THE MARKET ANALYSIS OF HONEY

(A CASE STUDY OF HONEY MARKET IN CHITWAN)

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A Thesis Submitted to:

Office of the Dean

Faculty of Management

Tribhuvan University

In the partial fulfillment of the requirements for the degree of Master's in Business Studies (MBS)

Narayangarh, Chitwan

March, 2011

RECOMMENDATION

This is to certify that the thesis

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Entitled

The Market Analysis of Honey

(A Case Study of Honey Market in Chitwan)

has been prepared as approved by this department in the prescribed format of faculty of management. This thesis is forwarded for evaluation.

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DECLARATION

I hereby declare that the work reported in this thesis entitled "The Market Analysis of Honey" (A Case Study of Honey Market in Chitwan), submitted to the office of the Dean, faculty of Management, Tribhuvan University in my original work done in the form of partial fulfillment of the requirement for the Master In Business Studies (M.B.S.) under the supervision and guidance of Mr. Bharat Khanal, Balkumari College, Narayangarh, Chitwan.

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ACKNOWLEDGEMENT

First of all, I would like to express my sincere thanks and deep gratitude to honorable lecturer and overall coordinator of MBS department Mr. Bharat Khanal for providing me with immense support and guidance. Undoubtely it would have been very difficult to complete the work initiated without his precious cooperation.

Various helps were received from different persons and institutions in due course of study. I would like to express my heartfelt thanks to all of them including the chairman of Federation of Nepalese Beekeepers Association Mr. Durga Upadhya and its secretary Mr. Ram Prasad Paudel & Mr. Thakur Prasad Dawadi for their help to make easy access and availability of pertaining material. Furthermore, I express my special thanks to Mr Khem Raj Neupane who helped me by providing previous research materials in the related topics which was of immense support in the completion of my thesis work.

Similarly, my thanks go to the different people of the Federation of the Nepalese Beekeepers Association for their kind cooperation by supplying all required statistical data to support me.

The credit of my success especially goes to Mr. Rabindra Giri who had been with me providing assistance during the collection of information, their classification and interpretation. I am really indebted to him for sharing his time and knowledge despite his busy schedule.

Lastly, I would like to acknowledge the special support provided Mr. Hari Adhikari (Classic Computer) for the processing of the manuscript through Computer and bringing it out in the final form.

Date:

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ABBREVIATIONS

%	:	Percent
&	:	And
A.D.	:	Anno Domini
B.S.	:	Bikram Sambat
Co.	:	Company
D. F.	:	Degree of Freedom
DFTQC	:	Department of Food Technology and Quality Control
DOA	:	Department of Agriculture
FNBK	:	Federation of Nepal Beekeepers
FNCCI	:	Federation of Nepalese Camber of Commerce and Industry
HACCP	:	Hazard Analysis & Critical Control Point
i.e.	:	That is
IAAS	:	Institutes of Agriculture and Animal Science
ICIMOD	:	International Centre for Integrated Mountain Development
MBS	:	Master's Degree in Business Studies
MQCD	:	Measurement and Quality Control Department
No.	:	Number
Regd.	:	Registration
SPS	:	Sanitary & Phytosanitary
TRIPs	:	Trade Related Aspects of Intellectual Property Rights
TU	:	Tribhuvan University
TV	:	Television
UNECE	:	United Nations Economic Commission for Europe
UNICEF	:	United Nations International Children's Emergency Fund
WTO	:	World Trade Organization

CHAPTER-ONE

INTRODUCTION

1.1 Background of the Study

Nepal is one of the least developed countries of the world. Most of the part is covered by mountains and hills. Only a small part is covered by Tarai. Construction of roads is very difficult on these rugged hills and mountains which have intensified the poverty of the country. Only 17% of the total land of our country is arable where more than 80% of the people are engaged. Industries are very few in our country. Most of these industries are agro-based and are of small and medium scale. Import is far greater than export which has adverse effect on balance of payment of our country. This trade deficit has plunged the country in an ocean of poverty and debt. Nepal hasn't been able to diversify its trade with other countries. Major part of its trade is confined to India. Moreover, Nepal has to largely depend on India for transit due to its land locked ness. Till 1951 A.D., Nepal was kept in a state of virtual isolation from the rest of the world. It was only in 1956 A.D. that the country launched its first Five Year Plan and got into the process of development. But till 1960 A.D., no attempt was made to diversify the country's overall trade. Till 1970 the overall trade of Nepal was confined to India alone. After the establishment of Trade Promotion Center in 1971 A.D., the share of India's trade gradually declined and the share of overseas improved. But it has been observed that after 2000 A.D. again the share of India in foreign trade has been increasing gradually. To add fuel to fire, the current political instability has hit the Nepalese industries and as a whole Nepalese economy hard. Despite of all these facts Nepalese entrepreneurs are trying their best to develop the trade and industry of the country.

I have selected Chitwan for the area of research. It lies along the Mahendra Highway which is the only highway which connects Eastern Region with the Far Western Region of our country. Further, it has been linked to the capital with roads and air services as well. Thus, almost every traveler heading to different parts of the country passes through Narayangarh, the major city of Chitwan district as well as one of the most commercial centers of our country.

1.2 Marketing an Overview

The society that we live in today is very old. From the very ancient time our society has evolved to this modern society passing through different stages. With the passing of time we can notice changes in different sectors like health, education, science, politics, economics, and social behavior and so on. Thus to understand them better other social subjects like physiology, psychology, population education, marketing etc also developed. To fulfill the requirement of the people market developed. In the past people used to wander places in search of food and shelter. But he realized that he should stay in one place and meet his entire requirement there itself. Therefore he settled in one place, grew food and fulfilled his needs from there. Society developed, people started growing surplus crops which they wanted in exchange with the things that they had. People wanted a place where they could sell their surplus production and meet their deficit needs. They wanted a common place for the exchange. This common place of exchange was the market. At the beginning people exchanged their goods through barter system. Slowly people started using money for exchange. Population started growing. The necessity of marketing became more. Thus, we can say that marketing developed in evolutionary rather than revolutionary manner.

Marketing means the buying and selling of things. Buying and selling of goods is one of the inseparable organs of marketing. Like blood in essential for functioning of human body, similarly to enhance the activity of buying and selling marketing became inevitable.

Marketing mainly focuses on the costumer's needs and wants and how to fulfill them. People of different places have different wants. To fulfill the want and demand of the people we produce product. Producers produce studying the demand and want of the people and people purchase product that they like providing suitable price. We can define marketing as:

"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 objectives" by American Marketing Association focuses on the recognition of marketing as a process and marketing activities that are undertaken to create exchanges that meet individual and organizational objectives.

"Marketing is a societal process by which individuals and groups obtain what they need and want through creating, offering and freely exchanging products and services of value with others" by Philip Kotler focuses on marketing as a social process performed for meeting wants and needs of products.

Albert Frey classified all marketing decision into two factors: the offering and methods and tools. Lazer and Kelly proposed a three-factor classification: goods and services, distribution and communication mix. E Jaromy McCarthy popularized the concept of 4 Ps-product, price, place and promotion.

Focus of marketing in last decade has shifted from 'producers' to 'consumers'. Consumers are regarded as the 'nucleus' to all Marketing

activities. The reason for this shift was done due to the realization of the fact that quality product is not successful until it is effectively marketed. Marketing Management has undergone a phenomenal metamorphous these days.

The essence of marketing is that it enables an organization to find out what the customers needs and it also helps to decide what product to make. Today's marketing environment is characterized by globalization, technological change and intense competition. Successful marketers are those who deliver what customers are willing to purchase as well as ability to produce the same. For this reason marketers today conduct many research and development to study consumer behavior so as to recognize why and how individual make their consumer decisions. Thus, marketing is the application, management and satisfaction of demand through the exchange process. Perhaps the most distinctive skill of professional marketers is their ability to create, maintain, protect and enhance brands.

Consequently, marketing suggests that it consists of some activities combining consumer needs, product, and price, and place, promotion to facilitate exchange and brands that satisfies individual as well as organizational objectives within the social and marketing environment prevailing today.

1.3 Focus of Study (Justification of the Study)

(i) The present study tries to focus on the Commercialization of beekeeping.

(ii) It will try to study how to enhance the capacity of the beekeepers through training; exposure and dissemination of beekeeping

techniques developed within the district as well as outside the district are brought to the market and sold.

(iii) The modern technology, training to people, environmental factor and agricultural loan will be the concern of the study.

(iv) The effect of price on demand. In this modern era, every marketer should understand the consumer's satisfaction which creates the behavior of consumer. In this era of cut throat competition, successful marketing can only be done through understanding of consumers taste, choice, preference, loyalty or say consumer behavior.

(v) It will also focus on the role of marketing which is very important for consumer as well as producers to buy and produce goods. It helps in bringing competition thus increases efficiency. As the focus of the study, the producers, distributors as well as consumers will be benefited by this study.

(vi) In this study an attempt will be made to examine the present marketing scenario of honey product in Chitwan district. The different co-operative institutes established to protect the consumers as well as producers well being.

(vii) This may give an insight into marketing policy and strategy. The study will try to focus on every aspects related with honey product. It will try to study right from the beehive to the final consumer everything that is associated with it.

1.4 Statement of the Problem

Honey product is a appetizer diet of the people. Nepal which is predominantly a agricultural country, it is therefore very important to study about the problem associated with honey production and sales.

Problem of storage. It is worth mentioning here that foreign countries have adopted modern techniques and tools to increase their production.

Nepali farmers shift their profession once their income increases. New farmer take up their place. It takes them a year or two to have a good understanding about the lobby to develop infrastructure related to quality production(collection centers, laboratory, storage etc). Moreover, the technologies are old. Though the country has been benefited with diverse geographical structure which has enriched the country's potential for bee keeping yet lack of knowledge, investment, government support has created a problem in utilizing the potentiality. Support and awareness over the importance of pollination, pasture and post harvest management for quality production is lacking among Nepalese farmers.

It is essential to know and understand about the relation between vegetation and bee, and the different types of varieties that can be produced from them. Therefore the study will try to answer some of these problems in marketing of honey production, trade and sales in the district.

- Why subsidy honey harvesting cannot be commercialized? Why has advertising not able to find proper honey market in the district?
- Problems associated with quality based quantity honey production?
- What is the problem associated with sales of honey in Chitwan?
- What are the promotional tools developed for competing with other substitute products?
- What are the pricing strategies being adopted by the marketers of honey in the study area?
- Have the farmers got proper market and distribution channels for the surplus production they make.
- Why has the government not been able to produce effective results even though it develops different level of trainings?

1.5 Objective of the Study

The overall objective of the study is to identify and evaluate marketing activities and every problems that is related to it, however, in particular it will try to focus on the below given objectives.

- To analyze market condition of honey product in Chitwan
- To analyze quality and variety production and its impact on sales
- To analyze proper marketing strategy used by honey producers
- To analyze about the effectiveness of government trainings

1.6 Importance of the Study

Honey production and sale is one of the major activity of Chitwan district. It is an occupation as well as profession of many people. It has helped to increase the living standard of the people. It is therefore very important to know about the production, sales and distribution of the honey within and outside the district. Unless we have a better understanding concerned with honey we won't be able to develop a good marketing strategy. In this era of intense competition it is very much necessary to understand about consumer's habit, taste, choice and attitude. Traders may find this finding very useful and thereby develop better marketing strategy right from the production to its distribution to the final consumer. They can also know about the different region within the country and develop better distribution channel. This study can also be helpful to other peoples concerned with honey and help them to locate the problems and find out opportunities.

1.7 Limitation of the Study

(i) In order to study deeply in various areas of the market, there wouldn't be time, cost and resources limit.

(ii) Data will be based on the sample survey conducted in Chitwan. Study area covered is a small segment of the Nepalese market and it won't be able to give proper explanation of the total honey marketing in the context of Nepal.

(iii) Most of the data used in this study will be obtained through questionnaire interview of limited number of manufacturers, retailers and ultimate consumer. So most of the information gathered may not be reliable since we have to rely on whatever information they give. The information supplied by them may be uninformative and thus the data supplied may also be not very accurate.

(iv) The nature of the respondent and the interviewer can also produce redundancy in the information gathered. Over viewing the above limitations every effort will be made to collect first hand information and interpreted in the same manner.

1.8 Organization of the study

This study will be organized into five chapters which will be like the one below:

First Chapter: This chapter will deal with the Introduction (Background of the Study, Marketing Overview, Focus of the Study, Statement of the problem, Objective of the Study, Importance of Study and Limitation of the Study.

Second Chapter : This chapter will deal with the Review of Literature Further, this chapter is divided into two parts. The 1st part deals with

Literature of Marketing and the 2nd Part deals with Reviews, previous related unpublished thesis & journal articles

Third Chapter: This chapter deals with Research Methodology. Various tools of research like the research design, sources of data, collection method etc will be carried out effectively for the authenticity of this research.

Fourth Chapter: This chapter deals with Data Analysis and Presentation.

Fifth Chapter: This chapter deals with Summary, Conclusion & Recommendation. At the end of dissertation bibliography and appendixes are also included.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Background

The First Chapter highlighted the objectives and problems of this study. This Chapter deals with the review of literature, its concept, review of past researches, their limitation etc. By review of literature we get or collect the information or knowledge about their researches. The previous study will be the base to face new problem and provide the foundation to the present study.

Study of consumer behaviour has now been as an effective measure to help develop proper marketing strategy. On growing need and demand of consumer's previous studies enthusiastic effort has been made to get additional information about a particular subject. Attempts are made by the researcher to bring truth and newness in the study. Thus, once study is made some new facts and ideas will develop and its implementation will help to develop marketing strategy.

For the study purpose, literature has been reviewed in terms of:

- Review of Supportive Text
- Review of Previous Studies

2.2 Review of Supportive Text

- Conceptual Framework
- Historical Background of Honey
- Bees and the Flower
- Honey Bees

- Beekeeping with the Honey Bee
- Honey and Wax
- Introduction to Honey Marketing and Environment
- Innovation of Global Honey Marketing
- Beekeeping as a Source of Income
- Advantages of Honey

2.2.1 Conceptual Framework

Marketing is the business function that identifies customer needs and wants, determines which target market the organization can serve best, and designs appropriate products, services and programs to serve these markets. However, marketing is much more than just an isolated business function–it is a philosophy that guides the entire organization. The goal of marketing is to create customer satisfaction profitably by building value-laden relationships with important customers. The marketing department cannot accomplish this goal by itself. It must team up closely with other departments in the company and partner with other organization throughout its entire value-delivery system to provide superior value to customers. Thus, marketing calls upon everyone in the organization to "think customer" and to do all they can to help create and deliver superior customer value and satisfaction.

Many people see marketing only as advertising or selling. But real marketing does not involve the art of selling what you make so much as knowing what to make! Organization gain market leadership by understanding consumer needs and finding solutions that delight customer through superior value, quality, and service. If customer value and satisfaction are absent, no amount of advertising or selling can compensate.

Marketing is all around us, and we all need to know something about it. Marketing is not only used by manufacturing companies, wholesalers, and retailers, but by all kinds of individuals and organizations. Lawyers, accountants, and doctors use marketing to manage demand for their services. So do hospitals, museums, and performing arts groups. No politician can get the needed votes, and no resort the needed tourists, without developing and carrying out marketing plans. People throughout these organizations need to know how to define and segment a market and how to position themselves strongly by developing need-satisfying products and services for chosen target segments. They must know how to price their offerings to make them attractive and affordable, and how to choose and manage intermediaries to make their product available to customers. They need to know how to advertise and promote products so that customers will know about and want them. Clearly, marketers need a broad range of skills in order to sense, serve and satisfy consumer needs.

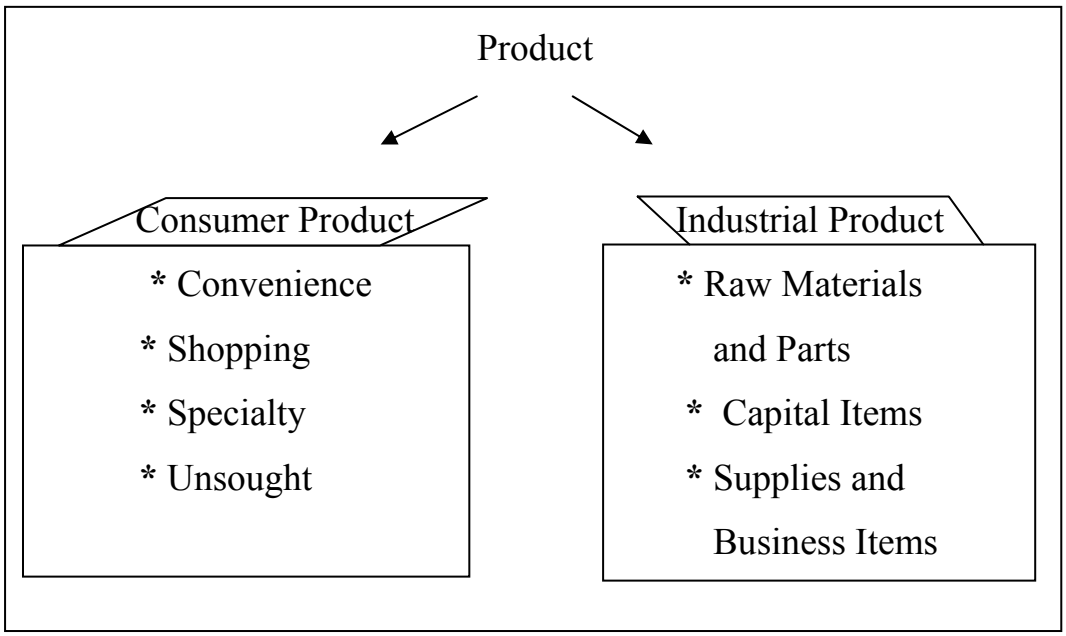
Product

We define a product as anything that can be offered to a market for attention, acquisition, use or consumption and that might satisfy a want or need. Product include more than just tangible goods. Broadly defined, products include physical objects, services, persons, places, organizations, ideas, or mixes of these entities. Thus, product include any or all of these entities. According to Philip Kotler, “A product is anything that can be offered to a market to satisfy a want or need”. In the broadest sense, a product is anything offered to satisfy customer needs. Its components are design, quality, variety, features, branding, packaging, services and warranties.

