

**AN ENTREPRENEURIAL ASSESSMENT OF THE MARKET  
ACCESS FOR HONEY AND HONEY PRODUCTS IN THE CITY OF  
NAIROBI, KENYA**

**BY**

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**D53/10807/04**

**THIS RESEARCH PROJECT IS SUBMITTED IN PARTIAL FULFILMENT OF  
THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS  
ADMINISTRATION (ENTREPRENEURSHIP), SCHOOL OF BUSINESS,  
DEPARTMENT OF BUSINESS ADMINISTRATION, KENYATTA UNIVERSITY**

**November, 2006**

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*An entrepreneurial  
assessment of the*

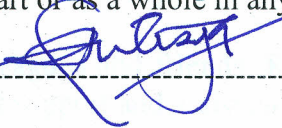


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**DECLARATION**

This Research Project is my original work and has never been presented for award of a degree in part or as a whole in any other Institution of Learning.


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**Lecturer's Approval**

This Research Project has been submitted with my approval as the Course Supervisor.

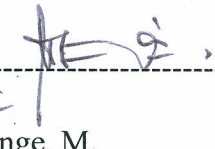
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## **DEDICATION**

This Research Project is, first and foremost, dedicated to my Saviour, the Almighty God, who gave me the physical strength and the intellectual ability to undertake this study.

To my wife and great friend, Sally, what could I have done without you?  
I am sincerely grateful for the love, care and the unrelenting encouragement.

To my colleagues and friends: Kyalo, Kitau, Faith, Mutua and Cheloti; I thank you for the constant support and assistance you offered me during this noble course.

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## DEFINITION OF TERMS

<b>Business</b>	An activity involving buying and selling or manufacturing or producing services in order to earn profits.
<b>Brands</b>	Products differentiated to make them distinct from other similar products offered by a given organization or its competitors.
<b>Case Study</b>	An in-depth enquiry and description of organizational problems
<b>Entrepreneur</b>	A person with high business acumen, resources and out to play a risk-bearing role in a business environment.
<b>Entrepreneurial Assessment</b>	An entrepreneur's stylish approach to enquire and analyze business issues, therein employing traits such as knowledge, flair, skills, ability to spot and exploit business opportunities and the inherent strong motive to excel.
<b>Investment</b>	The commitment of ones money or property to the creation of goods and/or services with the ultimate objective of earning a return on the money or property so committed.
<b>“Miti-ni-Dawa”</b>	Small business establishments which usually sell traditional liquors and or beers, concocted with honey and other herbal based products.
<b>Market Access</b>	The level of awareness of the existence of a commodity's market, and the extend to which the sellers are able to penetrate and exploit such a market.
<b>Market Potential</b>	A business situation where the activities of buying and selling goods and/or services exists and is capable of being developed or expanded.
<b>Research</b>	A process of gathering and interpreting relevant evidence that will either support a behavioural theory or help change it.
<b>Target Market</b>	A group of customers for whom a business undertaking creates and maintains a marketing mix that is consistent with the specific needs and preferences of the customers in the group.

## LIST OF ABBREVIATIONS

CBD	Central Business District
CBOs	Community – Based Organizations
CMA	Capital Markets Authority
DDC	District Development Committee
FAO	Food and Agricultural Organization
GDP	Gross Domestic Product
GNP	Gross National Product
GOK	Government of Kenya
HCA	Honey Care Africa Limited
ICIPE	International Centre of Insect Physiology and Ecology
KAFU	Kenya Association of Forest Users
KPRSP	Kenya Poverty Reduction Strategy Paper
NGOs	Non – Governmental Organizations
SMEs	Small and Medium Enterprises
UNDP	United Nations Development Program

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## **ACKNOWLEDGMENT**

First and foremost, lots of gratitude goes to my Supervisor, who devoted a lot of time and patience to this study. I am particularly very grateful for the extraordinary advice, guidance and encouragement accorded me by my supervisor, Mrs. Catherine Mulwa, of the School of Business, Kenyatta University.

Secondly, I wish to thank my wife, Sally Mutisya, for the financial, spiritual and moral support she accorded me while undertaking the study.

Joseph S. Mutisya.

## **ABSTRACT**

Experts have called for significant investment in honey production within indigenous forests because it promises high economic returns to rural families. Honey production level in Kenya stands at approximately 60,000 tons per annum (Mugure 2001). Bulk of the honey produced is consumed locally, as food and for local brews. Only about 20,000 tons finds its way to the market outside the administrative locations. And only about 2% of the annual production is exported. Thus, for bulk of the honey producers in Kenya, marketing of honey remains largely a local affair; and hence most honey producers in Kenya suffer from exploitation by middlemen.

