agricultural based country as its economy is based on agriculture. Fruits cultivation is parts of agriculture. The production of fruits can contributes a great in national economy and people's health. But the production of fruits is not in sufficient quantity as well as quality. Similarly, there are many more problems in proper distribution, storing, production and quality aspects. Fruit constitute an essential and important supplement to the human body. Due to the consciousness in health, the demand of fruits is increasing day by day. It helps to overcome the nutritional needs of Nepalese. With their low income, as it is the rich source of different vitamins and minerals.

2.3 Research Gap

In the past the focus was only to change the technology and reduce workload of millers and beneficiaries especially of women and children. But as a result of intervention in technology that brought another avenue to work on i.e. saved time of millers and increased efficiency of water mills to use for productive income generating activities in order to increase income level of the millers. But there is a still gap of knowledge on marketing of IWM product at user level as well as GOA. On the other hand, there is a high demand of flour of maize, wheat, millet and buckwheat there is no any marketing channel established between ghatta owners and end consumers. Taking into consideration of these facts, the IWM product marketing in Kathmandu valley is selected to explore the present market size and potential market share of IWM products in Kathmandu valley.

CHAPTER -III

RESEARCH METHODOLOGY

"Research methodology is a way to systematically solve the research problem. It facilitates the research work and provides reliability and validity to it. **(Baniya, P.23).**
A research methodology defines what the activity of research is, how to proceed, how to measure progress, and what constitutes success. **(www.cs.indiana.edu)**
Research methodology employed in this study is given below:

3.1 Introduction

The main objective of this study is to study the IWM product marketing in Kathmandu Valley. This chapter looks into the various aspects of research methodology such as: research design, nature and sources of data, data collection procedure.

3.2 Research Design

"Research design is the plan, structure and strategy of investigation conceived so as to obtain answers to research questions and to control variance. The plan is the overall scheme or program of research. It includes an outline of what the investigator will do from writing the hypothesis and the operational implications to the final analysis of data. **(Karlinger, fundamental of behavioral research, USA)**
For exploring the secondary sources of information about different aspect of IWM product marketing, primary information was generated through interview with retail store, groceries, supermarket etc. The study is therefore exploratory as well as descriptive in nature. To generate primary data, a survey research design is applied in the study.
The analysis of this study is based on certain research design keeping in mind the objectives of the study. Generally research design means definite procedure and technique, which guideline studying profound ways for researcher ability.

3.3 Nature and sources of Data

Every study / research needs data, information regarding the field of study. The data may be primary and secondary. The study is based on both types of data to collect maximum information regarding the subject matter. The primary data was collected from the people living in the area of study. Such data has been collected by various methods i.e. interview, questionnaire and field observation, etc. Similarly the corresponding secondary data has been collected from annual report, various published / unpublished books, journals, pamphlets, and many other concerning organizations etc.

3.4 Population and Sample

The total number of people using IWM product represents the population of the study. Sample unit of the study comprises the retail stores, Super market, bakeries, and groceries. Since the population of study is large, a sample was selected on the basis of sampling from the Kathmandu valley

3.5 Data Collection Techniques

3.5.1 Desk study

For collecting primary data, desk study, review of relevant literature has been carred out that is related to IWM Programme. The review of relevant document is supporting instrument for data collection such as preparation of structured questionnaire and checklist for focus group discussion.

3.5.2 Questionnaire

A well-structured questionnaire has been prepared and used to collect basic data and information from sample retail store, GOA, groceries etc.

3.5.3 Interview

The interview was taken from the selected persons, Ghatta Owners Association, supplier and sales person. Interview with concern manager/sales persons of market to have their opinion regarding potential product they want.

3.5.4 Observation

Field observation visit has been performed to observe IWM flour processing unit

3.5.5 Site Visit

The researcher has been visited few retail stores of urban area i.e. Kathmandu and other market places for collection of relevant data on the product.

3.5.6 Focus Group Discussion

The focused groups (FG) are the sources that are expected to provide critical information on IWM products, especially wheat, maize and millet flours. The 'focus group' of this study included GOA members, mill owners, CRT/N and a NGO at Banepa which are directly involved in IWM promotion in Kavreplanchok district. Altogether ten participants took part in the focus group discussion session. The discussion was oriented to gather information on major themes of IWM products and markets, assessing participants' perceptions on IWM product and marketing in urban areas, the perceived strengths and weaknesses vis-à-vis problems, constraints and opportunities. The study also collected the data related to the level support to the mill owners and GOA from various organisations and their appropriateness for the promotion in the market. GOA chairman, secretary and treasurer, mill owners, a representative from CRT/N and a local NGO were potential key informants in the focus group discussion. A separate checklist was designed to solicit the information from Focus Group Discussions. A checklist of focus group discussion is given in Annex 2.

3.5.7 Key Informant Interview

Key informants are GOA members and representative respondents in the possible market for IWM products. The study basically focused in collecting information related to their

awareness, understanding and perception of IWM products. Similarly, it also collected information related to their requirement in order to insert these products in the supply network in urban areas of Kathmandu valley. The study also identified the likely product brands and the share of their consumption in the market including the most potential among these buyers. The study also considered validating, cross checking and supplementing the information collected from other sources. Questions to the key informants were in semi structured interview schedule form. The formats of interview schedules with key informants are given in Annex 2 and 3.

The interview basically intended to find out the answer of following key questions:

1. What are the market requirements?
2. What is their understanding about IWM products?
3. Who are the competitors?
4. How can GOA or mill owners meet the market requirements?
5. What may be the appropriate mechanisms to promote IWM products?
6. Are they willing to sell these products, and if yes, in what conditions.

These questions give the basic answers of market access, system efficiency, product quality, competition and business environment.

3.5.8 Case Studies

Few case studies have been carried out for the triangulation of qualitative and quantitative information in the form of different events which could be both positive and negative.

3.5.9 Seasonal Calendar

Seasonal calendar are also prepared to identify the production and marketing schedule of key agricultural production, esp., wheat, maize and millet during the farm and off-farm season in the study area. This was prepared with the discussion with key informants including farmers groups and mill owners.

3.6 Method of Analysis

Data analysis plays a vital role in any kind of research study. The collected data are thoroughly checked, compiled, and presented in appropriate table to facilitate analysis and interpretation. Analysis has been done descriptively as well as statistically. For the analysis, statistical tools such as ranking, average, percentage, sampling, bar diagram, pie chart etc. are used. Similarly some of the data has been collected using PRA tools such as focus group discussion, key informant interview, case studies, community discussion and seasonal calendar. SWOT analysis is also used for collecting data.

CHAPTER -IV
DATA PRESENTATION AND ANALYSIS

4.1 INTRODUCTION

This chapter deals with presentation and analysis of data, collected from sample retail store, GOA and groceries etc and interpreted according to the objectives of the study related to IWM product marketing.

As mentioned in the research methodology sample has been collected. The sample is derived from retail store, super market, groceries and others. A list of questions has been distributed as presented in the appendix. The data collection has been conducted as per the questionnaire survey by meeting the respondents after having them exposed to the objective of the survey and necessary concept provided to them.

4.2 OBJECTIVE-WISE ANALYSIS AND INTERPRETATION OF DATA:

The study has been guided by four objectives. In order to meet these objectives, the collected data have been analyzed and interpreted on objective-wise basis.

4.2.1Objective one: To analyze the market for IWM products especially for maize, wheat and millet flour in Kathmandu.

The first objective of this study is concerned about the analysis of market place for IWM product in Kathmandu Valley. For this purpose, the researcher has asked different questions to the sample buyers of Kathmandu Valley in order to acquire their views towards different aspects of IWM product and what they have expected. Interview schedule for Buyers has been used to do so. Similarly, the researcher has also consulted the concerned authorities i.e. GOA, CRT/N etc.

4.2.1.1 Identification of Potential Buyers

The buyers were identified basically in four areas, namely: groceries, supermarkets, bakeries and restaurants and organic food shops. However, the requirement of organic shops is quite different from other four. Organic shops can buy IWM products only when they are proved organic. However, all these sectors have their customers who seek the products made of brown flour. The foreigners, high and middle class urban residents and the diabetes patients are the potential customers.

Nevertheless, the experience of restaurants is different. According to the respondents from restaurants, it is easy to make food items out of white flour. Take Momo (Dumpling) as an example. It is easy to make Momo from white flour- quite sticky and good in shape wile and Momo from brown flour easily breaks as it is not sticky. So, they prefer white flour instead of the brown one. The survey also comes up with new information. In response to our question that if popularity of brown flour is increasing, why they don't sell them in their kitchen, they replied that the food habit among customer at home and at restaurant is different. People are conscious of hygiene while being at home and they do not care much in the restaurants and prefer taste. Another, interesting information was that for foreigners, Nepali food means cooked rice, pulse and vegetables

and Momo, and not Dhido and others. Indians, however, also like maize Roti (bread). However, traditional kitchens targeting Nepali have a number of customers who come to restaurants to taste Dhindo. However, they buy FAPAR flour for Dhindo item. Still they are ready to try maize flour the quality is good. They are, however, sceptical that IWM flour often contains black particles and dust which they cannot encourage.
Bakeries are other potential area. But their requirements are also different. They prefer volume and regularity of supplies along with the quality and price. According to them price is also important for commercial purposes. Bakeries are of two kinds. For example, Nanglo has its own chain of bakery cafés which supplies bread, cakes and cookies with restaurant items. Another kind of bakery sells products from their own shops or supplies to groceries. *Krishna Bread* is one of such bakery. The aim to mention this difference is that IWM products can target these kinds of bakeries which have different ways of marketing their final products.

Groceries and supermarkets can be the largest buyers of IWM products. They can cover not only the scattered consumers of brown flour; they can also help consumers to follow their food consciousness at home. Groceries generally have two way communications with customers, where customer not only give feedback but also seek suggestion of the grocer too choose among the products. Hence, grocers can be the sales promoters and source of feedback to GOA and others. Besides, supermarkets can be trustful centres for customers because such stores are brands on themselves. Their customer can believe in quality because they often need clear labelling and quality certification.