Product can be classified according to their ultimate use. They can be:

Figure No. 2.1

Product Classification



Consumer Product is bought to satisfy personal and family needs. They are convenience, shopping, specialty and unsought product. Industrial product on the other hand is that product which is bought for business use or to make other products. The examples are raw materials, capital, supplies and business items. The same product can be both consumer and industrial product. Sugar used for household use is a consumer product. It becomes an industrial product if used for making candies. Organization must develop new products. Changes in technology, competition, customer preferences, and environmental forces necessitate new product development. The requirements for organizational growth and the shortened product life cycles reinforce such necessity. New product development is the life source of organization.

Those product which are purchased infrequently, well planned and spend substantial time and effort in locating the brand is called specialty product. Honey being costly and less usage by the people falls under this

category. Most of the people of the district follow primitive method of packing. Empty bottles and small tins after use are usually used to fill honey. Most of the people do not have knowledge about component design, branding and packaging. People in the cities have better knowledge about it. They have developed innovative plans and ideas to promote honey marketing within and outside the district. Nevertheless, proper training and awareness should be provided to the people to develop product satisfaction, customer needs thereby generating income and creating employment to the people.

Distribution

According to Cundiff and Govon, "Physical distribution involves the actual movement and storage of products after their production and before their consumption". Therefore, we can conclude that distribution is an activity which involves the storage and movement of products from the producer to the consumer. It is the management of the physical flow of products and the establishment and operation of efficient flow system. It is the concerned with efficient movement of finished products from the end of production line to consumer. The major objective of distribution is for; better customer service, reduction in cost, increase in selling, to create maximum profit, to develop communication system, to develop comparative efficiency and others like transportation facility, quality, fulfill demand of customers among others.

A proper distribution channel should be made for the effective sells of the product. Every product seeks to link together the set of marketing intermediaries that best fulfill the firm's objectives. This set of marketing intermediaries is called the marketing channel or distribution channel. According to Mccarthy, "Any sequence of institutions from the producer to consumer including one or any number of middleman is called a

channel of distribution. Therefore, it is a path a product takes as it moves from producer to consumer.

Channel Structure for Consumer and Industrial Goods

Distribution can be made through different channels. It may directly reach the consumer from producer or it may require other intermediaries to reach the consumer.

Channel Structure for Consumer Goods

- Producer-Consumer
- Producer-Agent-Consumer
- Producer-Retailer-Consumer
- Producer-Wholesaler-Retailer-Consumer
- Producer-Agent-Wholesaler-Retailer-Consumer

Channel Structure for Industrial Goods

- Producer-Industrial User
- Producer-Distributor-Industrial User
- Producer-Agent-User
- Producer-Agent-Distributor-User
- Producer-Agent-Distributor-Retailer-User

The role of intermediaries plays an important role to distribute goods from the producer to the consumer. The goal and objective of an organization is not possible without intermediaries. The market intermediaries are of following types:

- Wholesaler
- Retailer
- Agents
- Facilitators

Proper Strategic considerations should be made in channel selection according to the type of goods to be marketed. If proper selection is not made the organizational objective may not be achieved. If we do not make proper selection than it may take long period for the product to reach to the consumer from the producer. Following are the strategic considerations that should be made for channel consideration.

- Market Consideration
- Product Consideration
- Channel Consideration
- Organizational Consideration
- Legal Consideration
- Technological Consideration
- Objective Consideration

Honey is expensive, not well managed, lack of awareness among the people about its benefit, lack of proper market, lack of branding, packaging, and promotion, the distribution channel also is not properly managed. People who are engaged in honey production are usually of subsistence type. Usually the wholesaler is the producer themselves. The channel structure is from producer to the consumer. Retailers too are involved in the distribution. The distribution is not very effective. This is the reason Indian honey has covered substantial retailer market. People recently are developing new techniques and methods to commercialize honey.

2.2.2 Historical Background Of Honey

It is assumed that the first thing people tasted sweet is honey. It is not possible to exactly determine when honey bee originated in the world but it must have been together with the flowering plant. Scientist Frise has estimated honey bee origination some 2.3 billion years ago during the

Mozaic Era of the Jurassic Period. For centuries they were confined to the place of origination and gradually started spreading to other parts before the evolution of human beings. There are evidences that primitive people of Africa, Spain, Australia, India etc use to extract honey comb and eat them.

- The first people to do bee keeping is found in the Neolithic Period 5000 B.C. We can find during this period of Stone Age, people had already started beekeeping. They had developed an idea of making shelter for bees. But there were threat because other hunters use to steal the honey. Loss of natural nesting sites due to deforestation and fire in the forest, change in the agricultural pattern, unscientific honey hunting etc. have threaten the existence of honey bee species in many Asian countries. Honey bees which were found before 1600 B.C. in the old world (Africa, Europe, Asia) were not found in the new world (America, Australia, New Zealand). Therefore the people of the new world started importing honey bee along with the comb from the old world. European honey bee 'Apic Melifera' was taken for the first time from England to North America in 1622 A.D. Similarly, in 1688/89 A.D. honey bee was taken to the Caribbean island from France and in 1822 A.D. from England to Australia and then to New Zealand in 1829 A.D. In 1850 honey bee were taken from Europe to America and they gradually started spreading to different parts of North America and finally settled in British Columbia. In this way the European honey bee 'Apic Melifera' had already spread in every part of the world.

2.2.3 Bees and the Flower

Although bumble bees and honey bees are often active in dull weather, most bees are very much creature of the sunshine. They are never found far from the flowers which provide the nectar and pollen food. The bee has a tube like tongue, some times as long as its whole body, through

which it sucks up nectar. Only the female collect pollen, however, and their methods of doing so make them among the most interesting of insects. The female bumble bee and the female honey bee have a smooth, slightly hollowed out space on the outer side of the hind leg. It is called a pollen basket and the bee, with certain movements of her legs, combs her body clean of pollen grains and gradually packs them in a solid lump in her pollen basket. The leaf-cutter bees pack the pollen they gather on the underside of the abdomen.

When a bee sucks some nectar from a flower it flows into a special sack in its abdomen called the honey-stomach or crop. There it is held without being digested, and when the bee returns to its nest it regurgitates it to feed the young or stock the nest.

It is only the female bee that stings; the males cannot defend themselves. They spend their time searching for females or feeding among the flowers. They take no part in either making a nest or collecting food for their offspring.

Most bees are solitary; they nest alone and a female receives no help from others during nest construction or in looking after the brood. A few species of bee are social. These have a queen and live as a colony, or family, consisting mostly of workers; that is, females that cannot lay eggs but do the day-to-day work of the colony. Social bees can also produce wax, which no other solitary bee is able to do so. It first appears on the bee's body in the form of thin scales or flakes sticking out from between the segments, or plates, that make up the bee's abdomen. The bees use it for making combs in which to store honey or pollen for the winter, or in which the eggs are laid, and it does not melt even at quite high temperatures. The best known social kinds are the bumble bees and the honey bees.

2.2.4 Honey Bees

For thousand of years colonies of bees have been kept by man for their honey. Often a swarm of honey bees escapes the notice of the beekeeper and settles down in a hollow tree or in a chimney. Here the bees may live and go about their business for many years, no worse off than in the hive from which they came. Each hanging comb of the honey bee is double-sided with many hundreds of cells opening on each side of it. The cells are six-sided and made of the thinnest wax. To suit his convenience the beekeeper gets the bees to build their combs within wooden frames which can easily be lifted out of the hive.

Honey bees arrange their storekeeping so that the honey-cells form an arch across the top of the comb and half way down the sides. Beneath the honey is a narrow strip of cells in which the workers pack their loads of pollen, and all over the middle and lower part of the comb are the cells in which the queen lays the eggs that hatch into grubs and later become bees. A big colony may contain as many as 60,000 workers, females all of them and ready to sting if roughly treated. There is also the queen bee, the one fertile female in the colony, and many males, called drones. The drones are big with very large eyes and their only use is to mate with the young queens at swarming time. At the end of the summer the workers drive or drag the drones out of the hive, to die of neglect and starvation. During the summer, when the work is hard, worker bees live for only about six weeks, but many of those born at the end of the summer live through the winter and keep the colony going.

From the time she emerges from her cell the worker bee performs various jobs. For about the first three weeks, as a “house bee”, she cleans and polishes the cells. Then she helps with nursing duties, feeding the newly hatched larvae in the cells. Later she produces wax and builds this into

the honeycomb. At the end of the three weeks she becomes a field bee and goes off to gather pollen and nectar form the flowers, although she may still have duties to perform in the hive, such as fanning with her wings to reduce the temperature in hot weather. These house duties are of course performed subject to the needs of the colony, and a “house bee” will become a “field bee” and vice versa, if the colony’s needs so dictate.

When a worker bee finds a supply of nectar, such as a field of clover, she will fill her crop, come home and tell the other workers where she found it. She does this by two special dances. In the round dance she runs round on the comb in a small circle, first one way and then the other. This tells the others that they must hunt for food round about the hive but not more than about 45 meters in any direction. If the food is more than 90 metres away, she does a tail-waggling dance by tripping lightly over the comb so as to mark out a figure of eight, all the while waggling her abdomen. During the dance, she gradually moves over the comb followed by her excited sisters. The direction she takes and the number of times she waggles her abdomen while doing each figure of eight movement tell the other bees in what direction and how far they must fly to find the honey.

2.2.5 Beekeeping with the Honey Bee

In very early time bee-keepers kept their bees in hives make of wicker or in hollowed-out logs, and later in straw baskets called “skeps”. But in all such hives the bees fixed their combs to the hive walls and the honey could not be taken out without harming the colony. At the end of the summer it was then the custom to select the heavier skeps, kill the bees with sulphur fumes, and then cut out the combs and press the honey from them. In the following year the bee-keeper filled the empty skeps with swarms from the remaining colonies.

Honey bee colonies are now housed in rectangular wooden boxes, called “chamber”, that are open top and bottom. The chambers are stacked to accommodate the seasonal growth of a colony. For winter a colony may consist of one queen and about 8,000 workers, but by mid-summer the population may increase to some 60,000 workers. In each chamber, the beekeeper hangs a number of wooden frames containing a thin sheet of bees-wax called foundation. On it, printed in relief, is the hexagonal shape of bee-cells. The bee workers secrete more wax from glands in their body to construct cells on each side of the foundation. The use of frames enables the beekeeper to lift each comb individually out of the hive to look at the colony more closely. The cells that make up the comb are used by the bees to store honey and pollen, as well as for the rearing of their young. The combs that hang in the middle of a hive are built, predominantly, of rather small cells. The side combs and the margins of most combs often have noticeably large cells. In normal colonies only the queen lays eggs. As she walks from comb to comb she inspects the cells, and lays fertilized eggs in the smaller cells, and unfertilized eggs in the large cells. From the fertilized eggs develop workers, and from the unfertilized eggs develop drones.

2.2.6 Honey and Wax

To obtain honey, the beekeeper uses a “queen excluder”. This is a screen with slots through which the relatively smaller workers can pass, but not the queen. The queen excluder may be placed between the chambers, confining the queen to the lower point of the hive. The queen is thus prevented from laying eggs in the upper chamber, and the workers only store honey there. This can be extracted without interfering with any brood.

Honey is made from the nectar of flowers, or from sweet secretions produced by some other parts of plants or even some insects. The bees gather the nectar, and transfer it to the combs in their hive. In the process enzymes are added to it, and its water content reduced to 16 to 20 per cent. The honey is then “ripe” and the bees seal all the cells with a wax cap. At this stage the beekeeper may remove the fully sealed frames and extract the honey. The wax cappings are first removed with a knife or fork, and the frames put in a centrifugal honey extractor. The honey is spun out of the combs, filtered, and allowed to stand a few days so that air bubbles rise to the surface. It is then bottled.

Honey was formerly used for nearly all foods that required sweetening. Nowadays cheaper sweeteners made from sugar beet are available. Most of the honey harvested in the world each year is eaten as a spread on bread. A very small proportion is fermented to produce a wine called mead, which is reputedly the oldest alcoholic drink to man.

Honey was originally used to sweeten a range of food and drinks, such as wine and bread, and was also used as an ancient antibacterial agent. Wax was used as a binding agent in paints as well as being used in medicines, candles and mead, which was a popular drink in monastries.

Wax is harvested by melting down old combs. There are 125 listed uses for wax. Some of the most important are in the cosmetic industry, in making candles and in the manufacture of foundation for beekeepers.

After the honey has been removed from a colony, the beekeeper usually feeds the colony with syrup, so that the bees will not starve during the winter. The amount fed depends on the length of the winter. In northwestern Europe about 14 kilograms of sugar is sufficient. In the colder parts of the United States and Canada much more food is required,

but in regions with a Mediterranean climate little or no feeding is necessary.

2.2.7 Introduction to Honey Marketing and Environment

Beekeeping from ancient period has been traditionally practiced in Nepal. Apis Serena, a locally tamed bee are kept in different parts of the country. In the traditional beekeeping activities like covering the bee hive, keeping comb in the frames and taking out honey was practiced. In Nepal, beekeeping is taken as a pious work. In Hindu Granth, honey is taken as pure substance and flower's juice as the blessing coming out of god's breath. So it is considered pious and included in religious rituals in Hindu tradition. Moreover, it is also considered as the first sweet thing tasted by human.

It covers an important aspect of the honey industry. This aspect is considerably undermined by many, who feel that the focus should be on production and then simply selling the outcome of production to customers. Certainly production is a very important aspect, especially in the case of organic honey, where procedures and process have to be respected, but equally important, marketing has to be considered and given the same importance. In this specific context what is covered in this book is the marketing of organic honey.

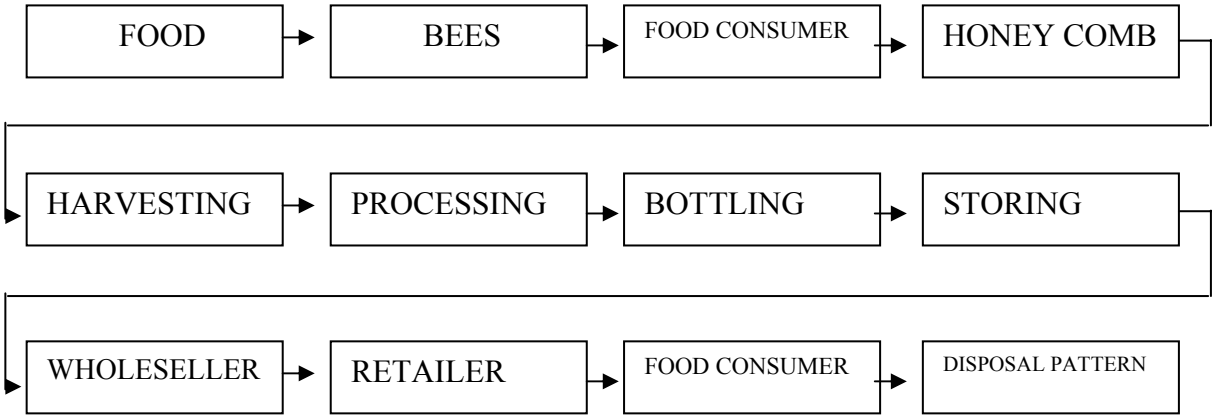
But what is meant by marketing? Marketing can be seen in two perspectives; the first perspective is that of carrying out all those necessary functions to make available a commodity or food product to consumers; it is a system. The second perspective is that of marketing as a philosophy, a way of thinking, that holds that above all comes the customer, and what the customer desires, should be delivered to them, on their terms. Hence we

have a marketing system and a marketing philosophy. In the case of food\

, such as honey, the marketing system is really the entire food system; it starts with the nectar of flowers and trees and ends with the consumer. (In this particular case it goes further than the consumer, for we are concerned with what the consumer feels after having consumed organic honey, but also what the consumer does with the food product packaging i.e. what are the disposal patterns).

Figure No. 2.2

The Food System / Marketing System



As we can see from the previous diagram, the marketing system covers the entire spectrum of honey, from nectars to consumers. There as some important reasons why marketing should be seen in this perspective:

It is necessary to view the entire system, from nectars to consumers, as part of Marketing; nectars only become products if consumers like, want and accept them.

Looking at the entire system, from nectars to consumers, looks at all functions needed to be carried out in marketing terms, bridging into the marketing philosophy that holds that all parts of an enterprise need to be market oriented.

This holistic approach is fundamental for organic production and processes. It enables a careful verification of every phase in the process from nectars to consumers, hence each phases can be verified for environmental concerns. It will enable the "cradle-to-grave" perspective, which is required in the marketing of organic food.

The entire system should be seen as a biological system. Food comes from the natural environment, hence marketing food products, involves looking at all the phases of the process. This is especially important when looking at organic food, such as organic honey.