The Government of Kenya has appreciated that apiculture has potentially valuable contributions to the development of the economy in terms of offering employment, as food, medicinal products, source of income both at the local and national level. Therefore, to improve this industry, the Government of Kenya needs market information to enable it review the policies in respect of the apiculture industry, to fully exploit its potential.

Production and marketing information in the honey industry in Kenya is very scarce. As a result, information on honey market access and potential is extremely fragmented. Consequently, there are difficulties in making decisions that would lead to the improvement of the sector. This study assessed the honey production in Muumoni Division, Mwingi District, its marketing access system, and how it is structured in the City of Nairobi. Specific objectives of the study included: to compare the prices of honey and honey products offered in Muumoni Division with those offered in the City of Nairobi; to establish the major marketing outlets for honey and honey products in the City; determining the potential for selling honey in Nairobi directly; the opportunities available for sellers of honey, as well as the constraints, if any, affecting the marketing of honey in the City of Nairobi; finding out the nature of competition and pricing strategies employed by marketing outlets within the City of Nairobi and determining the role of the Government of Kenya in influencing the market access for honey and honey products in the City of Nairobi.

Both primary and secondary data was collected for further quantitative analysis. The study thus used a set of three questionnaires, administered on producers, marketing outlets and consumers. Stakeholder participation was emphasized in all stages. Both descriptive and quantitative data analysis methods were employed in the study.

The findings of the study have both theoretical and practical implications on the development of apiculture industry in Kenya. Theoretically, the study is to contribute to the advancement of knowledge in Apicultural Industry matters in Kenya. It has also, highlighted factors that influence the production of honey and honey products, and, the factors that impact on the honey market access and potential in Kenya. The study has also practical significance because it may lead to the improvement of strategies in both production and marketing aspects of the apiculture industry by identifying the opportunities necessary for the exploitation of this natural resource. The study may be of immediate benefit to the Ministries of Agriculture and Livestock Development in the formulation of future apiculture policies aimed at enhancing production and market access for honey and honey by-products. The study shall also form a base on which others can develop their studies.

# **CHAPTER ONE**

## **1.0 INTRODUCTION**

### **1.1 BACKGROUND TO THE STUDY**

Apiculture, the study and keeping of bees, is a fascinating activity for all ages. Beekeeping is an excellent hobby that provides extra money and valuable educational experiences in biology and business. Bee-keeping, or apiculture, remains a traditional occupation of many communities worldwide. Presently, apiculture has perhaps the most potential of all mini-livestock activities worldwide, and much is being done in the United States of America, Asia, the Pacific Islands, Latin America and Africa in general; Australia, Nigeria, Uganda and Kenya to develop the practice of sustainable and improved bee-keeping, and has been shown to increase a farmer's income by up to 50% under favourable conditions, as it requires little capital outlay, a small area of land, and is not labour intensive. In most parts of the world, apiculture is particularly well suited as an income generating activity for women, young people, and the landless. Examples of the leading world producers of honey include the US, Canada, China, Australia, Phillipines, Congo, Uganda, Kenya, etc.

Kenya's economy has been witnessing a downward trend in real Gross Domestic Product (GDP) and Gross National Product (GNP) growth from 1995 through 2003. Whilst the GDP grew by 48 % in 1995, it contracted to - 0.8% in 2003 (Capital Markets Authority (CMA) 2001). Economic growth has been experiencing low rates of both the GDP and GNP averaging 1.2 % from 1999 to 2002. The decline has been reflected in almost all the sectors in the economy. The agriculture and manufacturing sectors, which account for about a third of GDP were seriously hit following persistent droughts, floods and famine which also led to disruption of power supply (Capital Markets Authority (CMA) 2001). Consequently, these hindered industrial growth and especially on the rural and semi-urban development as evidenced by the economic survey (GoK 2003). The low economic growth rate has led to high rates of unemployment and other social hardships. Arising from these problems, the challenge for decision-makers and citizens in Kenya has consisted of finding ways and means of

reversing this devastating economic decline (GoK 2001, World Bank 2002). The Government has since focused its attention to the previously 'overlooked' sectors, and in particular, the *apiculture* (honey production) sub-sector.