In the context of number of respondents familiar to IWM product, the researcher has asked question to different respondents that are you aware of IWM product in question no. 1.1 of annex 2. The response is as follows:

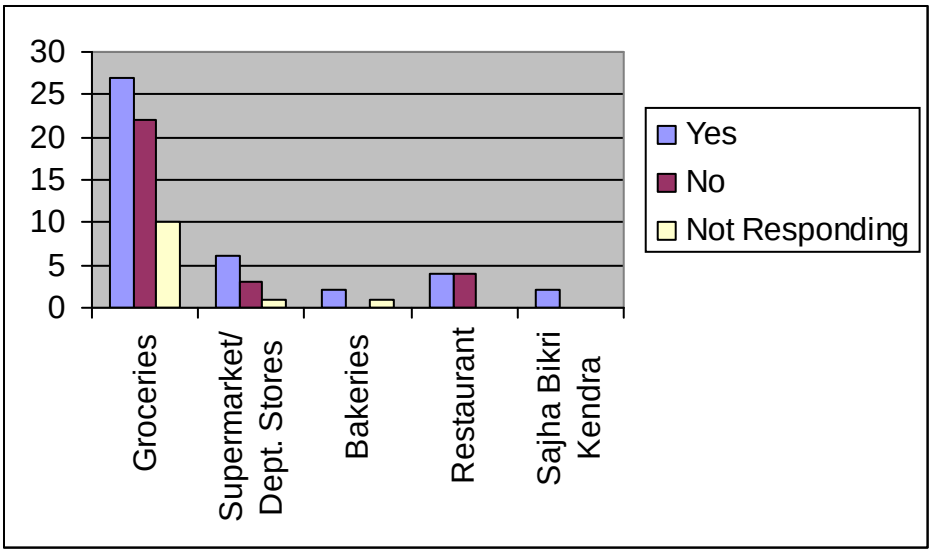
TABLE: 1
Number of Respondents Familiar to IWM (Ghatta) products

Particulars	**Aware**			**Total**
	Yes	**No**	**Not Responding**	
Groceries	27	22	10	59
Supermarket/ Dept. Stores	6	3	1	10
Bakeries	2	0	1	3
Restaurant	4	4	0	8
Sajha Bikri Kendra	2	0	0	2
Total	**41**	**29**	**12**	**82**

Source: Questionnaire

As per the table1 above and figure 1 below, Improved Water Mill (known as Paani Ghatta) is found known to almost 50% of the total respondents. Interestingly more than one third of the respondents are not aware about the Ghatta's flours and its operation mechanism. Nearly 15% respondents have no opinion about the IWM and its production.

Figure -1
Number of Respondents Familiar to IWM (Ghatta) products



The important fact regarding awareness is that the organized sectors are significantly aware about the IWM products. The groceries (46%), supermarkets (60%), restaurants (50%) and bakeries (67%) are found to be aware in the sense that they know the difference between the Ghatta flour and ordinary flours and the importance of brown (whole flour) and white flour in their businesses.

Similarly the researcher has asked whether the respondents want to take sample of IWM product or not in question no 1.2. Regarding this question the response is as follows:

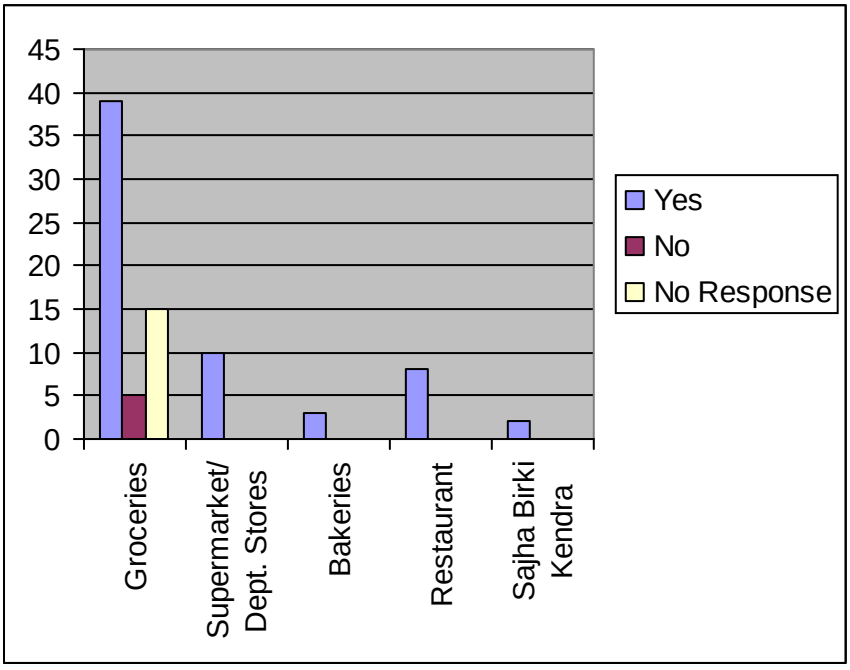
TABLE: 2
Number of Respondent (shopkeepers) by willingness to take sample of IWM products

Particulars	**Willing to take sample**			**Total**
	Yes	**No**	**No Response**	
Groceries	39	5	15	59
Supermarket/ Dept. Stores	10	0	0	10
Bakeries	3	0	0	3
Restaurant	8	0	0	8
Sajha Birki Kendra	2	0	0	2
Total	**62**	**5**	**15**	**82**

Source: Questionnaire

As per the table 2 above and Figure 2 below, out of total groceries shops 67% are highly interested to take sample of the IWM flours while one-fourth of them have no opinion on it. Except groceries, supermarkets, restaurants and bakeries are enthusiastic to sell the product but they don't know the supplier and distributors of IWM products.

Figure: 2
Number of Respondent (shopkeepers) by willingness to take sample of IWM products



4.1.1.2 Roles of GOA to Promote Market

GOA is basically an association of Ghatta owners. It is a non governmental organization (NGO) registered under Sanstha Darta Ain (Organization Registration Act), 2038 BS and Samaj Kalyan Ain (Social Welfare Act), 2049 BS. The basic aim of GOA is to improve the traditional water mill with different end uses, promote market for water mill products and conduct research and so on. In this course, GOA Makawanpur and Nuwakot have conducted a survey for expansion of market for IWM products in 2064 BS.

GOA Makawanpur has also operated business of IWM flours in 2063 BS. But it closed down after seven months as it could not compete in the market. GOA Kavre also tried to promote IWM products in local market and Kathmandu. That time GOA Kavreplanchok used packing materials like 1 kg. plastic bags with paper labelling which clearly mentioned the information related to flour, packaging date and price, etc. However, it was also closed down because it was not capable to identify the markets for the products. It was also unable to collect the due payment. In Nuwakot also, GOA did a survey for IWM flour market in 2064 BS. Unlike Kavreplanchok, GOA Nuwakot did not start selling IWM product. However some private mill owners started to supply flour directly to the nearby traditional restaurants located at Kakani. This is also not regular.

At local level, GOA seems as the major business support service (BSS) provider. It take lead in registration of water sources for installation of IWM, organize training to Ghatta owners on different aspects related to operation of Ghatta, distributing IWM tools and marketing of Ghatta products. Similarly, it is also involved in awareness creation and dissemination. GOA often organizes these activities in coordination and collaboration with different organizations including GOs and NGOs.

The researcher has organised focus group discussions representing the members of GOA, the mill owners, CRT/N, farmers and local NGO. On the basis of these discussions, this research has analysed SWOT of GOA as per question no. 2.5 of annex 1. The response is as follows:

TABLE: 3

SWOT Analysis	
Strengths - Coordinating and encouraging mill owner for improved water mill technology instillation - Contacting DDC for Ghatta registration, especially planning and budget allocation in the district - Promoted and searching potential markets of the IWM flours - Encourage adult education to the mill owners and farmers - Record keeping of the traditional/improved Ghatta.	**Weaknesses** - Lack of trained manpower - Finance - Poor publication advertisement - Poor level of integration among the possible organizations including government offices.
Opportunity - Develop as a umbrella organization of Ghatta Owner - Increase the scope of GOA beyond Ghatta and coordinate rural farm families as well. - Helps to increase the efficiency of the rural farmers in the sustainable livelihood	**Threats** - Sustainability of the institution/Project - Knowledge of coordination with potential partners - Finance for sustainable programme

4.2.1.3 Expected Sells Margin on IWM Products

The researcher has also asked expected sells margin on IWM product in question no. 1.3. Regarding this question the response is as follows:

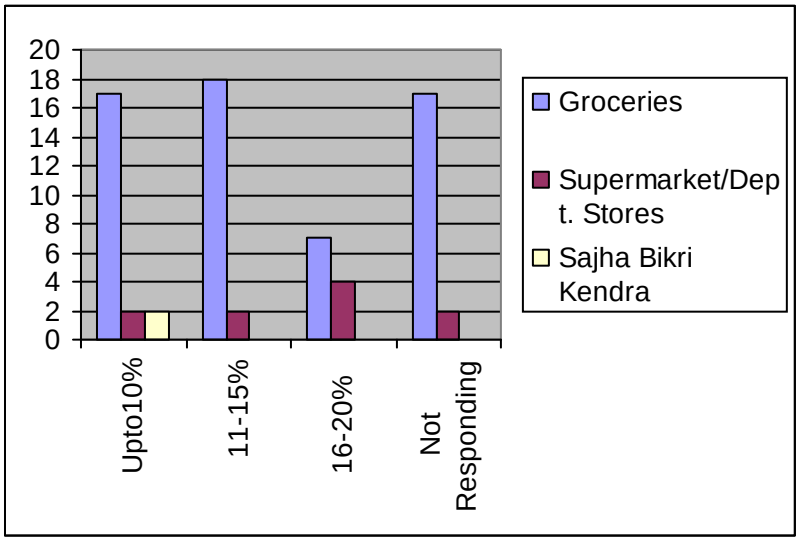
TABLE: 4
Number of Respondent by Expected Sell Margins in the IWM (Maize, Millet and Wheat) Flours

Particulars	Upto10%	11-15%	16-20%	Not Responding	Total
Groceries	17	18	7	17	59
Supermarket/Dept. Stores	2	2	4	2	10
Sajha Bikri Kendra	2				2
Total	**21**	**20**	**11**	**19**	**71**