Being concerned with food, there is a necessity for insuring that quality of honey arrives in the consumers hands upheld, for example that honey has not been improperly handled, i.e. fermentation, contamination etc.

It is thus important in marketing to consider the whole process, from "cradle-to-grave". Equally important is looking at marketing as a philosophy; the consumer comes first. If consumers are not interested in a food product or commodity, there is simply no food product or commodity. If consumers do not accept what has been produced, there will be no way in marketing what has been produced. It is this simple philosophy that needs to guide an enterprise in its decisions of what to market to consumers. Drucker, in 1958, expressed this concept clearly: "Marketing is not only much broader than selling. It is not a specialized activity at all. It encompasses the entire business. It is the whole business seen from the point of view of its final results, that is, from the customer's point of view. Concern and responsibility for marketing must therefore permeate all areas of the enterprise".

Clearly the focus being the entire enterprise applying marketing involves looking at some of the particular characteristics that pertain to micro, small and medium enterprises and limitations that this may bring to

marketing. Typically the size of the enterprise is small. The majority of honey enterprise are typically owned and operated by one or two people, by a family, or by partners, this will affect management, decision-making and hence marketing. The lack of financial resources will put a strain on marketing. The lack of being able to hire specialists or expertise, due to the financial constraints will have an effect on marketing. Importantly the enterprise will be characterized by its owner /manager or entrepreneur, his or her cultural background, character, vision etc, will all have a strong influence on marketing. The lack of a formal structure and process in decision making will influence marketing, as the opportunistic, flexible, changeable and innovative decision making, typical of an entrepreneur will affect marketing.

Entrepreneurs are always on the look out for new opportunities, this will entail decisions that are spasmodic and sporadic, constant innovation and frequent change of business direction. Typically honey focus on small markets, but due to constant changes and opportunities in markets, honey market may change completely to a different market from where it was before. They are high risk takers, and this factor will influence how they do business and hence marketing. They are highly motivated "go getters" and this can be an excellent drive for the marketing of the firm, for example developing new products, entering new markets, and finding new customers.

They have a lot of decision power and influence within the firm, this will heavily influence marketing. For example, the entrepreneur will not delegate important decisions. A further example is that via networking, contacts for marketing will be made and these contacts will be chosen by the entrepreneur him or her self.

The entrepreneur will heavily influence the management of the marketing activity. Being a generalist for necessity, the entrepreneur will probably chose the preferred aspects of marketing in a haphazard fashion; he/ she may focus on the product and the price, more than on marketing research, promotion and strategy planning in a formal manner. Typically this will create a unique marketing style typical of the particular firm. Other aspects of management may be that of analyzing marketing opportunities, via information gathering that is informal and not formally carried out by marketing research, as found in large enterprises. Typically closeness to customers will allow for good information collection, followed by informal analysis of opportunities, threats, strengths and weaknesses, but they will be heavily influence by the entrepreneur carrying out the marketing function.

Due the small size of honey and their work force, relationships within are informal and typically workers are motivated more by pride in doing their work then by economic incentives. This commitment and pride are great assets to the marketing function

Typically honey serve local markets and channels of communication between the entrepreneur and clients are short. It maybe that the owner/manager of the knows the customers personally, this enhancing customer trust and loyalty

Due to its small Size, honey marketer can respond better to customer requests and inquiries and changes in markets.

Honey being close to customers and markets can "grab hold" of opportunities faster and quicker than larger firms and concentrate on small markets that may be unprofitable for larger business organizations.

Honey are close to markets and their customers; this will allow access to a great deal of information. This information will be collected using informal ways, such as conversations with customers, and owners of local retailers, carried out by the owner/manager.

2.2.8 Innovation of Global Honey Marketing

In different period of time different scientists have developed different kinds of instruments and have made major contribution in the in the scientific beekeeping. Following inventions clearly indicate how beekeeping has been developed over a period of time.

- For the first time, in 1568 a German scientist had written an article on 'Developing a queen bee from a newly born bee'.
- Louis Lendez De Torris of Spain revealed that queen bee is the mother of all female bee in the comb and also the only bee who lay eggs.
- In 1609 AD Charles Butler of England had distinguished a male bee from a female bee and in 1637 AD Richard Remmant found that it were the female who are the worker bees.
- In 1644 H.C. Hornwolst of Germany found out that honey bee makes honey and 1717 V. Lyannt of France found that source of honey were the flower.
- Impaired beekeeper Swiss Franscois Hower published his experience in 1792 whose ideas has helped to develop the science of modern beekeeping.
- In 1806 Peter Propovich of Ukraine developed a one comb frame and started commercial beekeeping.
- Though by 1851 European bee had already spread throughout the world but device for putting and extracting of honey comb was still not developed.

- For the first time in 1851 AD Lorenzo Lorraine Lyangstd found "B Space" and the modern beekeeping started.
- Lorenzo Lyangstd (who is considered to be the founder of modern beekeeping) had developed a Lyangstd mobile frame and it had already become popular in America by 1861 AD.
- In 1800, Procopovich developed a device to block the exit of queen bee. Similarly, in 1891 E.C. Porter of America developed B. Scep which helped to side the bee and take out the honey.
- France Vonn of Austrai developed a container to take out honey from the hive.
- In this way, development of beekeeping took a rapid momentum since 1851AD to 1900AD and in the 21st century especially countries like Europe, America, Japan, China, Australia etc have been able to make great achievement by implementing modern techniques and methods and earn great profit.
- To eke out a full-time living from their honeybees, many commercial beekeepers pull up stakes each spring, migrating to find more flowers for their bees. Besides turning floral nectar into honey, these hardworking insects also pollinate crops for farmers – for a fee. As autumn approaches, the beekeepers pack up their hives scrambling for pollination contracts in hot spots.

2.2.9 Beekeeping as a Source of Income

Nepal is exporting honey to different overseas markets for the past few years, but the volume and the value of export is not optimal. Until 2001/2002, Norway used to be the largest buyer of Nepalese honey. But due to the problems related to pesticides residue, it is banned to enter into any of the European country including Norway. At present, the major

countries importing honey from Nepal are Japan and South Korea. However, for the last few years, countries like UAE, Thailand and Bangladesh are also emerging as the new markets.

The People's Rupublic of China is the world's largest producer of honey, followed by USA, Argentina, Turkey and Mexico. Other notable producers are India, Brazil, Canada, Australia, France, Spain and Hungary. The total production of China in 2003 was about 311 thousand mt. (AEC/FNCCI document).

The total world trade of honey was 402 thousand mt worth US$ 973 million in 2003 and the largest importer was Germany with 93.5 thousand mt worth US$ 241.5 million, followed by US (92 th.mt), Japan (44 th.mt), UK (22 th.mt), Saudi Arabia (10 th.mt) and Netherlands (9 th.mt) – (AEC/FNCCI document).

The international bulk price of honey has dropped significantly over the last 3 years. The price dropped to almost half at US$ 800 per mt (Rs. 58 per kg) in 2005 from US$ 1600 per mt (Rs. 114 per kg) in 2003. Similarly, the bulk (more than 22 mt.) price in the US market ranged between US cents 127 (Rs. 90) per kg to US cents 162 (Rs. 115) per kg in November 2005. The bulk price in US has further dropped to US cents 90 (Rs. 64 per kg) in February 2006. (AEC/FNCCI document)

Beekeeping is one of the major source, mainly for those beekeepers who have limited options for cash income. Beekeeping therefore, provides not only cash income, other benefits like food, nutrition and medicine as well. It is equally important to maintain biodiversity at society, national, regional and international level. Honeybees perform several ecological functions without competing for scarce land resources. Honey provide benefits for farm yield through pollination service.

Despite increased production, the local farmers state that they are unable to match output with the demand. “Besides the domestic market, our honey is gaining popularity across the border, and to match the demand we need to increase our production,” said a beekeeper.

According to experts, the production of honey in the district is increasingly due mainly to highly favorable climatic condition. “Since the climatic condition is conducive to beekeeping, we expect to raise honey production by many folds particularly adopting modern technology”, said Chandra Prakash Dahal, an expert.

Yuksha Raj Pant, an official of the DAO said that there are around 3,700 beehives in the district, of which almost 1,200 are kept commercially. The Tenth Five-Year Plan has proposed to establish Honey Source Centers In Palpa, Pokhara and Chitwan among others. (http://www.nepalnews.com.np)

Many may have seen ‘fair trade’ products, especially in Europe, according to Mr. Matheson. Coffee and chocolates are the usual products, but honey has now been added to this mix. This market segment is rapidly growing, and represents a real opportunity for beekeepers in some tropical countries. Mr. Matheson gave an overview of a presentation by Jos. Harmsen of the Max Havelaar/Trans Fair Seal organization. (ibid)

Trade facilitation is one of the areas that have generally been recognized as providing a significant contribution to trade, growth and development. It is now accepted fact that, in countries where trade facilitation is not developed and functional, trade cannot flourish. Without such facilitation, economic growth lags behind. As trade facilitation involves many customs and other trade procedures that are required in order to move goods and services across national borders, both public and private sectors need to act for facilitating trade. Governments need to examine

their trade policies and procedures carefully in order to ensure that these do not unnecessarily restrict trade. They must also commit to reducing delays and eliminating environment that foster the illegal payment often associated with implementing the policies and procedures that are in place. The private sector needs to lobby for strong and monitoring of the implementation of the reform activities, and usage of modern technologies and transport. Therefore, the scope and need of trade facilitation measures depend mainly on the available legal and institutional framework, dependency on the regulatory practices of a transit country, foreign exchange and revenue control, trade liberalization, role of the private sector, technological and infrastructural developments, transparency in the application of laws and regulations, and accession to international conventions and organizations. The United Nations Center for Trade Facilitation and Electronic Business put forth a recommendation specifically addressing the purpose, method of creation and operating structure of public-private partnerships (UNECE, 2001). The recommendation emphasizes to:

- Identify the issues affecting the cost efficiency of a country's international trade;
- Develop measures to reduce the cost and improve the efficiency of international trades;
- Assign in the implementation of those measures;
- Provide a national focal point for the collection and dissemination of information on best practices in international trade facilitation, and
- Participate in international efforts to improve trade facilitation and efficiency.

There is rich tradition of beekeeping in remote villages of Nepal, which is associated with genetic diversity of Apis cerena, availability of bee forage plants and wealth of indigenous knowledge in sustainable management of beekeeping in traditional log hives. It is the fact that the native Apis cerena bees now keeping only by those, who are poorest of the poor in the remote villages of Nepal. Traditional beekeepers who keep bees in log and wall hives are poorer than those practicing beekeeping in movable comb hives. Within the beekeeping communities in Nepal, Apis cerena beekeepers are poorer than those keeping exotic bees (Apis mellifera). However, Apis cerana beekeepers possess high degree of social capital and are strongly integrated within the society as compared to commercial beekeepers. Seeling bee products contribute cash income to the livelihood of remote and isolated communities in Nepal. (www.icimod.org/Sustainable

Management of Beekeeping in Nepal An Effort of ICIMOD's Project Entitled Indigenous Honeybees in the Himalayan Bees4livelihood.mht)

The production of honey not being sufficient in meeting the demand of exporters indicates that it has potentials for export markets. Presently, some of the exporters are exporting substantive quantity of honey to the European markets and the further potential is said to exist.

When delivering the product to the wholesaler in Dang, the cooperative society fetched Rs. 90 per kg. From this amount, the cooperative society charges Rs.5.00/kg with farmers as commission against the marketing support service rendered. In this way, Rs.85/kg is received as farmer's price on honey.

In the second method of delivering the product at Kathmandu, Rs.100/kg of honey is the price given to the cooperative society. In this price, farmer has to pay the commission to the cooperative society (Rs.5) and bear the

marketing cost (Rs.5.40) for marketing at Kathmandu. In this way, farmers receive a total of Rs.89.60/kg)

The farmers received Rs.36.13 as net margin per kg after covering the production cost of honey (Rs.48.87) while disposing the product to the wholesalers at the local area.

In the condition of delivering the product to the wholesalers at Kathmandu, farmers earned a gross margin of Rs.89.60/kg and received Rs.40.73 as net profit.

In selling the honey on retail, priced received ranged from Rs.120 to Rs.140 per kg last year in Shantinagar Hatbazar area. However the price of honey was around Rs.150 per kg on retail sales in Tulsipur.

Since there is only one wholesaler of honey in Dang district, competition is not seen in the local market. Nevertheless, the only wholesaler known as Gandaki Bee Concern is supporting the honey business by providing necessary inputs and market. Even though, honey enterprise is known as attractive business, other traders have not yet entered into this business. Big traders have not entered into this trade at its low level of production and tradable volume.

Information regarding the demand of major processing companies in Nepal and India are not available. Likewise data about demand of other trading companies in Nepal, India and Europe and their quality standards are not available to the farmers. A investment of processors and the traders' community is not harnessed. (www.fao.org/ag/magazine/0304spl.htm)

The major honey producing districts of Nepal are Chitwan, Nawalparasi, Rupendehi, Kapilabastu, Dang, Sarlahi, Sunsari, Mahottari, Makwanpur, Banke, Bardia and Kanchanpur.

Similarly, the prominent areas for Apis laboriosa or Bhir Mauri production are GhChowk, Ghandruk and Landruk of Kaski district, Lumle of Sunsari district and Sumsher Bhir of Lamjung district. There are more than 150 bhirs in Ghachowk area only.

At present the average annual productivity of Apis cerana and A.melifera is estimated to be about 8-20kg and 40-40kg per hive respectively. The productivity of Apis melifera seems to be on the lower side as compared with the productivity of major honey producing countries. (ibid)

2.2.10 Advantages of Honey

Direct Advantage of Honey

Beekeeping being a part of agriculture plays an important role in its development. Beekeeping has been practiced by the people of our country since ancient times. Suitable environment and diverse flower required by bee are found in Nepal. If modern beekeeping can be developed and practiced, it can be a good source of income for the people especially for those who live in the rural and remote parts of the country. Beekeeping can be taken as a profession both by male as well as female. Raw material required for beekeeping is found free in nature. Initial investment in beekeeping also can be small. People, who have no land, less land or by rich all can benefit from this profession.

People usually mistake beekeeping only for honey. But, in fact through beekeeping we can get different other things apart from honey. We can get the following things from beekeeping.

HONEY	WAX	QUEEN BEE
VENOM	POLLEN	COMB

Indirect Advantage of Honey

There are many indirect benefits that a person can make from honey.

- It can be a source of income and employment to the people. It can provide employment to the people of rural areas and help in poverty alleviation.
- Beekeeping can bring socio-economic change in the country.
- It helps in the creation of healthy and intellectual citizen of a country.
- It helps in the pollination of plants.
- Bottle, gloves, boxes etc industries will develop.

Medicinal Advantage from Honey

- Children who have shortage of hemoglobin in their blood can benefit by the regular usage of honey. It will make them healthy and fit. Honey especially prepared from fapar will be better as it contains more iron.
- People suffering from stomach ulcer (Petic Ulcer) can also benefit from it.
- In many research articles it has been found written that people suffering from blood pressure can be cured from it. (Two teaspoonful in two liters of water to be taken regularly)
- With the advice of doctor people can take honey during sickness. Honey can be a alternate to sugar especially black honey: honey from Fapar.
- It can be used as Jeevanjal during Diarrhoea. Mix honey in water and take it in the form of Jeevanjal.
- Honey can build up our immune system and help to fight against diseases.

- If we use honey in wounds and cuts it will help to cure them faster. It does not stick to the wounds and is therefore widely used in dressing as well. It also helps the wounds to not spread to other areas.
- One teaspoonful of honey, one lemon mixed in a glass of water and if taken regularly in empty stomach it will help to reduce fattening.
- If we mix honey and ginger in equal proportion and cook them and take them regularly it will help to cure cough, cold and different diseases related to throat.
- It also helps to cure skin ulcer.
- Women can use honey in their genitals and cure any diseases related to it.

Nutritional Advantage from Honey

The available nutrients found in honey are water 17%, sugar (Lobules, Dextrose, Sucrose , Maltose etc.) 80% , acid (Glucoline, Malik, Sulsinik, Formik, Amino Acid) 0.57% , protein 0.26% , minerals (Potassium , Sodium , Chlorine , Magnise, Magnesium, Chloride, Sulphate) 0.17% and Vitamin (Theamin, Revolfebin, Nicotinic acid, Vitamin K, Pholic acid, Biyotin, Pyanthotenic acid, Phirodocxin etc) pigments, fragrance, taste, sugar alcohol, teninus, enzymes (Invertez, Dystox, Glucose, Oxydez, Cyatalez, Phosphotez) etc. The above nutrients depend on the different types of flower that the honey bee feed on.

2.3 Review of Related Studies

2.3.1 Global Perspective on Honey Marketing

Schmuder has explained marketing as the practice, which is now busy integrating the potential of honey through the utilization of databases.

However, his research has not been able to deal with marketing approach of honey. Instead honey marketing has been evolved gradually overtime. *(www.fao.org/ag/magazine/0304spl.htm)*

Gerber (2000, Page No: 465) found out that wants and abilities change with time. He realized this and began expanding beyond its traditional baby foods line. Its new "Graduates" line is geared for the 1-to 3-year old. One of the reasons of Gerber's expansion into this new segment is that the baby food category's growth is declining, due to the factors including the declining birthrate, babies staying on formula longer, and children moving to solid foods sooner. He therefore has emphasized on proper market segmentation.