According to a study carried out and published by the Coordinator of Kenya Association of Forest Users, E. Mugure (2001, December 13, Daily Nation p. 30), in Kenya, the traditional value attached to honey by most ethnic groups means that most communities are involved in some level of honey production. Whereas the Kamba people have been engaged in honey production for centuries, and used it in the past to make dowry payments, honey is a secondary food source for the Ogiek-Dorobo communities of the Mau forest. Nevertheless, it has value far beyond its intrinsic worth as is evident in the way it integrates various systems in the Ogiek-Dorobo cultural life.

Honey production is most widespread in the semi-arid areas of Kenya where it remains one of the most viable commercial activities because it is not labour intensive. Honey production requires little initial capital and its quick returns supplements the meagre returns from agriculture in arid and semi-arid areas. The total production of honey and honey products in Kenya is approximately 40,000 and 60,000 tons annually, whereas the existing Kenyan market for these products is about 100,000 tons, and the deficit must be covered by imports (Mugure, 2001). Honey products have a wider potential market than most other non-timber forest products due to the varied uses to which honey can be put. Its common uses are as a food source, in local brew-making and in mixtures of traditional medicines. It is easily sold in supermarkets unlike products such as herbs and medicines which are either too bulky or may require special permits.

In most developing countries, current honey production amounts to a fraction of the real potential because of outmoded practices. According to an article entitled 'Bee Fair – Kenya' published by the Standard Correspondent (2002:October 13, The Standard,p.20), the major honey producing areas in Kenya include the four Ukambani Districts ( Mwingi, Makueni, Kitui and Machakos), Mbeere, Kwale, Kakamega, Baringo, Laikipia, Mau- Narok Districts, etc. However, market access and the marketing of honey in Kenya remains largely a local affair. According to an article

published in *The Toronto Star*, on January 3, 2006, page 11 (Dukes 2006), over 80 per cent of the households sell their honey within their villages or locations while only 20 per cent find its way outside their administrative district. Most honey producers in Kenya suffer from exploitation by middlemen. The honey is sold in either its raw form or as a semi-processed product in which the honey combs and wax have been removed through a simple process of boiling and sieving.

But the majority still sell their honey in raw form despite the significant price gains brought by semi-processing. KAFU's survey (Mugure 2001) found that semi-processed honey brought in the highest income of 300 shillings per kilogram as opposed to between 50 and 160 shillings for raw honey in the local markets, across the honey producing areas.

Experts have called for significant investment in honey production within indigenous forests because it promises high economic returns to rural families.

The researcher's preliminary survey of the market access in the City of Nairobi revealed that honey and honey products are mainly sold by small scale sole proprietors, some of which include Greenforest Honey (based in Umoja Estate), Jolly Honey Industries (based in Ruaraka), Maluini Honey (based in Kitui Town but marketed through various outlets in Nairobi including Uchumi and Chandarana Supermarkets, Peponi Grocers, etc).

The major honey processor in Kenya is Honey Care Africa Ltd, a locally incorporated company, with a factory along Muringa Avenue, Jamhuri Park, Nairobi. In 2005, the company produced 350 tons of honey with total sales of \$ 750,000 (2006, January 3, *The Toronto Star*, p.11); other large processors include Baraka Agricultural Institute, (a Catholic Church sponsored project based in Molo); ECO Honey (a collaborative project between ICIPE and locals) which has a factory in Mwingi Town, Eastern Province, and producing approximately 50 tons of honey annually (2003, March 3), *BioVision Newsletter*, p. 1.

A recent collaborative study carried out by Honey Africa Ltd and World Neighbours (2004, July 26, *Daily Nation*, p. 31) revealed that the local honey producers, processors and sellers face stiff competition from various brands of imported honey, including brands such as Capilano Honey, from Australia; Little Bee Impex, from India, Golden Blossom Honey, from America, etc. (2002, October 25), *FESnews Newsletter*, Toronto, p. 15. These imported honey brands are available in many

outlets in Nairobi including Uchumi, Chandarana, Continental and Nakumatt Supermarkets, Karen Provision Stores, Organic Greens and La Baguette and Peponi Grocery stores, among many others. The survey further found that national and international outlets for marketing of honey exist, though not properly documented.