Source: Questionnaire

As per the table 4 above and figure 3 below, nearly one-third respondents of the groceries have expected up to 15% sells margin in the IWM flours while 40% supermarket respondents have expected 16-20%

Figure: 3
Number of Respondent by Expected Sell Margins in the Maize, Millet and Wheat Flours



4.2.2 Objective Two: To find out the present market size and potential market share of IWM product

4.2.2.1 Daily Sales of Ordinary Flours

The researcher has asked amount of ordinary flour sold in the market to business unit in question no. 1.3. Regarding this question the response is as follows:

TABLE: 5
Amount of ordinary flours sold in the Market (in KG)

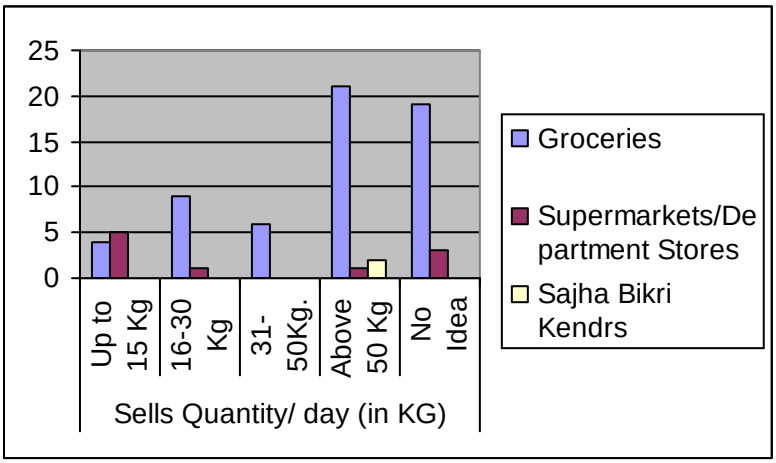
Particulars	Sells Quantity/ day (in KG)					Total
	Up to 15 Kg	16-30 Kg	31-50Kg.	Above 50 Kg	No Idea	
Groceries	4	9	6	21	19	59
Supermarkets/Department Stores	5	1	0	1	3	10
Sajha Bikri Kendrs	0	0	0	2	0	2
Total	**9**	**10**	**6**	**24**	**22**	**71**

Source: Questionnaire

As per table 5 above and figure 4 below, Out of 71 business units more than one-third sold above 50 kg of flour in Kathmandu. Daily sales of flours up to 15 kg, 16-30 kg and 31-50 kg are calculated as 13%, 14% and 8% respectively. In addition, 31% respondents have no any idea of daily sells of ordinary flour

Groceries are found to sell more flour than other business unites. Out of 59 groceries, 21 (32%) are found selling more than 50Kg of flour /day in Kathmandu. Remaining 32% groceries have no idea about daily sells. 50% supermarkets are selling up to 15 kg of flours and 30% of them have no idea about the daily sells of the flours. Locals, restaurants, hotels, MoMo shops and bakeries are the customers of the ordinary flours and many of them purchase from the supermarket, nearby grocery and Sajha Bikri Kendra.

Figure: 4
Amount of ordinary flours sold in the Market (in KG)



4.2.2.2 Amount Sold of the Ordinary Flours

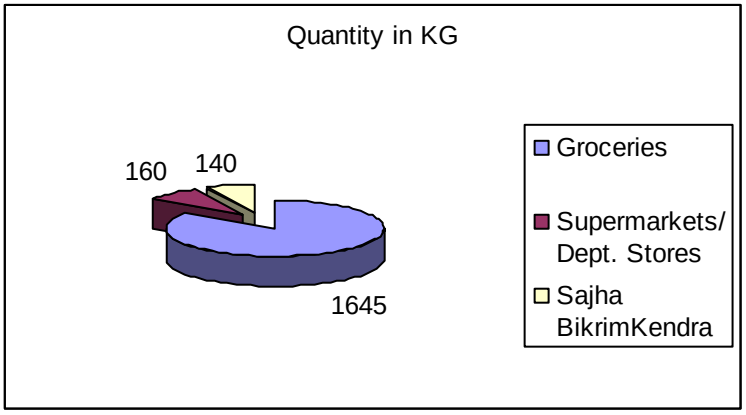
Table 6 and figure 5 shows that 85% flour sold in Kathmandu are sold by groceries and remaining 15% are sold by supermarkets and Sajha Bikri Kendra.

TABLE: 6
Amount of ordinary flours sold per day in Kathmandu (Based on the 71 business units)

Particulars	Quantity in KG	Percentage
Groceries	1645	85
Supermarkets/ Dept. Stores	160	8
Sajha BikrimKendra	140	7
Total	**1945**	**100**

Source: Questionnaire

Figure: 5
Amount of ordinary flours sold per day in Kathmandu (Based on the 71 business units)



4.2.2.3 Buyers' Opinion for Marketing

Almost every buyer who have not sold IWM products yet opine that they can sell if the sample is available as a part of sales promotion. However, all the buyers suggested that it should come in packaging at different weights with levelling clearly specifying the quality of ingredient, e.g., Lekali maize milled at IWM, washed well, removed non nutrient particles, best before (expiry) date etc. Further, they also strongly recommended that it is better to come through intermediaries or supplier because they better know where the potential market is. Moreover, these buyers also believe on the information that a supplier provides them.

Case 1: Krishna Bread Pvt. Ltd.

The daily sale of regular bread is up to 50 kg. It also sells brown bread. The demand for brown bread is increasing every day. The reason for such increase is the increasing trend of diabetics among urban population. The company used to sell bread made of maize, millet and FAPER, which a supplier from Nuwakot supplied some four years ago. The daily sell of bread of maize, millet and FAPER was about five to seven kg. The supplier supplied for some times and later he stopped to supply. The company is still seeking for such products, because it has a potential market in bakery area. The company thinks that IWM products also have potential buyers in bakery sector. The respondent added that he personally is familiar to and fond of taste of flour milled in

IWM. Foreigners often seek bread made of wheat and maize. Nepali people from Lama Community sometimes ask for millet bread. Other possible products of IWM products may be cakes and cookies. It can purchase such products if supplied regularly. However, hotels and restaurants demand only white bread, and not the brown breads.

In case of suppliers, they supply flour produced in modern mills only. They do so, probably due to the efficient system such modern mills have. Another cause may be that people still don't know about IWM products and their nutrients for the health.

Case 2: The Organic Village Pvt. Ltd.

Organic Village Pvt. Limited is a company involved in promoting agricultural products produced by organic technology and the handicrafts in national and international market. The basic about agricultural products is that it can purchase them if proved organic. It has some mechanisms which ensure that the product is organic. The example of one simple method is that it helps farmers to organize cooperatives, separates plots for organic farming and makes contract papers with farmers. Besides, it's JTA and technician tests soil and train farmers for organic farming. It makes groups or cooperatives so as to create a level of confidence that the farming method will be totally organic. In case of cheater, a member committing such act is expelled from the group. The company believes that as the reward for organic farming is high to the farmers, they generally don't think of using chemical fertilizers or pesticides. If necessary, it can also test the purity in the laboratory. However, this is a costly process, and the company generally does not apply lab test method.

In case of IWM product, the company prefers the organic products milled at *Ghattas*. However, company generally buys the products in big sacks and does final processing and packaging itself. According to the company, primarily the targeted buyers were foreigners living in Nepal. Nevertheless, the present day trend is that the number of Nepalese buyers are ever increasing and exceeding the foreigners. The company suggests that IWM product can be inserted into its value chain if they can produce using organic method. It also opines that GOA can take the space of cooperative in this case as it is already organized. So, GOA may coordinate with farmers for organic farming and ensure regular supply. Last but not least, it negotiates price in advance so that farmers and millers do not have any confusion regarding price they receive.

Case 3: The Explore Nepal Pvt. Ltd.

Explorer Nepal Pvt. Limited is also seeking for organic agricultural products. Bhojan Griha, one of the restaurants targeting foreigners, is its sister organization. The difference of approach between Organic Village and Explore Nepal is that former seeks totally organic and the later shows some flexibility. According to Mr. Bharat Basnet, total organic farming needs five to seven years from start to produce in a total organic ways. It is because, the land using chemicals before needs this much time to turn to organic. Similarly, contamination may occur through air and water. So, he suggests that if producers can ensure that farmers are not using chemical fertilizers and pesticides, his company is ready to promote such products. He also opines that networking of *Ghattas* is necessary for marketing. For him also, supply should be regular. He

emphasized that the level of honesty is weakening in the society and thus, teaching is necessary to the GOA members.

Case 4: Swajan Store, Lagankhel

Swajan Store is a department store situated at Lagankhel, Lalitpur. It sold IWM product once two years ago. The product was brought from Godawari VDC of Lalitpur. Sunita, the respondent told that the sell of the product was good and people really liked it. No people showed any complain against the product. However, the supplier did not come again to sell the product.

The supplier supplied flour in one kg. packs. Although the IWM flour was costly than Hulas flour, people still bought it and liked it. She hopes that she can still sell the product if the supply is regular.

4.2.2.4 Potential Market Size

Identification of the potential market size of the IWM flours in Kathmandu is not easy work. As per table 7 and figure 6 below, the researcher had contacted with 62 potential buyers in the Kathmandu Valley and calculated in ranges the demand of the IWM flours. Study shows that 45% buyers can tell the amount of flour they can buy only after seeing the sample. The percentage of respondents willing to buy such products up to 10 kg, 11-20kg, and above 20 Kg a week is reported 13%, 24% and 11% respectively. And, 6% buyers are interested to buy only in loose sacks. In the case of groceries nearly one-third are interested to take 11-20kg of flours and the similar number of the respondents are willing to take such products only after showing the sample. Similarly 60% of the supermarkets demanded the sample to tell the quantity of products they can sell in the market; while 30% supermarkets are interested to buy above 20 kg of flours a week. Restaurants also demanded sample and interested to try in their traditional kitchen. All three Bakeries surveyed demanded sample. Sajha Bikri Kendra reported that they are willing to buy up to 20 kg a week as a sample sale.