Dangel (2001, Page No: 377) presents three aspects of time affecting market orientation. Initially, one has to consider the time taken to implement a market oriented strategy. Lagged, threshold and cumulative effects occur over this implementation period. These can influence the relationship between market orientation and performance. Time as signified by the age of a firm impact on its strategy and its ability to change. This can either inhibit or facilitate the development of market orientation. Lastly, time is history and represents the specific, dated context of a firm. The historical context, such as early or late entry into a market can affect adoption of a genuine market orientation. Honey has to take the lessons from these researches for developing the market orientation.

Neupane (2002, Page 47) has explained the impact of the variety on consumer happiness. He has provided the impact of marketing strategies on general happiness. He has discussed the points of satisfaction; however, the researcher has not the scope of description of honey marketing and consumer satisfaction through research. Educating

consumers and providing information have been found to be points for satisfaction and these could be the same for honey marketing. Similarly, Dublin (2004, Page 243) has dealt on Systematically Varying Consumer Satisfaction and its Implication for Product Choice. The research has found that satisfaction with one product is a good reason to try an alternative, and it might be difficult to discern whether variety seeking or a desire to increase satisfaction is the goal. This could be further associated with honey use.

2.3.2 Review of Past Researches of Honey Marketing in Nepal

In order to understand the growth of honey marketing, present status of honey marketing and other information about the marketing facilities, the researcher found a very few researches that have been completed on "Honey Marketing in Nepal". These researches were mainly concerned with the economic aspect of honey. Following are the researches on honey and its marketing in Nepal.

For the first time in 2025/26 BS in Nepal commercial programme was conducted in the rural areas by local development committee. In 2030/033 on the auspicious occasion of Agricultural Year scientific and commercial study of insect began in Khumaltar of Lalitpur and inspection and development of honeybee also began. At that time 25 modern boxes of Apis Serena honeybee were distributed to districts of Kavrepalanchowk, Nuwakot and Lalitpur.

In 2036 BS *Nepal Punarbas Company* had distributed hybrid box to the 5 district of the terai, namely, Kanchanpur, Kailali, Banke, Bardiya and Sarlahi. In 2036/038 special program regarding honeybee keeping was conducted and in 2042/043 BS a separate office was established in Khopasi of Kavre Palanchowk to carry program regarding honeybee and

silkworm by Small Farmers Development Project, UNICEF and Commercial (KIT VIGYAN) Branch.

In 2042/043 the late king Birendra Shah announced a program and accordingly from 2043/44 to 2049/50 different honeybee projects were launched under the supervision of government of The Netherlands. This project carried out programs like, training, honey and honey material distribution and publicity of honey.

In 2049/50 Honey Development Program was established in Godawari and in 2052/53 the name was changed to Honey Development Branch. This branch is working in relation to honeybee by providing technical knowledge, selling and distribution of honey extracting materials, and to declare centre source.

Modern technical method of beekeeping and honey production started in a commercialized manner after the import of Apis Melifera in 2052/53BS. Now more than 300 farmers are attracted commercially and more than 2000 farmers are engaged as semi-commercial beekeepers. From 2053 the commercial beekeeping which started from Chitwan soon spread to districts like Sarlahi, Morang, Makwanpur, Kathmandu, Kavre Palanchowk, Sindhupalchowk, Nawalparasi, Kapilvastu, Dang, Salyan, Rukum, Pyuthan etc. In 2056 under the chairmanship of Khem Raj Neupane a national beekeepers association under the name “Nepal Beekeepers Association” having more than 300 members was established in Bharatpur, Chitwan with legal registration.

Ahmad (et al 2002) found out through his research that several mountain communities are inaccessible, lack transport and communication infrastructure has made the beekeeping with migratory Apis Mellifera highly expensive, vulnerable and high-risk activity. Stationary beekeeping with Apis Cerena fits well in these circumstances and

supports the livelihood of poor mountain people. (http://www.icimod.org.Honey A Source of Nutrition, Medicine and Cash Income for Himalayan Farmers Bees4livelihood.mht)

There are three major services of honeybee to farmers in Nepal. Farmers from high altitude areas in Jumla district (above 2000 meter) usually do not have land for rice growing therefore, since long time there is system of bartering honey with rice from lower altitude areas. Beekeeping is one of the major income sources mainly for those beekeepers who have limited options for cash income. Beekeeping therefore, provides not only cash income, other income like food, nutrition and medicine as well. It is equally important to maintain biodiversity at society, national, regional and global levels. Honey performs several ecological functions without competing for scare land resources. Honeybees provide benefits for better farm yield through pollination service. (http://www.icimod.org.Honey A Source of Nutrition, Medicine and Cash Income for Himalayan Farmers Bees4livelihood.mht)

Agriculture plays a significant role in the Nepalese economy. Despite the decline of its contribution to GDP from 47.4 per cent in 1990-91 to 39.2 per cent source of livelihood for about 80 per cent of the population. (Ghimire and Dahal 2004). Nepal's export in highly concentrated both in product and destination. While carpet, textiles and agricultural produce represent 70 per cent of total exports, three markets – the US; Germany and India are the major destinations, covering more than 80 per cent of total exports. Therefore, the challenges are to increase Nepal's export in the international market by diversifying its export profile. One of the possibilities is through agricultural exports. Honey is emerging as one of the leading export products of Nepal. It has a growing export market, as honey is increasingly used by food industries as well as pharmaceutical

companies. The cosmetic manufactures are also using it as an ingredient for soaps and shampoo. The hill mountain natural honey of Nepal is very famous for its exotic taste. The major export markets of honey are U.K.; Republic of Korea, Germany, Japan, Hong Kong, Poland, etc (FNCCI, 2004)

Some of the apparent threats from WTO membership come from some WTO agreements, particularly Sanitary and Phytosanitary (SPS) Measures and Trade Related Aspects of Intellectual Property Rights (TRIPS). Developed countries may impose various trade barriers in the name of protecting plant, animal and human health. Since a substantial proportion of SME's emanates from agriculture, there is always a risk that importing nations would restrict imports citing different there is always a risk that importing nations would restrict imports citing different SPS measures. Agro-exports from Nepal to existing partners are subjected to quarantine checks, which have created difficulty and given rise to delays and losses in transit. One of the recent examples of how the Nepalese traders can suffer due to SPS measures is that of the Nepalese honey exporters. Norway banned the import of the Nepalese honey under its Hazard Analysis and Critical Control Point (HACCP) regulations stating that the Nepalese honey is unfit for human consumption. (Progressive Regional Action and Cooperation on Trade monthly enewsletter. Vol 1 Issue 2 December 2003)

In Nepal, modern beekeeping was initiated 15 years ago (Entomology Division, 1998; Shivakoti and Bista, 2000) with the introduction of moveable frame hives to rear Apis cerana F. (Kafle, 1992). Beekeeping with improved and imported crossbreed honeybee, Apis mellifera L. started since 1993-1995 (Entomology Division, 1998; Thapa and Pokhrel,

2007). However, the average annual honey yield in the country is only 4.15kg per colony (HMG/N, 2002)

Since food security is not possible without income security (Koirala and Thapa, 1997), honey production through beekeeping could be a useful avenue of improving rural economy (Baptist and Punchihewa, 1983). Nepal Agricultural Perspective Plan (APP) has recognized beekeeping as high value income generating enterprise (APROSC and JMA, 1995). Poor, marginal and even landless farmers can benefit from beekeeping to support their livelihoods as it can be started even with limited resources giving income and supplying nutrition to them (ICIMOD, 1999).

Nepal is rich in ecological resources and is one of the ideal places for beekeeping but necessitates scientific technology for low-investment profile (Verma et al., 1990). The improved technology is lacking in most rural areas (Shrestha, 2000). Extension work is, therefore, crucial for the successful promotion of beekeeping through the transfer of skills and knowledge from specialists (Saville, 2000) which should be labour intensive as a part of agriculture (Pant, 1983).

Four out of nine honeybees, Apis laboriasa (Smith, 1871), Apis dorsata (Fletcher, 1952), Apis florae (Fletcher, 1952) and Apis cerena (Fletcher, 1952) are native to Nepal. Apis laboriosa, the Himalayan world largest honeybee is distributed from 850 m up to 3500 m in northern parts of fragile ecological Himalayan Regions. Apis laboriosa is commonly known as the cliff honeybees. They are absolutely black in colour with white stripes on each abdominal segment. Apis laboriosa constructs a single comb, 0.8 m wide and 1m long, suspended from steep cliffs (Thapa and Pokhrel, 2001)

Apis laboriasa stores honey in one corner of the comb. The key factor of survival of this species in an extremely harsh environment of the

Himalayan regions is the seasonal migration. In winter season, Apis laboriasa migrates en masse to warm temperate regions up to 850 m, where they spend around seven months (October-April). At this time of the year, different flowers are bloom. In summer season, when the ambient temperature is gradually increased above 25 ^{0}C than Apis laboriosa colonies start to migrate to sub-alpine areas between 2500m to 3500m at the base of Himalaya, where they spend five months (May-September) (Underwood, 1990; Thapa, 2001). However, in some areas, Apis laboriosa colonies were found all round the year. Currently the population of this star species has due to environmental degradation; indiscriminate use of pesticides and over harvesting (burning and chopping down the whole comb) caused a precipitous decline from Himalayan regions.

Apis dorsata, tropical giant honeybee, is found in the tropical regions of Asia (Rutner, 1988). In Nepal Apis dorsata is distributed in the southern lowlands (Terei belts) regions between 190m–1200m. They are commonly known as Khad mauri or Singkushe or cliff bee or king bees. Apis dorsata is yellow in colour with black strips on each abdominal segment. Apis dorsata builds a single comb, 1 to 1.6 m wide and 0.8 to 1.5 m long, underneath a stout branch of tall tree or building or water tower or cliff to protect their nests from top predators (Fletcher, 1952; Seeley et al., 1982; Crane, 1990; Wongsiri et. al.,1996). The comb is protected by several layers of protective curtains. The protective curtains maintain a constant brood nest temperature between 30-33^0 C. Apis dorsata also seasonally migrates back and forth between low (10m) and uplands (1100m) to escape from harsh environmental condition. In winter season, when the ambient temperature is dropped below 10^{0}C in hilly areas, they migrate between 60m to 350m in Terai regions, where the

maximum ambient temperature is fairly above 10^0C throughout the winter period. When Apis dorsata migrates in low agricultural lands, they always aggregate en masse from 25-120 colonies (depend on nesting spaces availability) on a single man made structure probably they need strong.

2.3.3 Alternative To Off-Season Sugar Supplement Feeding of Honeybees

"Alternate to off-season sugar supplement feeding of Honeybees" in 2005. The major objective of the study was to show supplement feeding to honeybee. But due to lack of efficiency of capital and infrastructures the success is only partial.

The major findings of the study was as follows: (Neupane, K.R., 2005)

Honeybee need several nutrients, like carbohydrates, proteins, lipids, vitamins, and minerals for their growth and development. They receive carbohydrates from nectar and proteins from pollen (Javaheri et al, 2000). Feeding bees with pollen substitute and sugar syrup increases the number of bees and frames covered by bees, brood area and colony weight much higher than feeding only sugar syrup or pollen. (Sahinler, et al. 2003). Availability of natural nectar and pollen become scarce for honeybees during rainy season in Nepal. In some areas of the country, even if nectar and pollen are available, honeybee cannot utilize them due to the unfavourable climatic situations. Therefore, beekeepers must feed honeybees artificially during off-season. Sugar is the main commodity to feed honeybees during off-season. However, the price for sugar is increasing every year making beekeeping an expensive enterprise. Therefore, the finding is concluded on the basis of a study that was carried out in a rainy season of 2003 in Yagyapuri of Chitwan district.

2.3.4 Related Researches

Thapa, R.B. (2006, Page No: 133) the researcher studied the response of colony strength to honey production and found that modern beekeeping was initiated some 15 years ago introducing moveable frame hives to rear Apis cerena. However, beekeeping with improved and imported crossbreed honeybee, Apis Mellifera started since 1993-1995. Out of 127,501 bee colonies in the country, beekeepers follow improved management practices for only 17,744 Apis cerena, and more than 7456 Apis mellifera colonies. Average annual honey yield is only 4.15kg per colony. Beekeeping can be started with limited resources giving income and supplying nutrition (ICIMOD, 1999). In the context of worsening distribution of income overtime, honey production through beekeeping could be a useful avenue improving rural economy. Nepal Agriculture Perspective Plan (APP) has recognized beekeeping as high value income generating enterprise. Beekeeping also provides pollination service to the high value (horticulture) crops to the range of 30% to as high as 3000% which worth about 143 times more than honey production. The imported crossbreed *Apis mellifera* has been gaining popularity in the country for few years because of its higher productivity and convenience in to handling. However, the average honey production of different Apis species is far below their production potential even in good honey follow season due to farmers' ignorance. Therefore, increased hive products like honey, wax, propolis, pollen, venom as well as crop productivity through crop pollination, the prime objective of beekeeping industry, can be achieved by increasing bee strength. Improved colony management technique and high yielding race can result in higher population and quality production. This study was conducted to find out the relationship of initial colony population on brood rearing and honey production.

Shrestha S.M. (2006, Page No: 145) studied the absconding behavior and management of *Apis cerena* Honey bee in Chitwan Nepal and found that beekeeping with *Apis cerena* has been traditionally adopted and is a part of cultural and natural heritage of the mountain communities in Nepal. At present, there are about 119430 *Apis cerena* hives in Nepal. Though *Apis cerena* are poor honey yielder, they require low management costs, are efficient pollinators and adopt on the harsh mountain environments including pests, diseases and predators in mid hills of Nepal. However, this bee is aggressive, swarms frequently and absconds hindering the commercial beekeeping. In fact, honeybees are known to possess intricate sequence of behaviour through which they monitor their environment. When the nest colony deviates from normal and the situation inside is deteriorated, they react immediately. At extreme situation, the whole members of the colony abscond. However, very little information is available on its absconding behaviour. Non-availability of food and water, abnormal climatic conditions, poor ventilation, attack of diseases, pests and robbing, hazardous fumes, pesticide poisoning, presence of old combs, physical disturbances and unusual handling are the causes of absconding in different parts of Asian tropics. However, absconding is a habitual seasonal migration. *Apis cerena* is a single honeybee species adopted by the hilly farmers in north Chitwan. Absconding of this honeybee during summer and rainy seasons is the most severe factor limiting honey production of the Chepang community in this area. Hence, the study was to investigate on the phenomena of seasonal absconding of *Apis cerena* and find its causes to suggest subsequent safety measures to the beekeepers.

D.M. Gautam (2007, Page No: 145) studied on the foraging preference of giant honeybee *Apis dorsata* to selected horticultural crops and found that

Nepal being a country with diversified ecological zones is a suitable place for the promotion of beekeeping with availability of diversified bee flora in abundance and suitable climatic conditions throughout the year. The giant honeybee (*Apis dorsata)*, the rock bee (*Apis laboriosa)*, the Asiatic hivebee (*Apis cerana)*, and the little bee (*Apis florae)* are the native honeybee species commonly found and distributed at different ecological regions of Nepal influencing both crops and beehive production and productivity. The giant honeybee is distributed widely across the plains and foothills of Nepal. The colonies have the strong tendency of absconding, swarming and migration. The bees migrate several miles away in search of food and safe shelter. Colonies most often reoccupy the same nesting site of previous year in subsequent seasons. The biology, foraging preference, behaviour of this honeybee is little known. Its great role as natural pollinator of several plants in its area of distribution is underestimated in many underdeveloped countries including Nepal. This is the most reliable natural pollinators of plants especially with large flowers and inflorescence secreting large amount of nectar and pollen. The bees forage for long distances by showing maximum foraging activity at a temperature between 20-35^{0}C, the distance and range being higher than the *Apis mellifera*. Out of the total honey and bee production of Nepal, large amount comes from the giant honeybee colonies. Professional honey hunters harvest the honey by cutting the whole comb after driving the bees off with a traditional fire smoke. Many people in the country consider this bee species as a furious enemy rather than the beneficial insect, which comes every year at the same time and location and serves the human beings freely by providing different bee products and pollination services. Loss of natural nesting sites due to deforestation and fire in the forest, heavy use of pesticides, change in agricultural pattern, unscientific honey hunting etc have threaten the existence of this

bee species in many Asian countries including Nepal. The productivity of crops is in decreasing trend due to the lack of desired farmers and policymakers in Nepal. A number of factors such as species of bees, foraging preference, their pollination, bee biology, types of bee flora available at the location etc appear to influence crop pollination. Many species specialize on a limited flowering plant species for pollen and nectar collection sometime restricting their visit to a single plant causing pollination hindrance on some economically important plant species when they flower at the same time and foraging location. A number of factors are involved to effect the preference of bees for floral rewards and has been found significantly different at different intervals of the day and stages of flowering. Therefore, the knowledge on bee behaviour and foraging preference and their interaction with different plant species are pre-requisite to frame on strategy for effective crop pollination and bee hive productions for different agro-ecological regions.

2.4 Research Gap

As mentioned earlier, Thapa R.B. (2006, Page No: 133) had studied about colony strength to honey production. He found that out of 127,501 bee colonies only in 17,744 bee colonies beekeepers follow improved management practices. He found that beekeeping can be a high value income generating enterprise overtime. The study has found that imported crossbreed Apis Mellifera has been gaining popularity in the country for few years because of its higher productivity and convenience in handling. But the honey production of different Apis species is far below their production potential even in good honey follow season due to farmer ignorance. This study was conducted to find out the relationship of initial colony population on brood rearing and honey production. But this study

has not mentioned about the types of honey available, the income of people and their purchasing power, various benefits that could be obtained from honey, types of training and their result in the people etc. researcher tried only to study about the species of bee, colony strength and their production capacity. The researcher has not mentioned about the different types of honey that are produced through different crops.