Notably, a survey carried out in Mwingi District by ICIPE in 2003 revealed that the district has a potential of producing about 5000 tons of honey and honey products annually (2003, March 3, BioVision Newsletter, p. 1). However, the survey estimated the current production at 3000 tons, out of which approximately 1500 tons (about 4% of Kenya's total annual output) is believed to come from Muumoni Division, of Mwingi District where about 60 per cent of the households own beehives. Further, ICIPE's survey found that only about 20 per cent or approximately 300 tons of the total honey produced finds its way outside the district (through middlemen and other dealers who buy for resale to high potential markets such as Nairobi and Mombasa cities, export markets, etc) with the rest being sold or simply consumed in the villages within the respective locations across the administrative divisions of Mwingi District. Thus, Muumoni Division alone has an estimated surplus of 1200 tons of honey for which access to lucrative and reliable markets should be sought urgently, in order to enhance the incomes of honey producers in Muumoni Division.

According to a research (case study) entitled "Honey and Pastoralists in Kenya" carried out by the Natural Resources Institute, UK (Oyuga and Morton, May 2004), production, market access and marketing information in the honey industry is scarce. As a result, information on investment opportunities, and by extension the market access and potential, is extremely fragmented. Consequently, there are difficulties in making entrepreneurial decisions in this industry, hence the researcher's motivation to have carried out an entrepreneurial assessment of the market access and potential for honey and honey products in the City of Nairobi.

The study, therefore, carried out an entrepreneurial assessment of the market access for honey and honey products in the City of Nairobi, by tracing the production of honey in Muumoni Division, Mwingi District, through middlemen and other dealers, all the way to the final buyers and consumers, in the City of Nairobi.

## **1.2 STATEMENT OF THE PROBLEM**

Agriculture, especially apiculture, farming and cattle rearing, continues to be the most important economic activities in Kenya, and accounts for 24.7 % of the GDP and 18.9 % of wage employment for the 1.8 million people who work in the formal sector.

According to Oyuga and Morton (2004), over 25 % of Kenya's population live in the pastoral rural areas, and the figure is rapidly expanding. Given the high levels of poverty, apiculture (or bee-keeping / honey production) is one of the promising economic activities through which farmers can improve their incomes to ensure food security and technology improvement and adoption. In most of these areas, the potential for honey production is very high.

Despite the fact that this sub-sector has a high potential as evidenced by the expanding production levels, the available data on the market access and market potential in Kenya (and the City of Nairobi in particular) is limited, and the available information on collection, processing and marketing of honey is extremely fragmented.

Hence, apiculturalists based in Muumoni Division, Mwingi District, (a remote rural pastoral area in Kenya), have very little information on the honey market access and potential in Nairobi, which means that much of the honey produced there is sold locally, at very low prices, and producers often suffer from exploitation by middlemen. Thus, identifying steady markets for their product is believed to spur growth in this sector, as well as enhance the employment opportunities, and resultantly ensure increased incomes of the Muumoni Division apiculturalists.

Arising from this lack of properly documented marketing information necessary for linking the honey producers in Muumoni Division and buyers of honey and honey products in the City of Nairobi, this study aimed at assessing the market access for honey and honey products in the City of Nairobi.

Due to these existing marketing information gaps, necessary to effectively link the honey producers (in remote rural villages in Muumoni Division) with the major customers (specifically, the Nairobi City dwellers), the study aimed at establishing a sound marketing linkage between the two broad parties (producers and sellers), as well as determining the role of middlemen and other honey dealers.

### **1.3 OBJECTIVES OF THE STUDY**

Based on the problem stated above, the purpose of this study was to carry out an entrepreneurial assessment of the market access and potential for honey and honey products in the City of Nairobi.

The specific objectives of this study were:

- (i) To analyze and compare the prices of honey and honey products offered in Muumoni Division with those offered in the City of Nairobi.
- (ii) To establish the main types of marketing outlets for honey and honey products in the City of Nairobi.
- (iii) To determine the honey brands (local and imported) sold, as well as establish the most preferred brands by consumers, in the City of Nairobi.
- (iv) To determine the opportunities available to potential entrepreneurs wishing to invest in marketing honey and honey products, in the City of Nairobi.
- (v) To determine the quantities of honey and honey products sold/handled by the various outlets in Nairobi, as well as determine the potential per outlet.
- (vi) To determine the most critical challenges Muumoni Division's honey producers face in trying to access the market (consumers) in the City of Nairobi.