TABLE: 7
Number of Respondents by Amount of Sample Willing to Buy IWM Products (Maize, Wheat and Millet Flours) weekly

Particulars	Upto10 Kg	11-20kg	Above 20 Kg	Loose Only	Amount to Fix after Seeing Sample	Total
Groceries	6	12	4	4	13	39
Supermarket/ Retail Stores	1	1	3	0	6	10
Bakeries	0	0	0	0	3	3
Restaurants	1	0	0	0	7	8
Sajha Bikri Kendra	0	2	0	0	0	2
Total	**8**	**15**	**7**	**4**	**28**	**62**

Source: Questionnaire

Figure: 6
Number of Respondents by Amount of Sample Willing to Buy IWM Products (Maize, Wheat and Millet Flours) Weekly

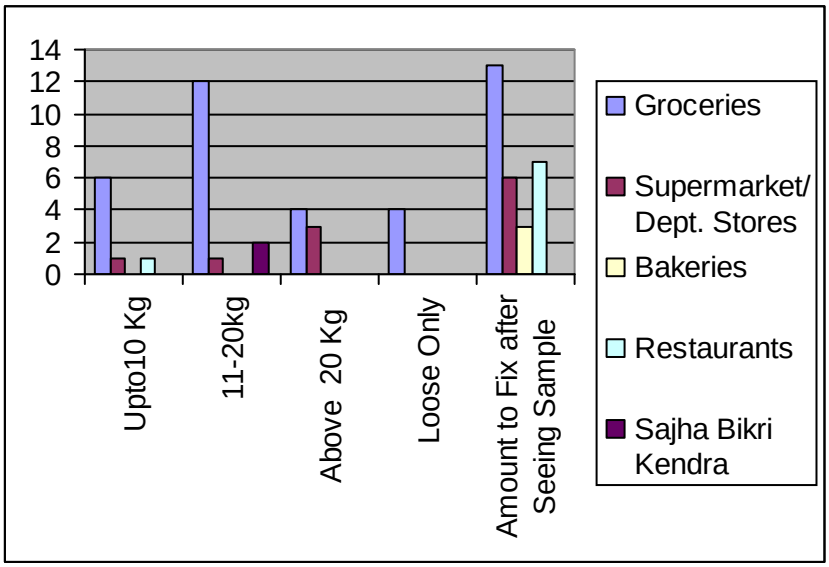


TABLE: 8
Demand of IWM products (Maize, Wheat and Millet Flours) in the Market (Based on 62 respondents) per week

Particulars	**Quantity (in Kg)**	**Percentage**
Groceries	540	80
Supermarkets/ Retail. Stores	100	15
Bakeries	0	0
Restaurants	10	1
Sajha Bikri Kendra	30	4
Total	**680**	**100**

Source: Questionnaire

The study as per table 8 above and figure 7 below reveals that 680 kg of IWM flours can be sold every week at 62 selected business units in Kathmandu (including Lalitpur). Out of total sample 80% of demand of IWM products is in the groceries and 15% in the supermarkets. These two business units are the most potential sector for IWM flour market in the Kathmandu. Nevertheless Sajha Bikri Kendra is also reported as a potential market of the products . In the case of Makawanpur district, the demand of IWM flour has been calculated one quintal (100Kg) (Key Informant Interview, Makawanpur, September 2009).

If we take half the quantity of expected sells, the demand or market size of IWM flour seems about 1200 quintal. This means that the monthly demand for IWM product is about 100 quintal in Kathmandu.

Figure: 7
Demand of IWM products (Maize, Wheat and Millet Flours) in the Market (Based on 62 respondents) per week

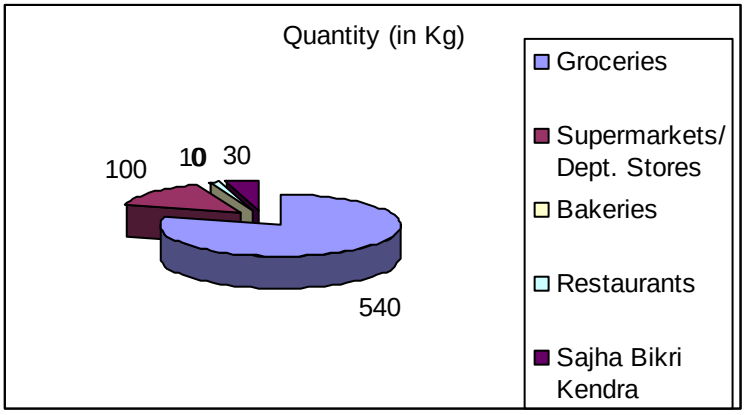


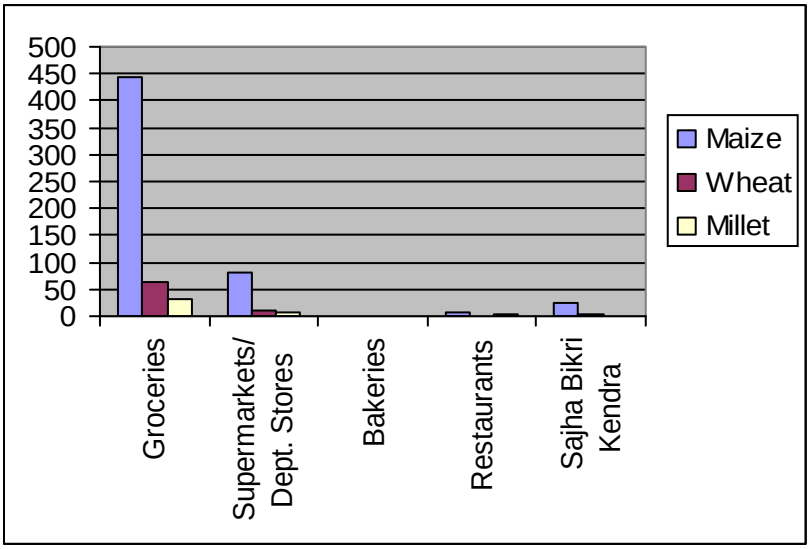
TABLE: 9
Amount to be sells in the Market (in KG/week)

Particulars	**Types pf IWM Flours**						**Total**
	Maize	**%**	**Wheat**	**%**	**Millet**	**%**	
Groceries	443	82	65	12	32	6	540
Supermarkets/ Dept. Stores	82	78	12	12	6	10	100
Bakeries	0	0	0	0	0	0	0
Restaurants	7	76	1	10	2	20	10
Sajha Bikri Kendra	25	86	4	10	1	4	30
Total	**558**		**82**		**41**		**680**

Source: Questionnaire

As per table 9 above and figure 8 below, out of three IWM products, namely, maize, wheat and millet flour, the largest market is identified for maize flour – for example, its demand in groceries is found about 82% compared to 12 % for wheat and only 6% for millet .Hence maize flour can be the potential products in terms of market demand. However, a different figure in the restaurant sector has been identified where its demand is about 20% which is double of the demand for wheat flour. Traditional restaurants and hotels sell dishes of millet as their main item to attract the Nepali customers.

Figure: 8
Amount to be sells in the Market (in KG/week)



4.2.2.5 Preference of the Potential Buyers

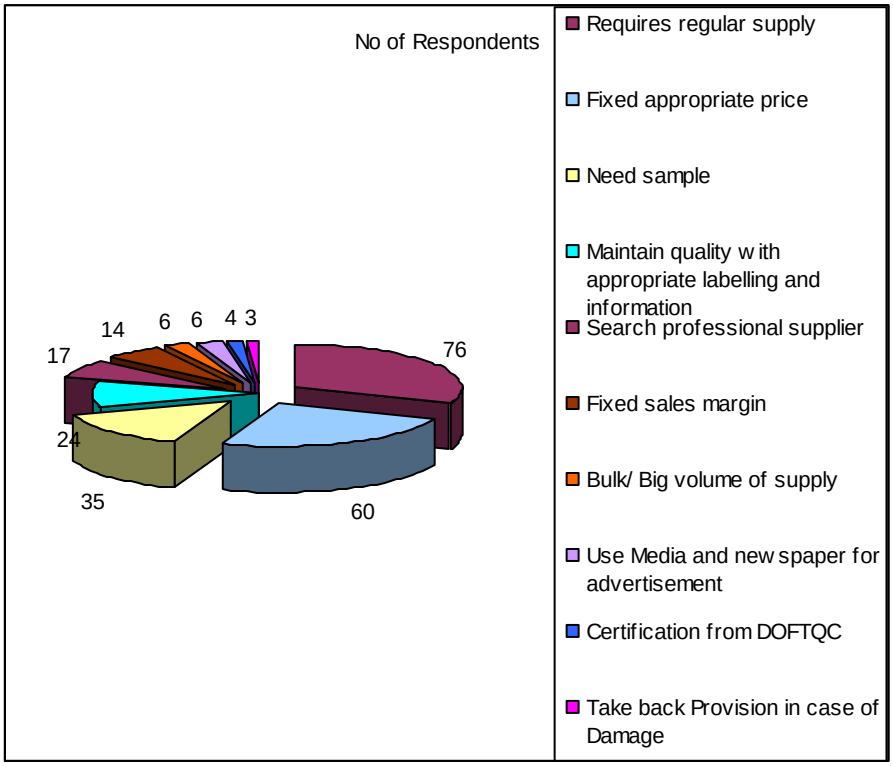
Kathmandu is identified a potential market for Ghatta flours. Buyers, however, are concerned more about their quality, price and supply regularity and not to the where about of the production. Buyers' perception about the IWM flour market in Kathmandu has been presented in table 10 and figure 9 below.