In this thesis, the researcher has studied about the different types of honey like Rudilo, Chiuri, Tori, Fapar that can be produced through different crops. Which are the seasons in which these crops can be grown? The researcher has also studied how the income of a person affects the purchasing power of a person. People with higher income tend to purchase more than people with low income. The researcher has also studied the types of training and their impact on the farmers. It was found that training given by the local trainers were more successful that by the DAO. The researcher also tried to study the type of honey consumer liked the best and the reason for it. However, it was found that most of the people who consumed honey didn't have good knowledge about its type. The researcher also found that there were various nutritional and other advantages of honey which the above mentioned researcher had not mentioned in his research.

CHAPTER-THREE

RESEARCH METHODOLY

3.1 Introduction

The introductory part of this study has already been presented in the first chapter. Beside this the relevant and pertinent literature available to support the study has been reviewed in the second chapter. Now, it is necessary to choose the appropriate research methodology that helps to carry out the study. This in this chapter due attention has been paid for research methodology. In this study attempt is made to examine the production, sales, marketing and distribution of honey in Chitwan district. The necessary relevant data will collected from the Federation of Nepal Beekeepers (FNBK) Chitwan, from different collection centers, different cooperatives and organizations, traders, whole sellers, vendors and farmers. The research methodology refers to the various sequential steps (along with a rationale of each steps) to be adopted by a researcher in studying a problem with certain objectives in view. In other words, research methodology describes the methods and process applied in the entire aspect of the study. To accomplish these objectives the research methodology employed in the present study is described here as follows.

3.2 Research Design

Research design is the plan, structure and strategy of invesgation conceived so as to obtain answer to research questions and to control variance.

(i) The thesis will be classified into two groups such as description and analytical research.

(ii) Descriptive research design describes the general pattern, introduction and objectives of the market. The analytical research design makes analysis of the gathered facts and information and makes critical evaluation of it.

(iii) This study will be based on survey research design as well as the information gathered from different institutions. A limited scale survey will be conducted among the manufacturer, retailer and the ultimate consumer.

3.3 Nature and Sources of Data

(i) This study will be based mainly on primary data collected directly from the respondents.

(ii) Secondary data obtained from different institutions will also be used. The respondents for this study will be the manufacturers, retailers and ultimate consumers in Chitwan. Most information will be collected from the primary source through the questionnaires and oral conversation with concerned consumers and distributors. The questionnaires will be distributed to the consumers and retailers of Chitwan district collecting necessary information.

3.4 Population and Sample

The total population of this study will be all the people who are concern with the purchase and sell of honey in Chitwan district. Since it's hard to collect information from each and every person only 5 manufacturers, 10 retailers, and 100 ultimate consumers will be interviewed with the help of three different structured questionnaires. Though the sample size is very small in comparison to the total population, sufficient efforts will be made to make the sample representative by including consumers, vendors, traders, wholesalers of different age group, location, educational background and economic background. In this study judgmental sampling

method will be used because study sample is very small as compared to large population.

3.5 Data Collection Procedure

We must have accurate, reliable , adequate and free from errors data. For the collection of required data in this period, I will use different techniques:

(i) Discussion / Interviewing

Focusing on the study discussion (talk program) will be made with respondents selected on judgmental basis. Three sets of structured questionnaire will be developed for the purpose of collecting data from the consumer, retailers as well as ultimate consumers. The questionnaire contains different aspects of marketing complications applicable to different aspects of marketing practices. The questionnaire will be administered to the respondents through personal interview and discussion. Respondents will be chosen from different socioeconomic background for filling up the questionnaire.

(ii) Observation

Observation is the most important techniques for collection of information. During the study period, I will visit the places where honey products are made and observe the daily activity that takes place there. I will also visit Federation of Nepal Beekeepers [FNBK] get insight into the working style and procedure.

3.6 Data Processing Technique

The necessary data for the study are collected from primary and secondary sources will be recorded systematically for analysis. Every questionnaire will be thoroughly checked after the collection. All the

information are then identified and grouped as per need of study in order to meet research objective. Collected data and information are analyzed and presented in the proper table , format graphs, bar diagram and pie chart wherever necessary as per for easy understanding and analysis.

Data will be analyzed both descriptively and statistically. Simple statistical tools will be used for the analysis.

3.7 Method of Analysis

The collected data were thoroughly checked, compiled and presented in appropriate table to facilitate analysis and interpretation. Analysis was done both descriptively and analytically. For the analysis statistical tools such as percentage, weighted average ranking etc has been used.

3.7.1 Percentage (%)

It is a mathematical tool, which represent the proportion of any variable in terms of its total. In the present study, percentage has been calculated for the types of information for the valid respondent obtained from the administered questionnaire.

3.7.2 Weighted Average

It is a statistical tool which shows the average figures considering relative importance of all variables. It is simply the average of weight of each component multiplied by their respective value divided by total weight. It is given by:

$$Xw = \frac{W_1X_1 + W_2X_2 + W_3X3 + \ldots\ldots\ldots\ldots\ldots\ldots + W_nX_n}{W_1 + W_2 + W_3 \ldots\ldots\ldots\ldots\ldots\ldots + W_n}$$

$$X = \frac{\sum wx}{\sum w}$$

Where,

Xw = Weighted arithmetic mean

w = Sum of the weight w_1, w_2, w_3 …… w_n assign ot x_1, x_2, x_3 …… x_n respectively

wx = Sum of the product of w and x

3.7.3 Ranking

It is a statistical tool which shows the rank method usually applicable where quantitative measures for certain data are not possible and the individual in the group can be arranged in order thereby, obtaining for each individual a number indicating its rank in the group.

3.7.4 Diagram and Graph

These are the picture tools which help to know the true picture of the different variables in the absence of complicated formula and equation.

3.7.5 Hypothesis Test:

The words hypothesis refers to different kinds of statements, or sets of statements, that scientists make about natural phenomena. A hypothesis is a proposition that attempts to explain a set of facts in a unified way. It generally forms the basis of experiments designed to establish its plausibility. Simplicity, elegance, and consistency with previously established hypotheses or laws are also major factors in determining the acceptance of a hypothesis. Though a hypothesis can never be proven true (in fact, hypotheses generally leave some facts unexplained), it can sometimes be verified beyond reasonable doubt in the context of a particular theoretical approach. A scientific law is a hypothesis that is assumed to be universally true.

F-Test:

An F-test is any statistical test in which the test statistic has an F-distribution under the null hypothesis. It is most often used when comparing statistical models that have been fit to a data set, in order to identify the model that best fits the population from which the data were sampled. Exact *F-tests* mainly arise when the models have been fit to the data using least squares.

Most F-tests arise by considering a decomposition of the variability in a collection of data in terms of sums of squares. The test statistic in an F-test is the ratio of two scaled sums of squares reflecting different sources of variability. These sums of squares are constructed so that the statistic tends to be greater when the null hypothesis is not true. In order for the statistic to follow the F-distribution under the null hypothesis, the sums of squares should be statistically independent, and each should follow a scaled chi-squared distribution. The latter condition is guaranteed if the data values are independent and normally distributed with a common variance. To calculate the f-test following formula and condition is applied.

$$F = \frac{MSB}{MSW}$$

Where, $MSB = \frac{SCC}{k-1}$ and $MSW = \frac{SSW}{k-1}$

MSB = Mean of Sum of Square between Sample

MSW = Mean of Sum of Square with in Sample

SCC = Sum of Square between Sample

SSW = Sum of Square with in Sample

CHAPTER-FOUR

DATA PRESENTATION AND ANALYSIS

This chapter deals with the analysis and interpretation of data obtained by the researcher to accomplish the objective of the study. In order to meet these objective data have been analyzed and interpreted on objective wise basis.

4.1 Market Condition of Honey Product in Chitwan

Chitwan being the capital of honey production and sales, it occupies a major market portion of honey in Nepal. Most of the honey produced in the country is consumed by Dabur Nepal. More than half of the total supply of honey to the Dabur Nepal is done by Chitwan district. The total honey production in Chitwan in the year 2061 B.S. through 2066 B.S. is given below:

Figure No. 4.1

Production Schedule of Honey in Chitwan

Production Year (FY)	Production Cost (Rs)	Production Quantity	Ordinary Sales Price	Bottle Packing Retail Price	Sales Quantity	Price
060/061	75/-	105 M.T	175/-	200/-	100 M.T	115/-
061/062	80/-	85 M.T	175/-	220/-	87 M.T	115/-
062/063	82/-	95 M.T	180/-	250/-	92 M.T	115/-
063/064	84/-	89 M.T	200/-	290/-	89 M.T	105/-
064/065	90/-	92 M.T	200/-	290/-	95 M.T	100/-
065/066	95/-	103 M.T	220/-	300/-	97 M.T	110/-

Source: Federation of Nepal Beekeepers, Chitwan, 2010.

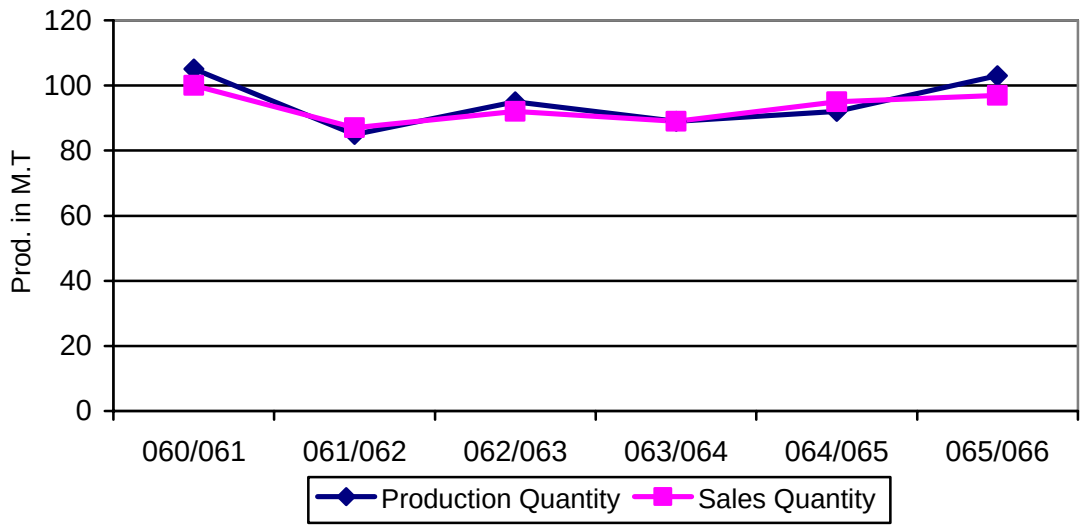
The above table shows the production year with the production costs, production quantity and its selling price. We can see that the production

cost per kg is gradually increasing. But there has been decline in the production quantity till 064/065. But 065/066 shows a better prospect of honey production with 103 metric ton. This is a positive indicator to the people involved in honey business. The above table also shows the ordinary sales price which the farmer obtain by selling the honey directly to the consumer. They obtain better price on honey when bottling the honey and selling them packed. The last column is the price at which the Federation sells the honey.

The production and sales quantity given in the above table has been presented in a trend line to provide a more clear relationship between them.

Figure No. 4.1

Production and Sales Trend Line



Source : Table No. 4.1

It is clear from the above figure that the production exceeds sales in some year but sales exceeds production in some other years. In some year the production is more than the sales, therefore, in the corresponding year sales exceed the production because of the stock. Therefore, we can see that there is intercross relation between the production and the sales. In the beginning production and sales were high but started to decline slowly in the coming years and increases in the later years.

4.1.1 Different Varieties of Honey Production and their Sales.

Honey are produced of different varieties according to the type of crop the farmers feed the bee. Mostly, honey is produced of Rudilo, Chiuri, Tori and Fapar. Honey is also produced from bee feeding on other crops too, but production from them is quite negligible, so they are also included in the above mentioned type. All the crops are not grown throughout the year, so different type of honey is produced in different season. Honey production from Tori is made in all the three seasons except the autumn. But Fapar and Rudilo honey are produced only in the winter season because the nectar from Fapar and Rudilo are available only in the winter season. In summer and spring honey from Chiuri and Tori is produced. Every years total production in honey is contributed from the below mentioned varieties of honey.

Table No. 4.2

Production and Sales according to Different Varieties of Honey

(In Metric Ton)

Year	Faper		Chiuri		Rudilo		Tori		Total	
	Prod.	Sales	Prod.	Sales	Prod.	Sales	Prod.	Sales	Prod.	Sales
2060	27	25	25	24	25	24	28	27	105	100
2061	21	22	21	22	20	20	23	23	85	87
2062	26	25	25	24	24	22	20	20	95	92
2063	26	24	25	25	18	20	20	21	89	89
2064	23	26	18	19	26	27	25	23	92	95
2065	28	27	21	20	27	25	27	25	103	97
Total	**151**	**149**	**135**	**134**	**140**	**138**	**143**	**139**	**571**	**560**

Source: Federation of Nepal Beekeepers, Chitwan, 2010.

In the above table the production and sales of honey according to their varieties is given. It is clear from the picture that there is not much difference between the production and sales according to the varieties of honey. It is because of the lack of knowledge regarding the varieties of honey among the people. There is not much fluctuation in the sales

among different varieties of honey which is further made clear from the F-test given in the appendix. The result of the F-test is given below:

Test of Hypothesis (F-Test):

Null Hypothesis (H_0): $\mu_0 = \mu_A = \mu_B = \mu_C = \mu_D$

i.e. There is no significant different in sales between four varieties.

Alternatives Hypothesis (H_1): $\mu_1 \neq \mu_A \neq \mu_B \neq \mu_C \neq \mu_D$

i.e. There is significant different in sales between four varieties.

The tabulated value of F-test at 5% level of significant for 3 and 20 d.f is 3.10.

$$\text{F-Ratio} = \frac{\textit{Mean sum of square between sample}}{\textit{Mean sum of square within sample}}$$

$$= \frac{6.78}{5.85}$$

$$= 1.16$$

Decision: Since calculated value is less then tabulated value of F-test. (i.e. 1.16<3.10), The Null Hypothesis is accepted. Therefore we can say, there is no significant difference in sales between the four varieties.

4.1.1 Personal Profile of the Ultimate Consumer

This section deals with the personal profile of the ultimate consumer. Here the age, sex, family size, education, etc is taken into consideration.

A) Age wise Classification of the Respondent

While analyzing the responses of consumer behaviour on the basis of preference the researcher tried to show which particular type of honey the respondent liked the most.

Table No : 4.3

Age Wise Classification of the Respondent

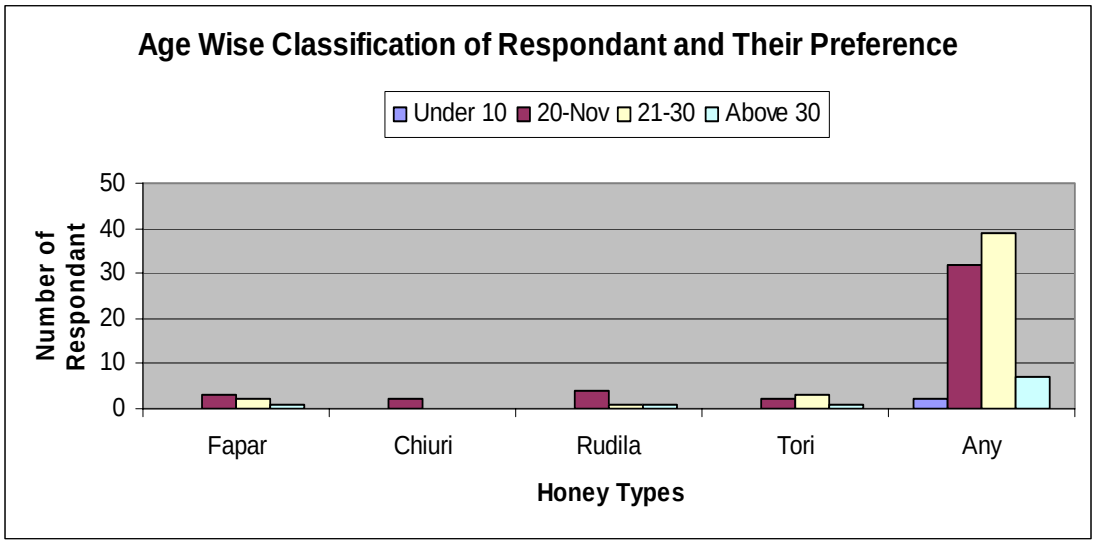
Age Group	Number of Respondent and their preference										
	Fapar		Chiuri		Rudilo		Tori		Any		Total
Under 10	-	-	-	-	-	-	-	-	2	2%	2%
11-20	1	1%	3	3%	4	4%	2	2%	32	32%	43%
21-30	1	1%	3	3%	1	1%	3	3%	39	39%	45%
Above 31	1	1%	1	1%	1	1%	1	1%	7	7%	10%
Total	3	3%	7	7%	6	6%	6	6%	78	78%	100%

Source : Field Survey, 2010

The above table shows that among the 100 respondent most of the people didn't have much knowledge about the different types of honey. Only 22% of the people had proper knowledge about the types of honey. 78% of the people who used honey just had the knowledge that honey was produced from bee but didn't have any idea about its types.

Figure No. 4.2

Bar Diagram Showing the Preference of Respondent on Honey



Source : Table 4.1

B) Sex Wise Classification of the Respondent

The following table shows the gender wise classification of respondent as well as their preference.

Table No. 4.4

Sex Wise Classification of the Respondent

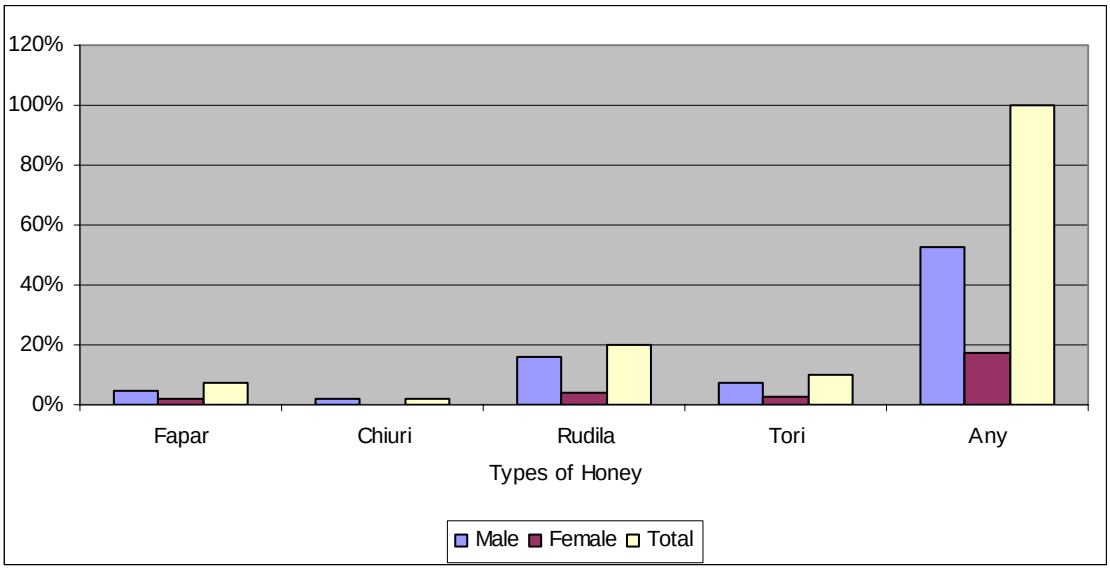
Age Group	Number of Respondent and Their Percentage										
	Fapar		Chiuri		Rudilo		Tori		Any		Total
Male	5	5%	2	2%	4	4%	6	6%	70	70%	87%%
Female	1	1%	2	2%	2	2%	-	-	8	8%	13%
Total	6	6%	2	2%	6	6%	6	6%	78	78%	100%

Source : Field Survey, 2010

Most of the respondent the researcher took as sample survey were male. The above table clearly shows that 87 % of the respondent were male. Only 13% of the respondent were female. About the preference most of the people didn't have proper knowledge about honey types.

Figure No. 4.3

Sex Wise Classification of Respondent



Source : Table No 4.2

C) Education of the Respondent

The following table shows the educational background of the respondent.

Table No : 4.5

Education of the Respondent

Age Group	Number of Respondent	
	Respondents	Percentage
Under SLC	5	5
SLC	6	6
Intermediate	24	24
Graduate	38	38
Post Graduate	27	27
Total	100	100

Source : Field Survey, 2010

Few of the respondent were under SLC. Most of the respondent taken as sample by the researcher were graduate. 38% of the respondent were graduate. Only 5 % of the respondent were under SLC.

D) Classification of the Respondent based on Family Size

While making the research the researcher also studied the preference based on family size.

Table No. 4.6

Classification of the Respondent Based on Family Size

Family Type	Number of Respondent and Their Percentage										
	Fapar		Chiuri		Rudilo		Tori		Any		Total
Joint Family	2	2%	2	2	4	4%	5	5%	22	22%	35%
Nuclear Family	4	4%	2	2%	2	2%	1	1%	56	56%	65%
Total	6	6%	4	4%	6	6%	6	6%	78	78%	100%

Source : Field Survey, 2010

Above table shows that 2% of the respondent from joint family liked honey prepared from fapar and chiuri whereas 4% liked honey prepared from Rudilo and 5% from that of tori. In case of nuclear family 6%, 4%, 6%, and 6% of the people liked honey prepared from fapar, chiuri, Rudilo and tori respectively. Most of the people just liked the honey but didn't know about its types.

E) Income of the Family

In order to find out the purchasing power of the consumer the researcher also studied the income of the respondent.

Table No : 4.7

Income of the Family

Family Income (in Rs.)	Number of Respondent	In Percentage
3000-5000	14	14%
5000-8000	57	57%
Above 8000	29	29%

Source : Field Survey, 2010

The respondent that the researcher selected were mostly earned a monthly income between Rs.5000 to Rs.8000. 29% of the people had a monthly income of more than Rs.8000. The income source greatly helped the researcher to make his finding more reliable in relation to the income and the purchasing power of the respondent.

4.1.2 Analytical Segment of the Ultimate Consumer

The analytical segment deals with the consumer behavior towards honey. Here the consumer preference in honey, how frequently they use honey in food, consumption pattern, substitute of honey product etc has been made. This analytical segment tries to find out the choice of honey by the consumer and studying their expectations and do the marketing of honey accordingly to create their loyalty to the product.

A) Use of Honey in Food

The table below shows the number of respondent and their habit of using honey in food.

Table No : 4.8

Use of Honey in Food

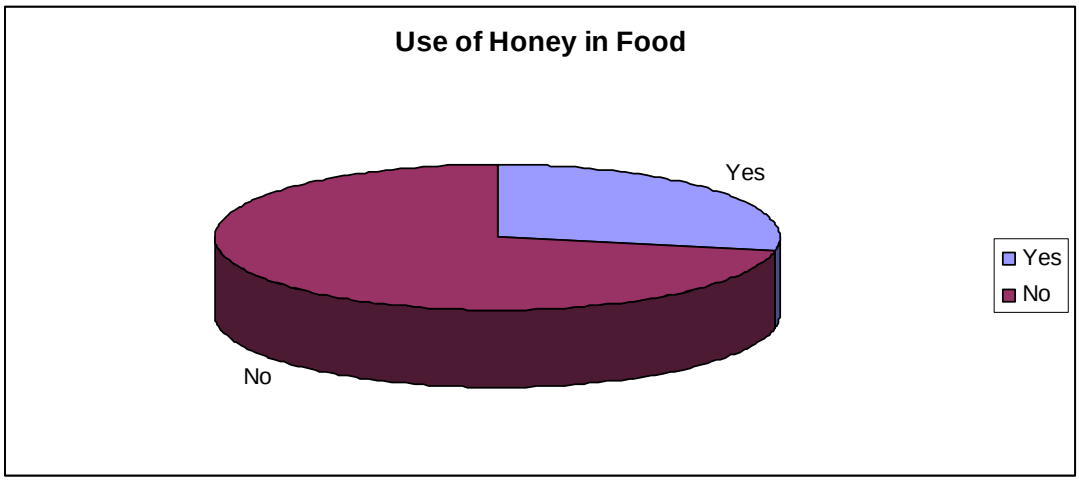
Response	Number of Respondent
Yes	28
No	72

Source : Field Survey, 2010

We can clearly see that the number of respondent who use honey in their food is very less. It is because of the cost, lack of availability, lack of knowledge about its benefit, could be used only with few food items as well as due to easy access to other substitute product. We can clearly see that 72% of the respondent use honey very rarely in their food.

Figure No. 4.4

Use of Honey in Food



Source : Field Survey, 2010

B) Consumption Period

During the time of research the researcher also studied the period of consumption. The table below shows the time period since how long the respondent had been using the honey.

Table No : 4.9

Consumption Period

Period	No of Respondent	Percentage
Below 10 years	13	13%
11-20 years	41	41%
21-30 years	39	39%
Above 31 years	7	7%

Source: Field Survey, 2010

The above table shows that respondent who have used honey for the last 10 years are 13%. 41% of the people have used the honey for the last 21-30 years. 39% of the people have used it for 21-30 years. There were only 7% of the people who were using honey above 31 years. The reason is most of the respondent chosen were between 11 to 30 years of age.

C) **Consumption Pattern**

Analysis of the consumption pattern of the respondent and their percentage in given below.

Table No: 4.10

Consumption Pattern

Pattern	No of Respondent	Percentage
Once a week	23	23%
Twice a week	7	7%
Thrice a week	1	1%
Daily	2	2%
Sometimes	67	67%
Total	100	100%

Source : Field Survey, 2010

The above table clearly shows that people regularly in their daily diet is very less. Only 2% of the people take honey regularly. 67% of the respondent said that they use honey only sometimes. People who preferred to take honey once a week were 23% which is followed by 7% who preferred twice a week. In the survey it was found that only 1% of the people used honey thrice a week.

D) Substitute Product of Honey

In order to find out the substitute product of honey in totality, the researcher has prepared a separate table based on the responses obtained from the respondent.

Table No : 4.11

Substitute Product of Honey

Substitute Product	No of Respondent	Percentage
Butter	22	22%
Ghee	3	3%
Jam	67	67%
Cheese	8	8%
Total	100	100%

Source : Field Survey, 2010

The above table shows that people preferred jam compared to rest of the substitute of honey. The researcher asked the respondent the reason for this. The respondent told that it was because honey was mostly used with bread or with similar items, and jam was the best substitute. Only 3% preferred ghee for honey.

E) Classification of Preference

When doing the research the researcher undertook various analysis factor such as taste, price, availability, health and found out the following facts.

Table No. 4.12

Classification of Preference

Season/ Honey	Number of Respondent and their percentage										
	Fapar		Chiuri		Rudilo		Tori		Any		Total
Taste	3	3%	5	5%	3	3%	3	3%	40	40%	54%
Price											
Availability					2	2%	2	2%	11	11%	15%
Health			2	2%	1	1%	1	1%	27	27%	31%
Total	3	3%	7	7%	6	6%	6	6%	78	78%	100%

Source : Field Survey, 2010

The entire consumer gave different type of responses when asked about their preference on the product based on taste, price, and availability and for health. But 49% of the people liked honey for its taste. Out of this, 3% preferred honey of Fapar whereas only 6% liked honey prepared from Tori. 40% of the respondent who said they liked honey because of taste said they didn't have much idea about its variety. 27% of the people liked honey because it was good for health. 15% of the people said that their purchase of honey was affected by price and availability.

F) Classification of the basis of availability

The following table shows whether the honey is available to the respondent whenever they want to purchase it.

Table No : 4.13

Classification of the Basis of Availability

Availability	Number of Respondent	In Percentage
Always	43	43%
Sometimes	38	38%
Never	19	19%

Source : Field Survey, 2010

Most of the respondent said that they could get honey in the shop whenever they want. 43% of the people said that they did not have any difficulty to purchase honey. But 19% said that they never get the honey the moment they want. The researcher asked the reason for this. They respondent that the place where they live is remote. There are few small shops. Moreover, the income of the people is low. Only 2 to 3 people sometime ask for the honey. The shopkeeper doesn't have profit margin by the sell of honey. 38% of the people said that they get honey sometimes because it depends on the types of shops they approach and stock availability.

G) Classification of the basis of Choice

The researcher asked the respondent how they react when they do not get honey in the shop.

Table No. 4.14

Classification of the Basis of Choice

Choice	Number of Respondent	In Percentage
Buy the alternate one	5	5%
Buy the substitute product	15	15%
Buy the one that seller appreciates	11	11%
Search for the desired product	69	69%

Source : Field Survey, 2010

Most of the people said that they would purchase its substitute product i.e. butter, ghee, jam etc. 69% of the people said that they would search for the desired product in other shops but they would purchase the product that they want. 11% of the people said that they would purchase the product that the seller tells them to buy. Only 5% said that they would purchase that they would purchase any other product if honey is not available in the shop.

H) Advertisement Media Recognition

Advertising plays an important role in the purchasing habit of consumer. The researcher asked the respondent to record their views about best advertising media and their influence on the purchasing decision.

Table No: 4.15

Advertisement Media Recognition

Medias	No of Respondent	Percentage
Newspapers, magazines, posters etc	12	12%
Hoarding board	7	7%
Television	34	34%
Radio	47	47%
Total	100	100%

Source : Field Survey, 2010

In the above table, out of 100 respondent 47% said that radio was the best means for advertising about the product. It is because it is a cheap means of communication and most of the people can afford it and there are many FM's which provides attractive programs and people are found of listening to it. Another important media according to the respondent was television. 34% of the people said that they felt television was a good media to advertise the product. 12% said that newspaper, magazines and posters were also good means of advertising whereas only 7% said that hoarding boards were also beneficial.

I) Prime Time for Advertisement

The respondent were asked when was the prime time for advertising and the following responses were obtained.

Table No : 4.16

Prime Time for Advertisement

Types	No of Respondent	Percentage
Before News	23	23%
While News	59	59%
After News	12	12%
Other Times	6	6%
Total	100	100%

Source : Field Survey, 2010

Most of the respondent felt that news of the best time to air the advertisement. Out of them 59% told that it was best to advertise in between news. 23% of the respondent said that advertising would be effective before the news. 12% said that immediately after the news it would be best to advertise. Some 6% said that it would be good to advertise during some interesting programs which are more entertaining than the news.

4.2 Market Analysis of Honey

To analyze the market of honey firstly the age and sex of the respondent is taken. Moreover, the availability of honey, role of the federation to promote honey, its sales trend, customer satisfaction and the purchasing behavior is made in this segment.

A) Age Wise Classification of the Respondent

The following table shows the age group of the respondent.

Table No : 4.17

Age Wise Classification of the Respondent

Age Group	Number of Respondent	In Percentage
20-30	3	30%
30-40	5	50%
Above 40	2	20%

Source : Field Survey, 2010

Table 4.15 shows that out of 10 respondent 5 of them i.e. 50% of them were in the age group between 30 and 40. 30% of the respondent were in 20-30 age group. 20% i.e. 2 of the respondent were above 40 years of age.

B) Sex Wise Classification of the Respondent

The researcher also made the sex wise classification of the respondent.

Table No: 4.18

Sex Wise Classification of the Respondent

Age Group	Number of Respondent	In Percentage
Male	9	90%
Female	1	10%

Source : Field Survey, 2010

It is found that our society is male dominated. Women are confined to household chores. This could have been the reason out of the 10 respondent chosen for the survey 9 of them were male. Only 1 out of 10 was a woman.

C) Classification on the Basis of Availability

The researcher inquired about the availability of honey within the district or whether they have to purchase from outside and got the following responses.

Table No: 4.19

Classification on the Basis of Availability

Place	Number of Respondent	In Percentage
Within the District	7	70%
Directly from the manufacturer	1	10%
Outside the district	2	20%

Source : Field Survey, 2010

From the above table it is seen that most of the retailers purchase honey from within the district and one respondent said that he purchased the honey directly from the manufacturer. Two of the respondent said that they purchased the honey from outside the district.

D) Classification on the Basis of Sales Trend

The researcher asked the respondent whether they were happy with the sales of honey and got the following responses.

Table No : 4.20

Classification on the Basis of Sales Trend

Sales Trend	Number of Respondent	In Percentage
Very Good	-	-
Good	4	40%
Satisfactory	6	60%
Bad	-	-

Source: Field Survey, 2010

None of the respondent was delighted by the sales of honey; neither had they felt that it was unsatisfactory. Since the sale of honey was not in large volume it did not make much difference in the business. Therefore 60% of them whatever the sale they were satisfied with it, whereas 40% felt good from the sales of honey.

Figure No. 4.5

Retailer's Reaction on the Sales of Honey

Source: Table 4.18

E) Classification on the Basis of Customer Satisfaction

Since the retailer knows about the utility that a customer gets and his purchasing behaviour. If the customer gets more satisfaction he will purchase again whereas if he does not get satisfaction he would not purchase the next time. According to the retailer the customer give following responses if asked.

Table No: 4.21

Classification on the Basis of Customer Satisfaction

Customer Satisfaction	Number of Respondent	In Percentage
Very Good	3	30%
Good	6	60%
Satisfactory	1	10%
Bad	-	-

Source: Field Survey, 2010

From the above table we can see that most of the customer who purchases honey is satisfied from the product. According to the retailer 30% of the customer satisfaction from the product was very good, 60% was good and only 10% of the respondent felt that customer satisfaction was satisfactory.

F) Effort by Federation of Nepalese Beekeepers

The researcher wanted to know about the efforts that were made the Federation of Nepalese Beekeepers to improve the quality of honey, to find proper market, to compete with outside honey and so on. He got the following responses.

Table No: 4.22

Effort by Federation of Nepalese Beekeepers

Response	Number of Respondent	In Percentage
Yes	2	2%
No	-	-
I don't know	8	80%

Source: Field Survey, 2010

We can see that most of the retailers are ignorant about the federation. It was therefore difficult to know about the efforts made by the federation. However, none of the respondent said that the efforts made by the federation were ineffective. From this we can imply that the federation is doing something for the promotion of beekeeping. 20% of the respondent said that the efforts by the federation were beneficial whereas 80% did not know about the federation at all.

G) Classification on the Basis of Income and Purchase

The researcher wanted to know whether the income of a person had any relation with the purchasing habit of the people and found the following facts.