TABLE: 10
Buyer's Perceptions about the IWM flours in Kathmandu Valley

S.N	Particulars	No of Respondents	Percentage (out of 76 respondents)
1	Requires regular supply	76	100.00
2	Fixed appropriate price	60	78.95
3	Need sample	35	46.05
4	Maintain quality with appropriate labelling and information	24	31.58
5	Search professional supplier	17	22.37
6	Fixed sales margin	14	18.42
7	Bulk/ Big volume of supply	6	7.89
8	Use Media and newspaper for advertisement	6	7.89
9	Certification from DOFTQC	4	5.26
10	Take back Provision in case of Damage	3	3.95

Source: Questionnaire

Figure: 9
Buyer's Perceptions about the IWM flours in Kathmandu Valley



The customers/buyers are more concerning about the regularity of the supply (100%), appropriate price (79%) and sample of the products (46%). These three aspects of the products are very important part of the marketing of Ghatta's flour. Nearly one third (32%) of respondents are found more conscious about the quality of products and suggested to maintain appropriate labelling and information. They opine that label should clearly mention the place, production technology (IWM), date and quantity of the product and its price with certification from authority. The buyers also suggested that they feel confident while dealing with suppliers rather than individual sellers. Nearly one-fourth (22%) of the buyers have suggested that IWM products can be better promoted through the professional suppliers. The other means of promotion may be using media and newspaper for awareness creation, advertisement, demonstration, certification from DOFTQC and provision of taking back in case of damage were also reported as the parts of marketing requirements.

4.2.2.6 Identification of Competitors

Several brands of the ordinary flour and their daily sells volume have been identified in Kathmandu. However, the most of brands are related to wheat flour and few related to maize flour as well. Among them Hulas and Gyan brands are important ones. There are very few shops having maize and millet flour supplied directly by mills of the vicinity areas in their own local brand or by farmers themselves. For these products buyers directly order supply when the demand arises. Very interestingly,

none of the groceries and supermarkets was reported to have IWM flours during the survey. Many of them sell maize grids and flour produced in diesel mills and some of them also sell *Phapar* flour.

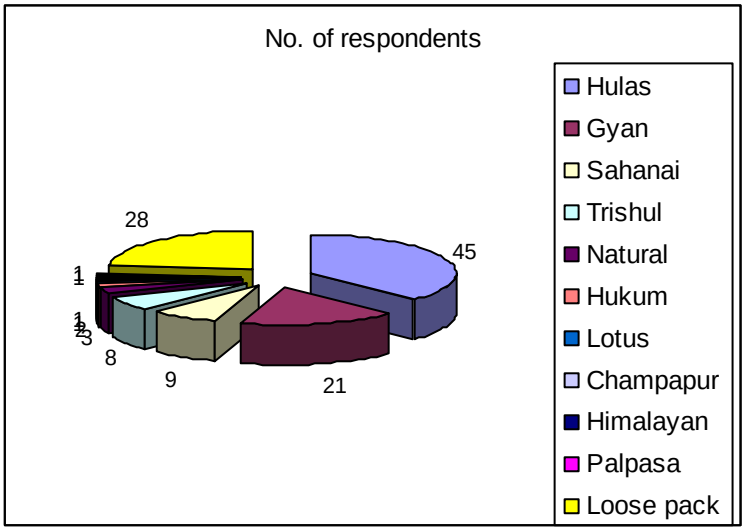
TABLE: 11
Main Competitors/Brands of Flour Selling in Kathmandu

Name of competitors	No. of respondents selling wheat flour	Percentage (out of 74 respondents)
Hulas	45	60.81
Gyan	21	28.38
Sahanai	9	12.16
Trishul	8	10.81
Natural	3	4.05
Hukum	2	2.70
Lotus	1	1.35
Champapur	1	1.35
Himalayan	1	1.35
Palpasa	1	1.35
Loose pack	28	37.84

Source: Questionnaire

As per table 11 above and figure 10 below, Out of the 74 respondents 61% shops are selling wheat flour of Hulas brand. Nearly one third of the shops are selling Gyan brand. Shopkeepers selling Sahanai and Trisul brands are reported only 12% and 11% respectively .

Figure: 10



4.2.2.6.1 Price of Major Competitors

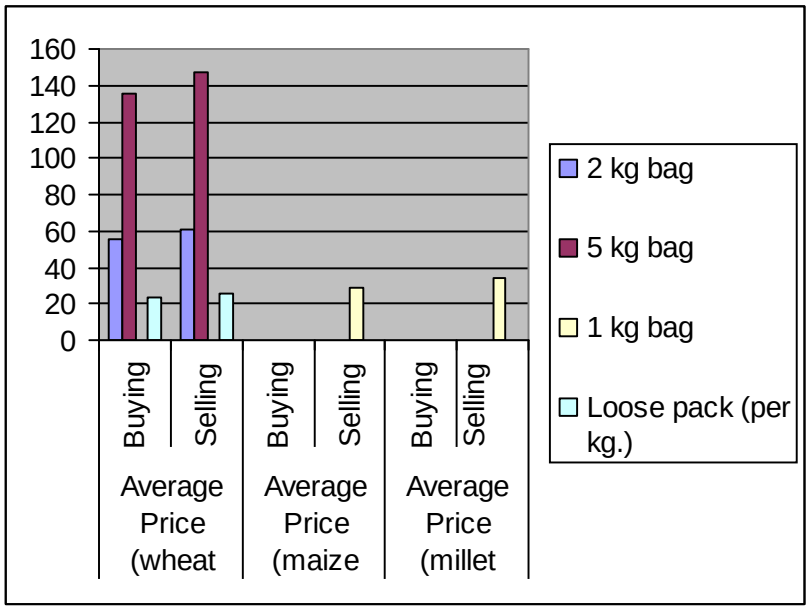
TABLE: 12
Major competitors' Price at Kathmandu (in Rs.)

Name of Competitors	Average Price (wheat flour)		Average Price (maize flour)		Average Price (millet flour)	
	Buying	Selling	Buying	Selling	Buying	Selling
2 kg bag	56	61	0	0	0	0
5 kg bag	136	147	0	0	0	0
1 kg bag	0	0	0	29	0	34
Loose pack (per kg.)	23	26	0	0	0	0

Source: Questionnaire

As per table 12 above and figure 11 below, an average price of the wheat, maize and millet flour has been calculated from 71 business units (including 59 groceries, 10 supermarkets and 2 Sajha Bikri Kendra) from Kathmandu and Lalitpur. Price of the wheat flour is found different for small packs and loose packs. For example, wheat flour of 2 kg bag's buying and selling price are Rs. 56 and Rs. 61 respectively. While buying and selling price of loose pack wheat flour are only Rs. 23 and Rs. 26 /kg respectively .

Figure: 11
Major competitors' Price at Kathmandu (in Rs.)



In the case of maize and millet flours, buying and selling price depends on the nature of market demand. In general, the selling prices of maize and millet flour in the local market are Rs. 29 and Rs. 34 in average respectively.

4.2.3 Objective Three: to identify problems and prospects of IWM Product

4.2.3.1 Problems for Marketing IWM flours in Kathmandu Valley

Numerous problems have been identified in the marketing IWM flours in Kathmandu valley. Regularity of production and supplying of the IWM flours, lack of marketing channelling and absence of intermediaries, collection and distribution centres in the urban areas are the key problems. Linkages among the farmers, mill owners, GOA, CRT/N, DDC and other NGOs and INGOs are reported a very weak. This study has also showed that still GOA, CRT/N couldn't play a proper role in the promotion of market in the past. Lack of advertisement and media, financial inadequacy of GOA and lack sample of the products (flours) in the urban area are other identified problems for the promotion market of IWM flour in Kathmandu valley.

4.2.3.1.1 Remoteness and High Cost of Transportation- Because of the remoteness of IWM sites transportation costs are high for transporting equipments and IWM products. As mentioned earlier, long shaft IWMs are located relatively at longer distance from motorable road than the short shaft IWM. FAEM report suggests that transportation costs for machineries and equipments are high and such materials are not available at local markets (FAEM, 2005: 31). These increase the cost of production of the mill owners in the value chain.

4.2.3.1.2 Financial Resources- FAEM study shows that the ghatta owners are generally from the lower economic strata and their average annual income is around Rs. 30,000 per annum. However, they are able to install Ghatta with various sources like the subsidy, loan and own money (ibid: 29). It shows that very few mill owners received loan from banks and local cooperatives. However, AEPC has provisions to provide micro finance institutions (MFI) credit at 6% interest under IWM Credit Fund from where IWM owners can get loans for IWM and related end uses with an interest rate up to 16% (ibid:42). MFIs can also use this provision for the promotion of IWM products. Nevertheless, lower income reduces the bargaining capacity and most possibly becomes the cause of establishing hierarchical relationship between buyers and mill owners in the value chain.

4.2.3.1.3 Lower Value Add- The Ghatta owners are often from lower income strata. Lower income often force them to accept lower value add for their products. A baseline survey from CRT/N found that a ghatta operator in Makawanpur buys maize at a rate of Rs. 10 per kg and sells the processed flour at a rate of Rs. 11 per kg, (CRT/N, 2004) which means the value add is Re 1 only which is 10% of the raw material which also includes his direct labour- labour of processing and labour of carrying product and selling to the market.

4.2.3.1.4 Competition between Strong and Weaker Sections- IWM producers is small scale producer and scattered in the geography. However, market is open to all, including the larger producer who can produce in economy of scale and can offer verities in comparatively cheaper price. GOA is also found to take commercial brands as the competitors to the IWM products.

The above problems are also sort out in the SWOT analysis of this study. The SWOT analysis of the IWM flour is given below.

TABLE: 13

SWOT Analysis	
Strengths - Fresh, Testy, High Nutrious - Appropriate Diabetes Patient - Tradition Products - Preserve long time (up to six months)	**Weaknesses** - Inappropriate training to Mill Owner - Cannot recognized the real consumers - Distance media and advertisements - Supply cannot meet the market demand - Irregular supply in the market
Opportunity - Rural technology and product - Increasing demand in the market - Promote in traditional restaurants and bakeries factors - Increasing interests of the leaders, business, rich people and high rank bureaucrats - Export beyond the country - Grading (OR Branding) related to the types and location of maize, wheat and millet.	**Threats** - Black particles in the flours - Competition with ordinary flours - Mixturing between IWM and ordinary flours - Doubt sustainability of the products after programme drawback by CRT/N and SNV (CRT and SNV provides concept and introduced the technology that has helps to increased the income of the rural poor people but due to the inadequate training to the mill owners and farmers many people have doubt about the sustainability of the system and technology)
3. Market Requirements	Appropriate price, Suppler, collection centres, training for market promotion, organic farming and the products

4.2.3.2 Prospects for Marketing IWM flour in Kathmandu Valley

4.2.3.2.1 Cereals Production in the Selected (Potential Supply) Districts

Kathmandu valley is surrounded by Kavrepalanchowk, Nuwakot, Dhadhing and Makawanpur districts. These are the potential supply districts of the Ghatta's flours in

the valley. Therefore the production amount of maize, wheat and millet in the district has been taken into consideration in this study.