Table No: 4.23

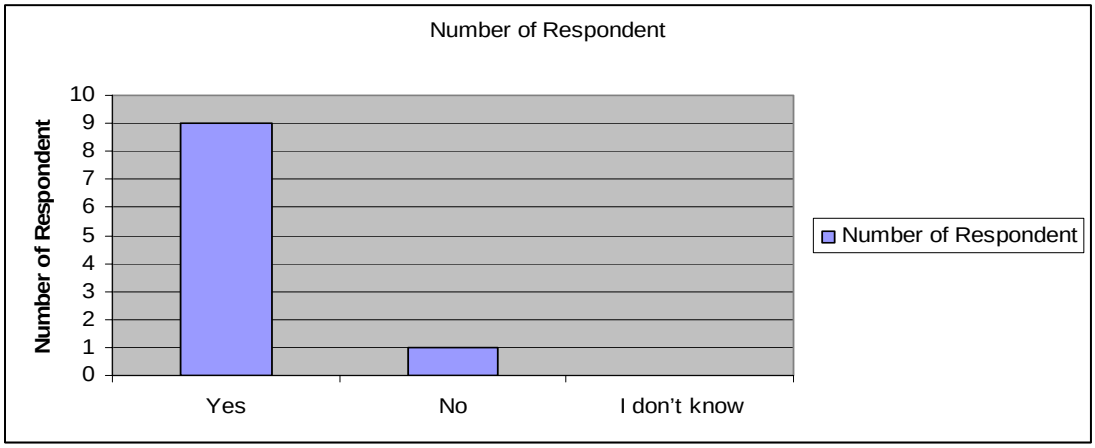
Classification on the Basis of Income and Purchase

Response	Number of Respondent	In Percentage
Yes	9	90%
No	1	10%
I don't know	-	-

Source: Field Survey, 2010

Figure No. 4.6

Classification on the Basis of Income and Purchase



Source: Table No. 4.21

According to the respondent he found that people with higher income were most of the people who purchased honey. It is because honey is costly and people with low income could not afford to purchase it. 90% of the respondent said that income plays a important role in the purchasing habit of a person whereas only 1% said that it has nothing to do with purchasing.

H) Preference of Consumer on Honey Types

When asked to the respondent which type of honey do the consumer mostly like, he said that usually most of the consumer do not have proper knowledge about the different types of the product. They are just concerned about the product not its types.

Table No. 4.24

Preference of Consumer on Honey Types

Response	Number of Respondent	In Percentage
Fapar	1	10%
Rudilo	-	-
Chiuri	-	-
Tori	-	-
I don't know	9	90%

Source : Field Survey, 2010

From the above table we can see that 90% of the respondent don't have the knowledge about the types. 1 respondent said that people purchase Fapar honey from his shop.

I) Classification on the Basis of Sales

The researcher wanted to know why the sales of honey are not very high though it has many advantages got the following responses.

Table No : 4.25

Classification on the Basis of Sales

Response	Number of Respondent	In Percentage
Not knowing about its advantage	1	10%
Due to lack of advertisement	2	20%
Because it is costly	4	40%
Due to lack of awareness	3	30%

Source : Field Survey, 2010

The researcher found that most of the people did not include honey in their daily diet because of the above given factors. 10% of the respondent felt that the consumer did not use honey not knowing about its benefit, 20% felt that their was not good advertisement, 40% of the respondent felt that cost was the main factor behind why less people used honey whereas 30% said that there was no good methods applied to let the people know about the various benefit that can be obtained by the regular use of honey.

4.3 Analysis of Marketing Strategies and Trainings

This segment deals with the different strategies and trainings adopted by the government and the Federation of Nepal Beekeepers to the manufacturers. It also deals with the different seasons in which different varieties of honey is produced, the outcome of trainings, their durations etc for the effectiveness in the honey production and its commercialization.

A) Age wise Classification of the Respondent

The following table shows the age group of the respondent.

Table No. 4.26

Age wise Classification of the Respondent

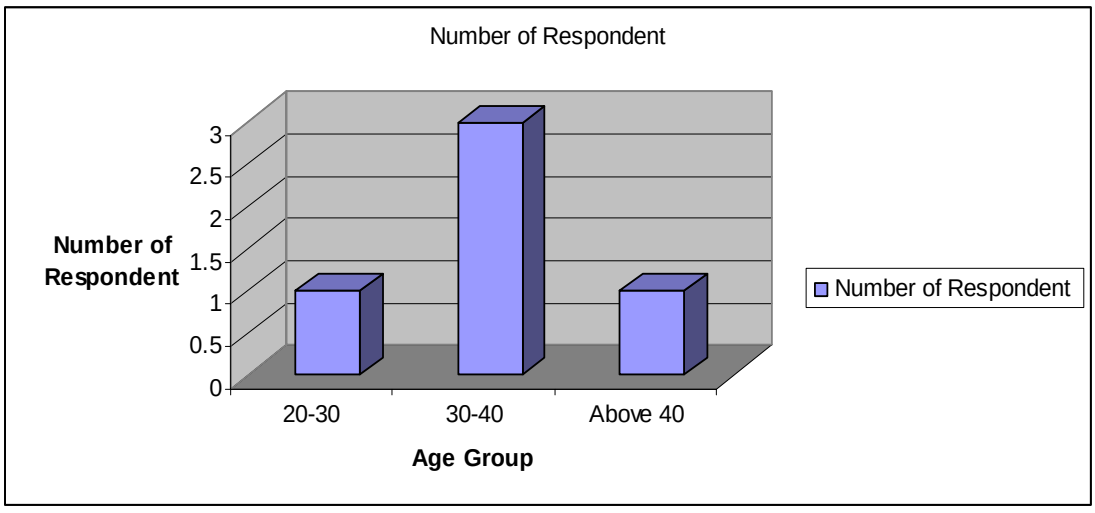
Age Group	Number of Respondent	In Percentage
20-30	1	20%
30-40	3	60%
Above 40	1	20%

Source : Field Survey, 2010

The above table shows that the respondent whom the researcher had selected are mostly between the age group of 30-40 years. 60% of the respondent fall under this category. 20% of the respondent were in the 20-30 and above 40 age group.

Figure No. 4.7

Classification on the Basis of Age



Source Table No. 4.24

It is clear from the above figure that the manufacturers who involve in the honey production are mostly in the age group of 30-40. But the figure also shows that the people between 20-30 and above 40 are less involved in the production of honey.

B) Sex Wise Classification of the Respondent

The researcher also made sex wise classification to know about the involvement of male and female in the field of manufacturing.

Table No : 4.27

Sex wise Classification of the Respondent

Age Group	Number of Respondent	In Percentage
Male	5	100%
Female	0	0%

Source : Field Survey, 2010

This finding was quite astonishing. The 5 respondent whom the researcher had selected were all male. The women involvement in this profession was found to be nil. Either there was 100% involvement of male in this field.

C) Best Season for Honey Production

The researcher wanted to know which the best season was for the growth of different crops because it determined the types of honey produced. The researcher found out the following facts.

Table No: 4.28

Best Season for Honey Production

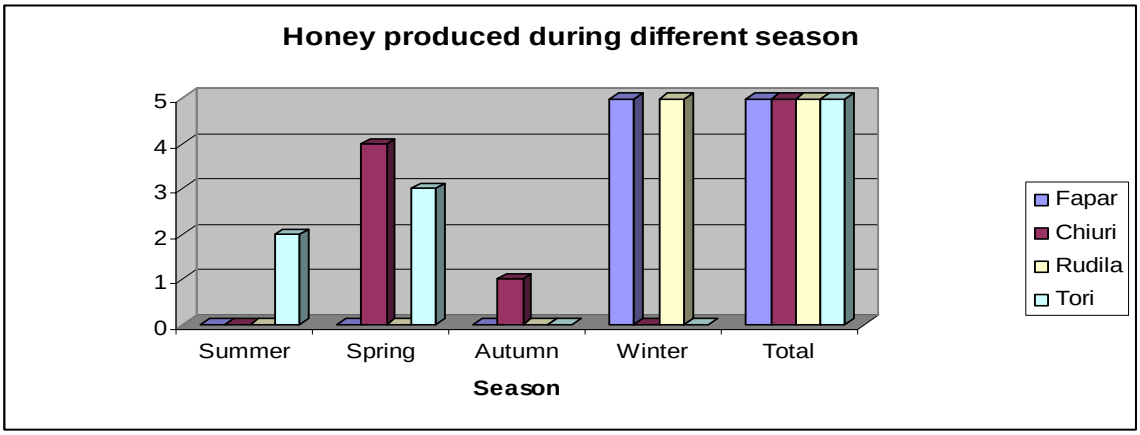
Season/ Honey	Fapar		Chiuri		Rudilo		Tori	
Summer	-	-	-	-	-	-	-	40%
Spring	-	-	-	-		3	60	60%
Autumn	-	-	4	4	-	-		
Winter	5	100%	1	1		2	40	40%
Total	5	100%	5	100%	5	100%	5	100%

Source: Field Survey, 2010

The above table shows that Fapar is usually produced in the winter season after harvesting rice especially in the month of Poush, therefore mostly Fapar honey are produced during this time. Chiuri is usually grown in the end of Autumn or the beginning of Winter especially in the month of Mangsir/Poush. Tori is grown in mild climate usually during Aswin & Kartik, therefore honey made from this crop is produced during Autumn. Rudilo is produced in between Magh to 15th of Chaitra because Rudilo is grown in these particular season. Baishak to Ashad no honey production is made and just the bee are fed on plants for survival. In Srawan and Bhadra even sugar is fed to the bee to keep them alive. Therefore, honey production is not made from Baishak to Bhadra.

Figure No. 4.8

Honey Production According to Season



From the above figure we can see that honey production from Tori is made in all the three seasons except the autumn. But Fapar and Rudilo honey are produced only in the winter season because the nectar from Fapar and Rudilo are available only in the winter season. In summer and spring honey from Chiuri and Tori is produced.

D) Classification on the Basis on Fulfilling the Demand of the Market

The following responses were received on the market demand.

Table No. 4.29

Fulfillment of the Demand of the Market

Response	Number of Respondent	In Percentage
Yes	5	100%
No	-	-
I don't know	-	-

Source: Field Survey, 2010

The honey that is produced in the district is sufficient to fulfill the demand of the market. Even surplus is grown and distributed in other districts too.

E) Classification on the Basis of Low Quality Honey Production

Chitwan has got a good climate to grow diverse crops. The land is fertile and there is a better facility of irrigation compared to other districts. Yet the production has not been able to achieve its mark. The following factors were asked to the respondent and told them to give them opinion marking 1 to the most and 5 to the least.

Table No: 4.30

Classification on the Basis of Low Quality Honey Production

Response	Number of Respondent	In Percentage
Use of insecticides	5	100%
Improper storing vessels	5	100%
Use of low quality equipment to draw honey	5	100%
Climate factor	5	100%
All of the above	5	100%

Source: Field Survey, 2010

The researcher found that the respondent considered all the factors equally important in proving hindrance to the high honey production. Use of insecticides, improper vessels, use of low quality equipment to draw honey, climate factor, all of them were equally responsible to diminish the honey production in the district.

F) Trainings and their Achievement

The researcher wanted to know if any training the success of the training provided by the local trainers, by the beekeepers federation or by the District Agricultural Officer (DAO). The following facts were found about the training.

Table No: 4.31

Trainings and their Achievement

Response	Number of Respondents					
	Local Trainers	In %	Within Federation	In %	DAO	In %
Highly Successful	1	20%	-			
Successful	2	40%	1	20%		
Neutral	2	40%	2	40%	4	80%
Unsuccessful		-	2	40%	1	20%
Total	5	100%	5	100%	5	100%

Source: Field Survey, 2010

The above table shows that most of the training given by local trainers was more successful then other organizations. Training provided by the district agricultural office is least effective of the three. Training provided by the federation was of satisfactory level.

G) Classification on the Basis of Duration of Training

The table below provides the training according to their duration period and found out the following interesting facts.

Table No: 4.32

Classification on the Basis of Duration of Training

Duration	No of Respondent	Percentage
Below 3 months	3	60%
3-6 months	1	20%
Above 6 months	1	20%

Source: Field Survey, 2010

Three of the respondent told that training which was of below 3 months were provided by Local Trainers, Beekeepers Federation and the District Agricultural Office. One each respondent told that training of 3-6 months and above 6 months is usually given by the Federation of Nepal Beekeepers Association.

H) Performance after Training

The following table shows what the respondent felt about the effectiveness of the training and established the following facts.

Table No: 4.33

Performance after Training

Performance	No of Respondent	Percentage
Great change	1	20%
Moderate change	2	40%
Neutral	2	40%
No change		
Total	5	100%

Source: Field Survey, 2010

All of the respondents felt that training brought changes in the level of performance that they made. 20% of the respondent felt that training brought great change in the performance. 40% of the respondents felt that it brought moderate change. Another 40% didn't give either any positive or negative response. Whatsoever, we can conclude that training no doubt has some positive impact on the trainee.

4.4 Major Findings

The researcher wanted to know about the market condition of honey in Chitwan district**.** In comparison to other districts Chitwan has got a good market of honey. The major findings that the researcher made are provided below:

- It was found that people liked honey for its taste, nutritional advantages and other advantages.
- The potential market of honey is very big. There is a good potential to develop honey not only within the district but even outside the district.
- Almost half of the total honey produced in the country comes from Chitwan district. In the year 060/061 honey production in the district was good but there was a gradual decline in the production up to the year 064/065. Since the year 065/066 the production of honey in the district is improving.
- All of the total production of different varieties of honey in the district is consumed.
- There is a close interrelationship between the income and the consumption pattern of the people. People with high income tend to consume honey more then the people with low income.

- Only few people use honey in their daily food because of its high price, lack of availability everywhere and ignorance.
- Most of the people have been using honey for the past 20/30 years.
- Consumption pattern of honey frequently is very rare. Most of the people consume honey only sometimes.
- There are different other substitute product of honey like ghee, jam, butter, cheese etc.
- People have knowledge about different types of honey but most of them lacked the knowledge regarding its taste. Therefore, the preference on its type is ignored.
- Honey is not available everywhere especially in villages and urban slums.
- People who prefer honey do not purchase substitute product but find the desired product from somewhere else.
- People feel that radio and television are the best means of advertisement to promote the sales of honey.
- The prime time for advertisement is in between the news.

The researcher also wanted to know about *the market analysis of honey and its quality and variety***.**

- The researcher found out that Chitwan has a good market in honey. Honey produced here is even supplied to other districts. Most of the requirement of honey in the district is fulfilled by local producer. Actually due to the cost all the people cannot afford to purchase it. Else, its market would have been larger.
- Most of the retailers purchase the honey from the wholesaler or other bigger retailers from within the district. Since most of honey is produced within the district therefore some retailers purchase honey directly from the manufacturers too.

- The sales trend of honey is of satisfactory level.
- Customer satisfaction from the honey is very good.
- Retailers knowledge regarding the efforts made by the Federation of Nepalese Beekeepers to improve quality of honey, its market etc is lacking.
- Income and the purchasing behavior of the people are very much interrelated.
- People who sale honey is of the view that consumer do not purchase honey on its type but rather on its brand. The researcher wanted to know about the preference on different types of honey to differentiate the product and capture the market with the product type that the consumer liked the most. But, most of the people who consumed honey didn't have proper knowledge about its type. The people just had the knowledge that it was produced by bee from flower.
- Sales of honey in the district are not up to the expectation because of lack of knowledge about its advantage, lack of advertisement etc.
- Regarding quality, it was found that lots of improvement has to be made to produce honey of international standard. There is the problem of lots of insecticides being used in the crops. There are no good storing vessels, drawing equipments etc. Knowledge about filtering, labeling, branding etc are lacking in the people. If the above mentioned problems are handled properly, no doubt honey will be able to cover more market and discover new market.

To know about the *analysis of market strategy and training* the researcher made a separate structured questionnaire and collected information from 5 manufacturers.

- On the basis of his finding, the researcher found that the Federation of Nepalese Beekeepers [FNBK], DAO, Beekeepers Cooperatives and other trainers gave training regarding how to manage the production and thereby manage distribution channel and increase the sales of honey in the district.
- In different season, different type of honey is produced. Winter season is good for Fapar and Rudilo, Spring season is best for Chiuri and Tori.
- Honey produced from the district is able to fulfill the total demand of the market in Chitwan.
- Use of insecticides in plant, improper storing vessels, use of low quality equipment to draw honey, climate factor etc are some of the causes for the low quality honey production.
- Training to the farmers from the local trainers are more successful in comparison to the training provided by Federation of Nepal Beekeepers and District Agricultural Officer.
- Usually training is of short duration of less than three months.

Some changes are noticed in the farmers after the training, though the changes are not to the expectation level. Knowledge about the insecticides, pesticides, storing vessels, drawing equipment etc is given to the people through the training. It was found that mostly the training provided by the local trainers were successful compared to training provided by FNBK, DAO and other institutions. There were different durations of training provided to the people. Mostly, training conducted was of short duration. It was also found that some positive changes were observed in the people after the training.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Summary

To make the study effective and realistic the researcher divided his study into various segments. At first he selected a suitable title for his study. The researcher then collected essential materials, data and other requirements to fulfill his study. Different structured questionnaires were made to different groups of respondents. At the beginning of research, the researcher presented the background of the honey marketing, marketing overview, and then the researcher identified the problems relating the study, and then to overcome the problems the researcher prepared objectives and significance of the study. The researcher also disclosed the limitations that he may go through in his study period.

Literature Review actually helps the researcher in his findings by giving him a path or way through the past researches. It also helps him to acknowledge the drawbacks the past researcher has made and to overcome those drawbacks. In this thesis, the researcher has divided the review into two parts: In the first part, the researcher has made an attempt to review supportive text with the help of different articles, news, research papers, websites which is related to honey and marketing. In the second part, the researcher went through the findings made by the different researchers in the previous studies. The researcher also studied the problem associated with the studies that the past researchers went through. The researcher also pointed out the problems the past researcher made which he has rectified in this research in the research gap.