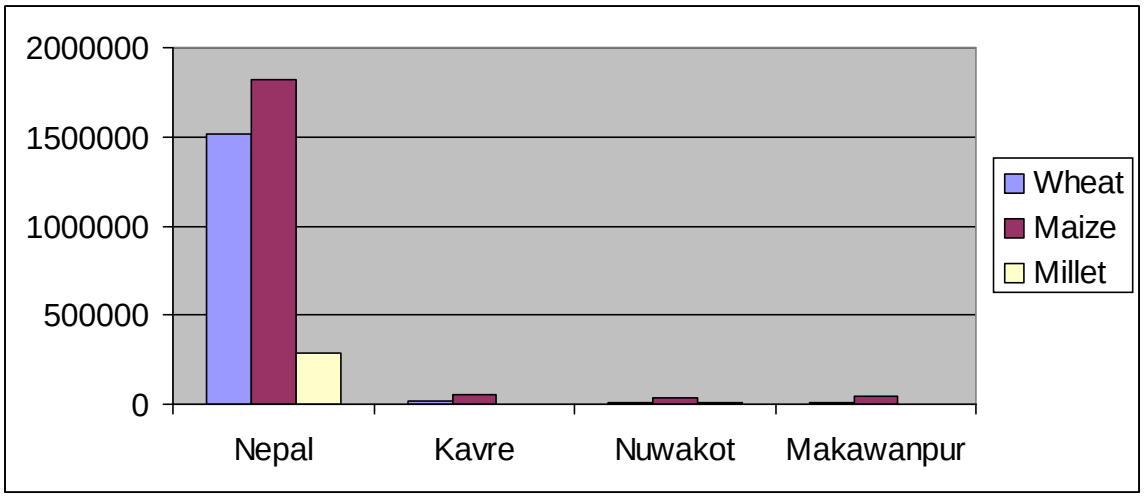
TABLE: 14
Production of Wheat, Maize and Millet in Fiscal Year 2006/07 (in M.ton)

Cereal Name	Nepal	Kavre	Nuwakot	Makawanpur
Wheat	1515139	22050	12597	10662
Maize	1819925	53500	35550	48539
Millet	284813	3510	7080	3216

Source: Ministry of Agriculture and Cooperatives, Nepal (www.moac.gov.np)

Table 14 above and figure 12 below shows that production of maize is significantly higher than other cereals like wheat and millet in all three districts related to this study. Compared to the maize and wheat, the production of millet is even significantly low. So, potential of marketing IWM product is greater for maize flour than other two cereals.

Figure: 12



The study during focus group discussion found that the production trend of wheat is decreasing due to increasing demand and profit margin of the fresh vegetable including off-season vegetables especially potato in the districts. Millet production in the districts is highly possible only in the Bari lands (house yards) and the Lekha (high mountains) which are normally far from the district headquarter road head and the market. Wheat and millet are generally planted once a year in the Bensi (lowland) and Lekha respectively while maize is also grown once in the lowlands (Bensi/Khet) and once in Bari/Lekh, though at different times. Harvesting time of maize in the Lekh area is longer than Bensi/Khet land (Box 1).

Box 1: Planting and Harvesting Periods of Maize, Wheat and Millet in the Districts						
	Bensi/Khet		Comes in big lots to the mills	Comes in small lots to the mills	*Bari/Lekh*	
	Planting	Harvesting			Planting	Harvesting
Maize	Chaitra-Baishakh	Shrawn-Bhadra	Mansir-Poush	Shrawn-Bhadra	Falgun-Chaitra	Ashwin-Kartik
Wheat	Kartik-Mansir	Baishakh-Jeshtha	-	-	-	-
Millet	-	-	-	-	Baishakh -Jeshtha	Mansir-Poush

Sources: Key Informant Interview, GOA Kavrepalanchowk, Nuwakot and Makawanpur, September 2009

4.2.3.2.2 Possible Production of IWM Flours for Marketing

The possible production of maize, wheat and millet flour in three districts for selling has been calculated based on total production of these cereals in the district.

TABLE: 15

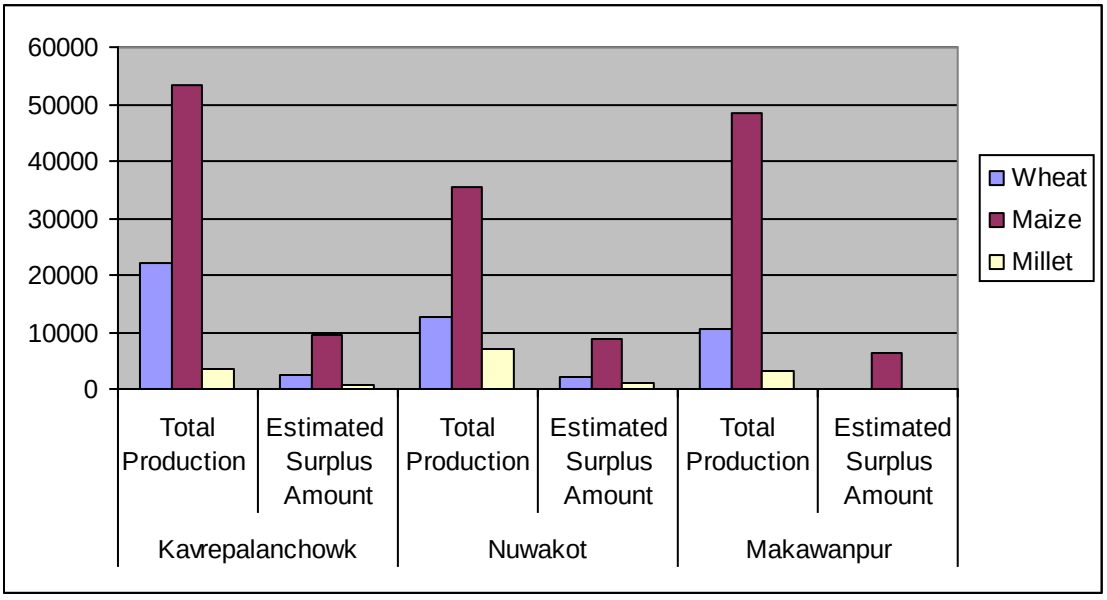
Potential Production of IWM flours (based on 2006/07 Production Data (in Mt)

Cereal Crops	Kavrepalanchowk		Nuwakot		Makawanpur	
	Total Production	Estimated Surplus Amount	Total Production	Estimated Surplus Amount	Total Production	Estimated Surplus Amount
Wheat	22050	2426 (11)	12597	2142 (17)	10662	Nominal
Maize	53500	9630 (18)	35550	8888 (25)	48539	6310 (13)
Millet	3510	527 (15)	7080	1204 (17)	3216	Nominal

Source: Key Informant Interview/ Focus Group Discussion September 2009

Table 15 and figure 13 shows that out of the total production of maize, 18% from Kavrepalanchok, 25% from Nuwakot and 13% from Makawanpur district can be taken as surplus and that amount of flour can be sold in the near markets. In addition 11% of wheat in Kaverpalanchok and 17% in Nuwakot produced can also be sold. In the case of millet, 15% in Kavrepalanchok and 17% in Nuwakot can be taken to the market for selling as flour. In the case of Makawanpur district, a very small quantity of millet and wheat is entering into the local market. FGD found that in Makawnpur, wheat and millet are produced in a small scale only for the household consumption purpose. Millet in general, is used to make home made alcohol in villages, and thus, the surplus millet cannot be estimated in a short field visit (FGD, September 2009).

Figure: 13
Potential Production of IWM flour (based on 2006/07 Production Data (in Mt)



A mill owner at Makawanpur has reported that each week he sold nearly 100 kg of maize flour in the local restaurants in Hetaunda Bazar. That quantity, according to him, he gathers as a price of grinding cereals in the Ghatta.

4.2.3.2.3 Selling Price of IWM Flours

The selling price of the flours in three different districts has been found different. In many cases, the selling price of the goods are depends on the cost of production including labour charge and transportation cost. Study shows that millet is comparatively expensive than maize and wheat due to two different reasons; first: it produces in the remote hills and unirrigated and unfertile Bari or Lekha area where the harvesting period is longer and the amount of production will be less, second; it has high cost of transportation because it produces in remote hill areas. Maize and wheat are most common crops and produces in Khetland. Sometimes maize has also grown in Bariland.

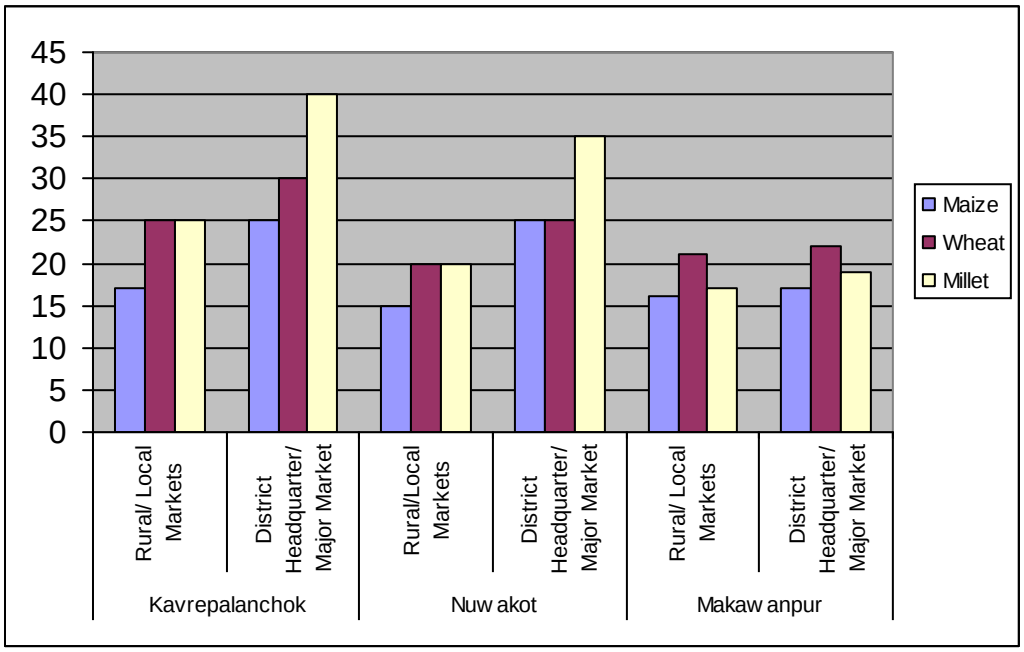
TABLE: 16
Selling Price of IWM flours in the Markets (in Rs./KG)

Districts/ IWM Flours	**Kavrepalanchok**		**Nuwakot**		**Makawanpur**	
	Rural/ Local Markets	District Headquarter / Major Market	Rural/Local Markets	District Headquarter / Major Market	Rural/ Local Markets	District Headquarter / Major Market
Maize	17	25	15	25	16	17
Wheat	25	30	20	25	21	22
Millet	25	40	20	35	17	19
Average	**22**	**32**	**18**	**28**	**18**	**20**

Source: Discussion with Community and Key Informant Interview, September 2009

As per table 16 above and figure 14 below, selling price of IWM flours is depends on the seasonality of the production, location of the markets, price of cereal grid in the market, cost of transportation and demand of the flours in the market. The study shows that the price of IWM flours in rural markets and the district headquarter/ major market centres are different. The price of the IWM flours in rural market and major markets are presented in Table 16 and figure 14. Study shows that nearly 50% price of these products can be increased while selling in headquarters and major markets compared to local rural markets, but in Makawanpur there is no significant variation in selling price.

Figure: 14
Selling Price of IWM flours in the Markets (in Rs.)



4.2.3.2.4 Key Issues for Promotion IWM Flour Market

1. Coordination and Information Sharing: Rural villages (markets) are the suppler points of IWM products in urban areas. This kind of interdependencies is highly perceived in many areas of Nepal. Various stages from production (producer) to consumption (consumers) of the agricultural production have been reported by various authors in their research reports. Onakomaiya (1976) had tried to analyze the relationship between/among the different stages and concluded that each stages of marketing are highly interrelated; however, due to the lack of clear government policy and programme in the past such linkages could not maintain properly in Nepal (Pradhan and Rautray, 1992). This also applies to the marketing of IWM products or flour in Kathmandu or other urban areas. This study also found that proper interaction and discussion among the possible stages of the market channelling is lacking. Whatever the interaction is, that is also limited between the GOA and Mill Owner and in some cases to farmers as well. Mill owner have relations only with the GOA. But some mill

owners have relation with the customers directly and they sell IWM flour particularly maize flour prepared from their own water mill.

GOA Kavre was found to gather information through various means. It responded that it is involved in coordinating Mill Improvement Programme (Ghatta Sudhar Karyakram) and supplying necessary tools in coordination with DDC which coordinates AEPC programmes in the district. GOA was also found to coordinate with DEO for adult education of its members. Besides, it is also working closely with a local NGO- Resource Management and Rural Empowerment Center (REMREC) - for the registration of water sources, other legal matters and advocacy for Ghatta. It also informed that it is coordinating with a local magazine but not with any FM for market promotion. Makawanpur, however, is not found to coordinate with these various sources. Instead, it receives information with the locals.

Whatever are the sources of information, the similarity to all these GOA is that they tried once and stopped on being not succeeded. It is also natural in the sense that GOA spends the money of its members and is accountable to such results which they cannot continue again and again.

2. Presence of Market Intermediaries: GOA tried to sell maize flour themselves milled in IWMs. None of them thought about intermediaries or suppliers. GOA can be, but are not professional for market promotion. An intermediary or supplier has network for supplying goods to the buyers. Further, these are full time professionals in their own field, and thus are well-experienced.

3. Institutional Setup: There is no institutional set up as such in each district. GOA is involved in marketing but it has not developed as an institution yet. GOA is also not equally active in each district. Their effort for marketing is also not enough.

4. Marketing Support: Categorically, there is no marketing support for the promotion of IWM products in the market. For example, market study shows that demand for IWM product is large enough. The demand for brown flower is ever increasing. Simultaneously, conscious buyers and conscious customers are seeking for certified food items. The certification process has some standards to pass which is set by Department of Food Technology and Quality Control. No systematic effort is found to certify and promote among conscious buyers.

5. Knowledge of Competition: The mill owners and GOA members know that they have competition with modern mills and large scale producers. All of them opine that their own cost of production is higher than the competitors. But they do not have much idea about the marketing strategy and networking of the competitors. Similarly, it also seems that prices that their competitors offer is also very high, although, it is equally important that food prices has gone high these days compared to two years back. In last six months only, the consumer price index is raised by 14%.

The mill owners and GOA are also found to overlook the fact that their products are distinct than their competitors. In fact, there might not be any competitor as such for such products, because the customers for IWM are different from the customers of regular flour. Further, the customers of organic food are quite different and there are no competitors at all.

4.2.3.2.5 Potential (Cereals and Flours) Collection Centres

Ghatta are developed along the river/stream or rivulets in the rural villages and they are scattered. Many of them are still in operation by using traditional tools. The improved Water Mill programme initiated since 2003 covering 16 districts of Nepal. After the installation of improve tools, the production amount and the efficiency of the production has been increased of the mill owner.

Cereals flours collection from the rural villages and the scattered Ghatta to meet the demand of the urban community in the city like Kathmandu is not easy. There is no any flours collection centre in the peripheral districts of Kathmandu valley. FGD in Nuwakot, Kavrepalanchowk and Makawanpur districts shows that such centres will play very crucial roles in the promotion of flour market in urban area. The potential collection centres of agriculture production including maize, wheat and millet flours are given in Box 2.

Box 2: Potential Cereals /Flours Collection in Selected Districts

Districts	Name of the Potential Collection Centres
Kavrepalanchok	Banepa and Panauti, Taaldhunga (6), Mahadevtar (4), Kaldhunga (4)
Nuwakot	Ranipauwa (4), Baguwa/Samahari Bhanjyang(5), Kharanitar (6), Dhikure (3), Ratmate (6)Taruka (6) Trisuli
Makawanpur	Hetaunda (11), Manahari (7), Palung (7), Phaparbari (5), Bhimphedi (4), Agra (2)

Source: Focus Group Discussion, September 2009
Note: Figures in the bracket represent the number of VDC

4.2.3.2.6 Possible Stakeholder

Based on the above analysis and findings, the stakeholders for the promotion of IWM are identified as follows:

1. Farmers
2. Mill Owners
3. GOA
4. IWM Development Partners (CRT/N; AEPC/N; SNV/N)
5. Suppliers/Intermediaries
6. Buyers (Groceries; Supermarkets; Bakeries; Restaurants)
7. Organic grain/flour buyers
8. Government Organisations other than AEPC/N (DDC; VDC; DAO; DOFTQC)
9. Local NGOs, NG Training Centres, Media

CHAPTER-V
SUMMARY, CONCLUSION AND RECOMMENDATION

This chapter deals with the 4th objective of this study. A summary of this study has been presented, conclusion has been drawn and on the basis of these summary and conclusion, recommendation to IWM programme and other concerned has been suggested. All these have been done with the help of analysis made on chapter four.

5.1 SUMMARY OF THIS STUDY

CRT/N has done a lot of efforts with the help of AEPC and SNV to improve traditional water mills and ease the rural life, especially, by saving time of milling. IWM has greater efficiency that it can mill the grains faster than the traditional one. Besides, long shaft IWM has multi-functional end uses, including milling, hulling, electricity generating and so on. Altogether an estimate of 5,215 IWMs is installed in 19 hilly districts of Nepal.

The increased efficiency has opened the scope for marketing of IWM products. In fact, the increased food consciousness in the urban areas has increased the scope for IWM products. The nutrient it has is considered hygienic. The general perception is that these products are good in quality and tasty. However, GOA itself and some buyers noticed some black particles (damaged grains) and dust (foreign materials) in the flour. In totality the quality has good impression among buyers.

During the study it has been found that a large number of buyers are interested to promote IWM products in the market. However, the suply of IWM maize flour is found commercially viable. There are two reasons for it. First, there are few local brands- not well established in the market, which makes it easy to compete in the market. The second reason is that the supply side also has good surplus on the production of maize and they can get good margins. The demand for maize flour is also significant. In overall, the demand for IWM maize flour has been found 82%, wheat flour 12% and millet flour 6%. In this way, demand for IWM maize flour outnumbers the demand for other IWM product. A rough estimate of demand for maize flour under IWM programme is suggested as 100 quintals per month. Buyers' perception to the IWM product is good in overall. It is perceived that maize flour is also good for diabetic patients, although clinically it is found only as a healthier product.

Associated to this, another important fact is that, the brands like Hulas or Gyan brands supply wheat flour in the market, and not maize or millet flour. Further, the supply side of IWM wheat or millet flour is also not strong. Thus the marketing of wheat flour in IWM programme does not seem viable at the first stage. However, after successful marketing of IWM maize flour, it can be possible to look market for wheat flour along with millet flour.

The buyer of organic food is also another possibility of IWM product marketing. Nevertheless, converting a non-organic farming to an organic farming takes a long time, and hence this may be a long term option. However, as an immediate action, the programme can focus for promoting IWM maize flour.

In terms of buyers, groceries are found as the most potential buyers along with the super markets. The study found that 80% of total sales can be channelled through

groceries, 15% from super markets and 5% from others like bakeries and restaurants. Groceries are the best channel because it has two way communications with customers. This is possible because in a grocery, owners are often also sellers. Restaurants often buy flour from groceries. Hence, programme need to focus groceries and supermarkets for marketing IWM flour.

The regularities of supply is most important aspect for marketing. It keeps markets with the producers. 100% buyers in this study emphasized for the regular supply. It is obvious because if the supply is not regular and a grocer returns his/her customer without providing the product again and again, people stop asking for the product and he/she can not recommend them to try. Other important aspect in demand side is price, sample and labelling. 79% of buyers suggest that price should be reasonable, 46% preferred to see the sample and about 32% emphasized for having clear labelling with price, packing date, nutrients etc. Hence, it is clear that the same buyer have more than one preference, which the supply side needs to consider. This is possible only after introducing a supplier or intermediary in the network. A supplier can motivate the producers to meet these preferences.