Research is incomplete without using methods to collect data, use tools to analyze the data etc. Therefore the third chapter deals with different methods that will be used to collect data and present them. Besides, population and sample, data collection procedure, method of data collection, period covered and different statistical tools like Tables, Bar Chart, Pie Chart, Correlation and Hypothesis Test are presented in this chapter.

In the fourth chapter, the collected data are presented and analyzed by means of using different statistical tools. To make the study more scientific, data are presented in three different categories. Firstly, data are presented and analyzed from the view point of ultimate consumer, secondly, data are presented and analyzed from the view point of retailer, and finally, the data are presented and analyzed from the view point of manufacturer. At the end of this chapter, major findings of the study are presented in points.

At the end of this thesis, the researcher has summarized the research work and concluded that Nepal has got good market potential for honey product and recommended and suggested the stakeholders to enlarge the market and commercialize honey business adopting appropriate means.

Even though Nepal is small country, it is diverse in climate, vegetation and cultivation. Necessary raw materials (flower's juice and pollen) which can be used only by honeybee, are available from Mechi in the east to Mahakali in the west, and Terei in the south to Himalalyan in the north throughout all the seasons. At present there is a capacity to harvest 4 to 5 lakh bee comb, however only about 30,000 comb of European bee Melifera and about 1,00,000 comb of local bee Cerena are available. Besides, the condition of honey comb and their number found in hills *(Bhitte Mauri)*, at homes *(Katthe Mauri)* and in trees *(Singus Mauri)* are not known. Presently, in Nepal the average honey production from

Melifera is about 25-30kg and from Cerena 2-3kg is estimated per year per box. Their possibility of increasing the capacity of Melifera is 60-70kg and of Cerena is 10kg per box per year. Millions of ruppes is wasted because of not utilizing the available flower juice and pollen which would otherwise be a good source of income. Fortunately, Chitwan has been a major contributor in the development of honey.

It is a business which depends on agriculture and forestry, therefore it can be a good source of income especially to people in village and remote areas. Moreover, both male and female can rely on this occupation and make it a source of their livelihood. Raw materials are freely available so people who have no land, less land, poor or rich, everyone can follow this profession. If we can make more people engage in this business then there will be economic development, social and environmental condition will also get better. Ultimately, it will usher the country into industrial development. Furthermore, there are other things which can be produced by means of beekeeping, like: *honey, wax (Maain), Queenbee (Mauri ko Rani), Mauri Khoto, Pollen, Honey Comb (Mauri ko Gola), Honey Poison (Mauri Bikh).*

5.2 Conclusions

On the basis of the study, the researcher has undertaken the following conclusion regarding the honey product.

- Honey is the edible product practiced from ancient time in Nepal.
- The majority of the producers and the entrepreneurs are male in the district, Chitwan.
- The consumption pattern of the honey shows that people do not have habit of consuming honey regularly.

- Honey is easily substituted by the other products like ghee, butter; jam etc. in the market if the production and the price are not properly managed.
- Electronic Medias are best means of the advertisement of the honey.
- Most of the respondents had preferred the time during the News, saying that most of the people pay their attentions toward the News so it is the right time of the advertisement.
- There are different varieties of honey, but most of the people lack the knowledge about it. Focus should be made to provide proper knowledge about its types and its advantage so that people will consume honey more regularly.
- Knowledge should be provided to the farmers regarding the bad impact of use of insecticides, improper storing vessels, and low quality equipment to draw honey etc so that the quality of honey can be made better.
- Variety in honey production doesn't have much impact on sales, therefore, the manufacturer should pay more attention on quality rather than variety production.
- The production of the honey is very low because most of the production is consumed in the local market.
- Most of the respondents in the district who are involved in this business are uneducated and applying the traditional approach of the production of this product. The production of honey has not been up to the satisfactory level. So, modern methods of farming should be taught to the farmers.
- People are illiterate and lack the knowledge regarding the marketing strategy that should be adopted to have a good hold of

honey market. Moreover, the consumption pattern of honey is low compared with other regular used products. Therefore, marketing strategy like packaging, labeling, branding and proper distribution channel should be carefully managed so that people get attracted by the product and start using it regularly.

- Trainings provided by the local trainers are found to be more beneficial than the government training. So, the government should pay more focus and design the training more properly for its effectiveness.
- If the people engaged in this business are trained properly they can produce more and the living status will be improved.

5.3 Recommendations:

Analysis of market condition of honey was made and it was found that there is a very good potential of developing honey market in Chitwan and other districts too. For this, suggestions and recommendations given below should be carefully followed.

Suggestion to the Farmers

- Beekeeping should be carried out as commercial farming instead of subsistence farming.
- Try to find new market and select proper channel of distribution.
- Utilize the by-product of honey and sell them to produce wax, poison, medicine etc.
- Take trainings provided by different organizations.
- Should give priority to produce organic honey.
- Establish a sound system of traceability.

Suggestion to the Government

- Adequate number of resource centers (including queen breeding) must be established in suitable sites/locations.
- Farmers must be made aware about the importance and benefits of beekeeping, including benefits from pollination and demerits of pesticides, through organizing seminars, workshops, interaction programs in and outside the Chitwan.
- Practical oriented training programs on different aspects of production and processing including the use of harmful insecticides and pesticides, must be conducted in or near by the production areas.
- The government should play pro-active roles in already established as well as for opening up the potential markets.
- Establish accredited Testing and Certification Laboratory of international standard. Until, such laboratory is established present laboratories must be strengthened by availing those necessary equipments, facilities and technical manpower in time.
- The government must put in force adequate and updated laws/regulations and strictly implement these in maintaining quality and standard.
- Develop infrastructure and support services like roads, transportation facilities, electricity, communication, bank and financial institutions etc. near the production and collection centers.
- Develop and promote honey in the international market in crucial part and prepare a residue control plan and quality check system and submit it to DFTQC and MQCD at an earliest possible time.

- National production policy has to be clearly defined
- Incentives and subsidies must be provided for production and promotion within the jurisdiction of the multilateral and regional trade agreements.
- Government must give priority and put emphasis for the development and promotion of organic honey for which she must introduce National Organic Program and Integrated Pest Management Program simultaneously.
- Continuous supervision and monitoring mechanism must be developed to assure the international market regarding the honey production in Nepal free of pesticide and antibiotic.
- Farmers should be encouraged to produce quality honey by developing a mechanism to give premium to good quality honey and at the same time refusing to purchase the sub-standard product.
- The government must adopt and implement private sector favorable policies and establish suitable institutional mechanism required to attract and involve the private sectors in beekeeping.

Suggestion to the Distributor

- For successful development, promotion and increase the competitive strength of Nepalese honey, commercialization of beekeeping is a must. But, commercialization must cover the areas including inputs as well as marketing aspects and not only limit in production.
- Scientific farming, brand awareness, aggressive advertisement should be properly planned. Once the demand for honey increases there will be necessity to produce more of it. Increase in demand

will create employment opportunity, which will raise the income of the people and uplift their living standard.

- Undertake various promotional activities like sales promotion, advertisement through different media and organizations and participation in the honey related trade fairs and exhibitions at home and abroad for the enhancement of the domestic sale and export.
- Promote institutionalized mechanism and networking.
- Find and capture new markets
- Despite some efforts made by some organizations, there is no any detail information available on some of the important aspects of Nepalese honey. Therefore, a detail study and research need to be undertaken.
- The most critical issue realized by all the stakeholders at the moment is the absence of a reliable and guaranteed market. Therefore, it is urgent to take some steps immediately, so that markets can be identified that are, as far as possible, reliable and guaranteed from the long- term perspective.

Lastly, unless the management is sound and efficient, the whole exercise in the developmental efforts for honey or any other commodities for that matter will be futile bearing no any desirable result. Therefore, for the best result, all the stakeholders should come together with full commitments, determination under the management system suitable to the Nepalese condition. By and large, it is also deeply realized and therefore concluded that there should not be any honey developmental program under 100% subsidy base.

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Appendix-I

Survey Questionnaire for the retailer

Dear Sir,

As an MBS student, I'm going to make a research study on Market Analysis of Honey for the ***partial fulfillment of the requirement for the Degree Course.*** . In order to accomplish my objective I have made a questionnaire and I would like to request to you to kindly write or tick wherever necessary and help me to prepare my research report. I would be very much thankful to you for your kind cooperation.

Thank you !

Please fill up your full bio-data

Name :

Address :

Age :

Sex : Male Female

A) Market Analysis of the product

1. Since how long you have been in this profession?
   a) Below 1 year [ ] b) 1-5 years
   c) 5-10 years [ ] d) More than 10 years
2. Where do you purchase honey item?
   a) Local Market [ ]
   b) Within the district [ ]
   c) Directly from the manufacturer [ ]
   d) Outside the district [ ]
3. What is the sales trend of honey in Chitwan district?
   a) Very Good [ ] b) Good [ ]
   c) Satisfactory [ ] d) Bad [ ]
4. What is the level of customer satisfaction?
   a) Very Good [ ] b) Good [ ]
   c) Satisfactory [ ] d) Bad [ ]
5. Is there any effort done by the Federation of Nepalese Beekeepers to uplift the marketing of honey within the district?
   a) Yes [ ] b) No [ ]
   c) I don't know [ ]

6. Are you satisfied with the sales of honey?

a) Strongly Satisfied [ ] b) Satisfied [ ]

c) Neutral [ ] d) Dissatisfied [ ]

7. What do you think is the average income of people in your area?

a) Rs. 5000 or less [ ] b) Rs. 5001- 10000 [ ]

c) Rs. 10001-15000 [ ] d) Above Rs. 15000 [ ]

8. Is there any relation with the income of the people and purchasing behavior of honey?

a) Yes [ ] b) No [ ]

c) I don't know [ ]

9. Is there need of substitute market to flourish honey marketing?

a) Yes [ ] b) No [ ]

c) I don't know

If yes, how?----------

Quality and Variety Production

10. Among the different types of honey which one do consumers usually prefer?

a) Fapar [ ] b) Rudilo [ ]

c) Chiuri [ ] d) Tori [ ]

11. What is the reason for the preference?

a) Difference in quality [ ] b) Difference in price [ ]

c) Difference in taste [ ] d) Availability [ ]

12. Why do very few people include honey in their daily diet?

a) Not knowing about its advantage [ ]

b) Due to lack of advertisement [ ]

c) Because it is very costly [ ]

d) Due to lack of awareness [ ]

13. How far has the Federation been able to achieve its objective in terms of quality and variety production?

a) Highly fulfilled [ ] b) Fulfilled [ ]

c) Unfulfilled [ ] d) Neutral [ ]

Complain and suggestion

14. If you have any complain and suggestion regarding the marketing and sales of honey in your district please mention it point wise.

a) _____ b) _____

c) _____

Survey Questionnaire for the Manufacturer

Dear Sir,

As an MBS student, I'm going to make a research study on Market Analysis of Honey for the ***partial fulfillment of the requirement for the Degree Course.*** . In order to accomplish my objective I have made a questionnaire and I would like to request to you to kindly write or tick wherever necessary and help me to prepare my research report. I would be very much thankful to you for your kind cooperation.

Thank you!

Please fill up your full bio-data

Name :

Address :

Age :

Sex : Male Female

Marketing Strategies and Effectiveness of Government Trainings

1. Which season is best for the manufacture of honey?

   a) Summer [ ] b) Autumn [ ]

   c) Winter [ ] d) Spring [ ]

2. Do you think honey manufactured within the district meets the demand of market?

   a) Yes [ ] b) No [ ]

   c) I don't know

3. If no, how is the demand met?

   _____

4. What is the reason for low quality honey production in your opinion? (Give 1 to the reason which you support the most, 2 to the second most and so on)

   a) _____ Use of insecticides

   b) _____ Improper storing vessel

   c) _____ Use of low quality equipment to draw honey

   d) _____ Climate Factor

5. Do the government give any training to promote honey production?

a) Yes [ ] b) No [ ]

c) I don't know [ ]

6. What is the duration of the training?

a) Below 3 months [ ] b) 3-6 months [ ]

c) 6months to 1 year [ ] d) More than 1 year [ ]

7. Who provides the training?

a) Local trainers [ ]

b) People within the federation [ ]

c) District Agriculture Office [ ]

8. How far has the training been successful?

a) Highly successful [ ] b) Successful [ ]

c) Neutral [ ] d) Unsuccessful [ ]

9. Do you implement what you learn from the training?

a) Yes [ ] b) No [ ]

10. Is there any changes in the performance after the training?

a) Greatly [ ] b) Moderately [ ]

c) Neutral [ ] d) No changes [ ]

Complain and suggestion

11. If you have any complain and suggestion regarding the marketing and sales of

honey in your district please mention it point wise.

a) _____ b) _____

c) _____

Survey Questionnaire for the Ultimate Consumer

Dear Sir,

As an MBS student, I'm going to make a research study on Market Analysis of Honey for the ***partial fulfillment of the requirement for the Degree Course.*** . In order to accomplish my objective I have made a questionnaire and I would like to request to you to kindly write or tick wherever necessary and help me to prepare my research report. I would be very much thankful to you for your kind cooperation.

Thank you

Please fill up your full bio-data

Name :

Address :

Age :

Sex : Male Female

Profession :

Family Size : Joint Family Nuclear Family

Family Income (monthly) : ----------

1. Have your ever used honey in your food?
   a) Yes [ ] b) No [ ]
2. Since when have you been using it regularly?
   a) Below 10 years [ ] b) 11-20 years [ ]
   c) 21-30 years [ ] d) Above 31 years [ ]
3. How often do you use it in a week?
   a) once a week [ ] b) twice a week [ ]
   c) thrice a week [ ] d) daily [ ]
4. What are the substitute product of honey?
   a) Butter [ ] b) Ghee [ ]
   c) Jam [ ] d) Cheese [ ]
5. Among the different types of honey which one do you prefer?
   a) Fapar [ ] b) Rudilo [ ]
   c) Chiuri [ ] d) Tori [ ]

6. Why?

a) Taste [ ] b) Price [ ]

c) Availability [ ] d) Health [ ]

7. Is honey available in shops whenever you want it?

a) Always [ ] b) Sometimes [ ]

c) Never

8. What do you do if your favorite type of honey is not available in the place where you want it?

a) Buy the alternate one [ ]

b) Buy the substitute product [ ]

c) Buy the one that seller appreciates [ ]

d) Search for the favorite honey [ ]

9. Which form of advertisement is the best to make you aware about honey? (Give 1 to which you like most, 2 to second favorite, and so on. Write the ranks you give on the space provided along with the options).

a) _____ Newspaper, magazines, posters, etc.

b) _____ Hoarding board

c) _____ Television

d) _____ Radio

10. What is the prime time of advertising the honey product in TV and radio?

a) Before News [ ] b) While News [ ]

c) After News [ ] d) Other Time

Complain and suggestion

11. If you have any complain and suggestion regarding the marketing and sales of honey please mention it point wise.

a) _____ b) _____

c) _____

Appendix-II

Test of Hypothesis (F-Test)

	Faper	*Chiuri*	*Rudilo*	*Tori*				
Year	X_A	X_B	X_c	X_D	X_A^2	X_B^2	X_C^2	X_D^2
2060	25	24	24	27	625	576	576	729
2061	22	22	20	23	484	484	400	529
2062	25	24	22	20	625	576	484	400
2063	24	25	20	21	576	625	400	441
2064	26	19	27	23	676	361	729	529
2065	27	20	25	25	729	400	625	625
	149	**134**	**138**	**139**	**3715**	**3022**	**3214**	**3253**

Null Hypothesis $\mu_0 = \mu_A = \mu_B = \mu_C = \mu_D$

i.e. There is no significant different in sales between four verities.

Alternatives Hypothesis $\mu_1 \neq \mu_A \neq \mu_B \neq \mu_C \neq \mu_D$

Grant total (T) $= \Sigma x_A + \Sigma x_B + \Sigma x_C + \Sigma x_D$

$= 149+134+138+139$

$= 560$

Correction Factor$= \frac{T^2}{n} = \frac{560^2}{24} = 13066.67$

Total sum of Square(TSS)$= \Sigma x_A^2 + \Sigma x_B^2 + \Sigma x_C^2 + \Sigma x_D^2 - cf$

$= 3715+3022+3214+3253-13066.67$

$= 137.33$

Sum of square between samples(SSC):

$= (\Sigma x_A)^2/n_A + (\Sigma x_B)^2/n_B + (\Sigma x_C)^2/n_C + (\Sigma x_D)^2/n_D$

$= 149^2/6 + 134^2/6 + 138^2/6 + 139^2/6$

$= 20.33$

Sum of Square Within the sample(SSW):

=TSS-SSC

=137.33-20.33

=117

One Way Anova Table

Source of Variation	Sum of Square	d.f. (degree of freedom)	Mean Sum of Square	F-Ratio
Between Samples	20.33	4-1=3	$\frac{20.33}{3} = 6.78$	$\frac{6.78}{5.85} = 1.16$
Within Samples	117	20	$\frac{117}{20} = 5.85$	
Total	137.33	24-1=23		

Level of Significance = 5%

Critical Value: The Tabulated value of F-test at 5% level of significance for 3 and 20 degree of freedom is 3.10.

Decision: Since calculated value is less then tabulated value of F-test. (i.e. 1.16< 3.10), The Null Hypothesis is accepted. Therefore we can say, there is no significant difference in sales between the four varieties.