Other weakness is that GOA members were afraid of strong competitors in the market. However it has found that people are buying wheat flour in different price for different brands and non brands. This also means that IWM can also get a different price than other brands and non brands. As people give different price to different brands due to their images, then why not to pay a handsome price for IWM maize flour as people have positive perception about it.

Transportation is an important part for IWM products. As majority numbers of IWMs are far from motor-heads, the transportation cost limits the chance of producing at competing price. However, the IWM products may find special consumers who can buy at price higher than the price for regular flour in the market.

National policies also seem to favour such products. However, GOA needs to make more efforts to get advantage of these policies for marketing. Similarly, GOs, CRT/N and other NGOs and SNV are constantly working on IWM programmes. Further, a number of media are also working at a local level. These could be other advantage for IWM products. In short, the scope of IWM product marketing seems encouraging.

5.2 CONCLUSION

On the basis of major findings the following conclusions have been drawn:

1. A large number of buyers are interested to promote IWM products in the market. However, the suply of IWM maize flour is found commercially viable.
2. In overall, the demand for IWM maize flour has been found 82%, wheat flour 12% and millet flour 6%. In this way, demand for IWM maize flour outnumbers the demand for other IWM product.
3. The brands like Hulas or Gyan brands supply wheat flour in the market, and not maize or millet flour. Further, the supply side of IWM wheat or millet flour is also not strong. Thus the marketing of wheat flour in IWM programme does not seem viable at the first stage.
4. The buyer of organic food is also another possibility of IWM product marketing.

5. In terms of buyers, groceries are found as the most potential buyers along with the super markets.
6. The regularities of supply found most important aspect for marketing because It keeps markets with the producers.
7. Price, sample and labelling is other important aspect in demand side.
8. GOA members were afraid of strong competitors in the market. However it has found that people are buying wheat flour in different price for different brands and non brands.
9. Transportation is an important part for IWM products. As majority numbers of IWMs are far from motor-heads, the transportation cost limits the chance of producing at competing price
10. National policies also seem to favour such products. However, GOA needs to make more efforts to get advantage of these policies for marketing.

5.3 RECOMMENDATIONS

Based on the major findings and its conclusion, the following recommendations have been made:

5.3.1 The Market Access

IWM products have two distinct markets- market for flour produced by organic technology and market for regular IWM products. These need different strategies which are as follows:

1. The organic food gives higher price than the regular ones. Hence, a network can be developed between IWM at remote areas and the buyers. Therefore, it is recommended that IWM programme and GOA shall take initiation to negotiate with these buyers and take steps to insert into their network. It is important to note that buyers of organic food can only deals with groups. In the sense, GOA can enter into supply chain for such product as an organization.

2. For other buyers like groceries, supermarkets, bakeries and restaurants GOA shall negotiate with local suppliers or suppliers at Kathmandu to collect from them or mill owners. For this they can also negotiate with these buyers to find suppliers.

3. Most of the data gathered in the field study are related to wheat flour produced in the modern mills. This means that these mills are producing mostly wheat flour. Hence the competition with wheat flour may not be viable. Thus at the starting, this study recommend the programme to promote maize flour first.

5.3.2 System Efficiency

The major changes in the system should be the involvement of suppliers to regular buyer. It is also recommended that GOA should have regular interaction with suppliers, mill owners and farmers. Besides they need to have a written contract with these stakeholders, which may make them more regular in terms of supply and payment.

Further, groceries can be used for sales promotion by giving them more margins because grocers are often found to having two way communication and exchange of opinion related to the quality and importance of the products.

Similarly, IWM products are also promoted through travel agents, because restaurants targeting foreigners generally receive tourist in a tour package. However, this is also a task of supplier.

5.3.3 Product Quality and Quantity

It is also recommended that the black particles and dust particles should be removed to improve the quality. For this the programme shall continuously keep on revision of technology. This is a kind of Research and Development work of the programme. So, this means that this is not a urgent but a necessary step for promotion of IWM product and kind of upgrading step in future. Similarly, farmers and millers should be trained for taking precautions so that these threats to the quality should not occur.

Not only are the quality, the quantity of the production and regular supply also important. Hence, the programme and GOA should ensure these before coordinating to any supplier or buyer.

5.3.4 Competition

The study found that people pays different price for different quality and brands. Therefore, it needs that IWM programme needs to give emphasis on advertisement and sales promotion demonstrations so as to give a different image of IWM products to the consumers. This can be done by mobilizing local news papers and FMs. Besides, a certain amount committed for advertisement, sales promotion and demonstration is necessary. The study recommends the programme to raise a certain amount for these activities.

However, for the promotion of flour, there is no need of advertisement. The buyers of such flour can promote the product themselves. It is because they have their own network.

5.3.5 Business Environment

IWM may have some problem of registering water sources. Otherwise, there is no such problem from policy perspectives. The government policy seems friendly to these products. The certification from government agency is also possible if the IWM products meet the set standards. Hence, GOA is recommended to coordinate with DAO, DDC and Department of Food Technology and Quality Control.

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ANNEX - 1

Checklist for Focus Group Discussions with GOA Members

1. Introduction(Project Brief)

2. Market Access:

2.1 Can you explain the market trend of IWM products, particularly, maize, wheat and millet flours

Particulars	Increasing	Decreasing	Reasons
Production			
Demand			
Price			
Cost of production			
Overall market trend			

2.2 Can you explain the actions you took to address these market trends? Please specify.

2.3 What lesson did you learn from these changing market trends? Please specify.

2.4 Let's discuss on the market size. Does GOA have any idea about the potential markets and the market size of IWM products? If yes, please specify.

2.5 What are the strength and weakness of the IWM products (focus on wheat/millet/maize flour) with regards to the potential market in the local as well as outside?

3 System Efficiency:

3.1 How do you interact with buyers (both local and outside including Kathmandu Valley)?

- Directly, face to face
- Through an intermediary (e.g., collector)
- Others (please specify)

3.2 How often does GOA meet buyers to discuss business related matters and exchange new information?

Daily	Once a week	At least once per month	At least once every three months	Other (Specify)

3.3 Whom does GOA coordinate to get market access to IWM products?

With IWM owners and buyers	With IWM owners, intermediaries and buyers	With farmers, IWM owners, intermediaries and buyers	With all possible stakeholders including chambers of commerce

3.4 Does GOA limit itself to coordination or involve into business transactions related to IWM products as well?

- o limits coordination only
- o involves in transaction only
- o both
- o others (please specify)

3.5 What kind of information does GOA get from buyers?

Information about new market trend	About market requirements (e.g., quality, standards)	About new technologies and methods	About available business services	About cost and prices

3.6 What kind of information does GOA provide to IWM owners?

Information about their products and services	About new technologies and methods	About available services	How to use and maintain input factors (e.g., machines)	Others (please specify)

3.7 What other sources of information do you have for market expansion?

BDS providers	Government Agencies	Media	NGOs and Development Agencies	Others

3.8 Do you feel the need of market intermediaries for selling your product in the market?
3.9 Is there any management committee for marketing in GOA?
3.10 Do you feel that such committee is necessary? Why?
3.11 What kind of mechanism you prefer for marketing of IWM products?
3.12 Do you see any need of marketing support? If yes, what are these, and by whom?

4. Product Quality and Specifications

4.1 Describe selling price of major IWM products.

IWM products	**Price (Rs.)**		
	Local market	Kathmandu valley	Other (please specify)
Wheat flour			
Maize flour			
Millet flour			

4.2 What kind of packaging materials do you use for IWM products? (if any)

4.3 How do you transport IWM products to the markets?

5. Product Differentiation- Competition

5.1 Who are the main competitors for IWM products?

5.2 Do you know the price that your competitors sell their products? If yes, what are the prices?

Competitors' products	**Prices (Rs.)**		
	Local market	Kathmandu valley	Others (please specify)

6. Are regulatory issues important for marketing IWM products? If yes, how?

ANNEX - 2

Interview Schedule for Buyers (Groceries etc.)

1. **The Market** (Particularly maize/wheat and millet flours)

Are you aware of IWM products?

- Yes
- No
- Not responding

Are you willing to take sample of IWM Products?

- Yes
- no
- No response

Daily sales of ordinary flours?

- up to 15 kg
- 16 to 30 kg
- 31 to 50 kg
- Above 50 kg
- No idea

Expected sales margin on IWM products?

- up to 10%
- 11 to 15%
- 16 to 20%
- No opinion

How often do people come to buy IWM products? (esp., wheat, maize and millet flour)

- Not at all
- Rarely
- Frequently

Who are your buyers?

Do you face any problems by selling IWM products?

Do you get feedback from your customers about the IWM products which you sell?

- Yes
- Not at all

1.6 Let's discuss on the market size. Do you have any idea about the potential markets and the market size of IWM products? If yes, please specify.

1.7 What are the strength and weakness of the IWM products (focus on wheat/millet/maize flour) with regards to the potential market in the local as well as outside?

2. Product Quality and Specifications

What kind of IWM product (categories) do you sell in your store/restaurants/bakeries?

What kind of preferences do your customers have (e.g., in terms of quality, nutrients, packaging, etc.)

What is the price you sell of IWM product?

What are your main cost factors with regard to sell these IWM products?

3. Supply

Do you purchase IWM products directly from producer or purchase through suppliers?

Do the IWM products meet your customers'requirements (in terms of quality, quantity, price, nutrients and delivery time)?

Do you get sufficient information from your suppliers about available products, prices and quantities?

- Yes
- No (why not?)

How do you collect your products?

Suppliers come to me	I go to a supplier (through an agent or personally)	I have collecting centers	Others

What kind of services do you provide to your suppliers?

Information about market requirements and developments	Equipment and Input Factors for Production	Loans	Technical assistance and training	Marketing support (e.g., advertisement, branding etc.)	Others

4. Competition

What products are as main competitors to the IWM products in the market?

What makes IWM products competitive to other products?

At what prices do you sell competitos products?

Competitors' products	**Price**
Wheat flour	