### **1.4 RESEARCH QUESTIONS**

By undertaking this study, the researcher aimed at having the following varied questions answered:

- i. How do the unit prices of honey and honey products in Muumoni Division compare with those offered for the same quantity in the City of Nairobi?
- ii. Which main types of outlets (hawking, supermarkets, provision stores, *miti-ni-dawa* establishments, hotels, hospitals) buy/sell the highest quantity of honey in the City of Nairobi ?
- iii. Which types of honey brands (local or imported) are most preferred by consumers in the City of Nairobi ?

- iv. What opportunities are available for sellers and marketers of honey in the City of Nairobi ?
- v. What quantities of honey are sold/handled by the various types of outlets ? And what is the potential per outlet amongst the different types of outlets in the City of Nairobi ?
- vi. What are the most critical challenges do the Muumoni Division honey producers face in trying to access the market (consumers) in Nairobi ?

### **1.5 SIGNIFICANCE OF THE STUDY**

The study has been conducted at a time when the entire country needs accelerated economic growth, which could be achieved through the development of the apiculture industry, across the entire country, and especially in the arid and semi-arid regions of the country. In addition, the country is currently experiencing very high levels of unemployment, with the worst hit areas being the arid and semi-arid ones – these areas are predominantly the major honey producing areas. At the moment, the government has not yet put the necessary policies and funding into the sector, implying that the high potential in this sector still remains grossly under-developed.

The study is therefore expected to act as an eye-opener and a springboard for future academic and other researches, to further carry out research on the factors influencing the production, market access and resultantly, marketing of honey and honey products in the entire country.

The study will also be very useful to the bi-lateral development agencies and non-governmental organizations in making development assistance decisions in respect of the apiculture industry. In addition, the study is expected to assist the Export Zones' initiative of exploring the export opportunities available for the locally produced honey. Further, it is common knowledge that majority of the honey producers in the rural areas are not aware of the usefulness of the many by-products of honey: beeswax, propolis, pollen, royal jelly or 'bee milk' and bee venom, all of which are valuable and marketable products. Most of the honey-producers just discard these by-products, thereby denying themselves and the country the much-needed income, not

to mention the colossal waste of the country's natural resources. The study will therefore assist policy makers to drum up awareness on the existence of opportunities to sell these by-products.

The findings of the study will have practical implications on the development of the apiculture industry in the country. The study is expected to contribute to the advancement of knowledge of the apiculture industry in Kenya. It shall also, firstly, highlight factors that influence the production of honey and honey products, and, secondly, the factors that impact on both the honey market access and potential in Kenya. Further, the study has practical significance because it may lead to the improvement of strategies in both the production, market access and marketing aspects of the apiculture industry by identifying the opportunities and constraints affecting the exploitation of this natural resource. Specifically, the study will be of immediate benefit to the Ministries of Agriculture and Livestock Development in the formulation of future apiculture policies aimed at enhancing production and market access for honey and honey by-products.

Given the current high levels of poverty, and the contrasting high potential for honey production in Kenya, this study presents a window of hope in respect of the identification of entrepreneurial opportunities, to serve as a vehicle for enhancing the marketing of honey and honey products, as well as give rise to other economic linkages needed for the exploitation and subsequent development of apiculture in Kenya. Therefore, the findings of the study will be availed to the relevant Government Agencies (District Development Committees, etc) and other stakeholders (Community – Based Organizations (CBOs) and other NGOs) at the grass-root levels in, particularly, the arid and semi-arid districts in Kenya.

The potential beneficiaries of the study include, but are not limited to:

Beekeepers - who are expected to both discover new markets offering higher prices for their products, and also discover more and valuable uses of their honey and honey products, otherwise discarded as waste. In addition, the study will encourage increased output of honey, as well as lead to better management of the honey production and marketing chain.

Potential entrepreneurs - wishing to invest in apiculture industry will make informed investment decisions.

Kenyan labour force – the study will promote job creation and employment opportunities through creating awareness of the emerging commercial linkages during production through to selling honey products to final consumers.

Government of Kenya – expected to come up with informed and better policy formulation and decisions on the apiculture industry matters, for the benefit of economic growth.

The study will also form a base on which others can develop their studies.

## **1.6 SCOPE AND LIMITATIONS OF THE STUDY**

This study was concerned with determining the market access for honey and honey products in the City of Nairobi. Muumoni Division was the source of the honey and honey products being considered in the study. This was due to the fact that Muumoni, producing approximately 1,500 tons of honey was considered a classic example of a major honey-producing zone, which warranted such a study. The study traced the production, market access, sales and marketing activities undertaken by middlemen, through to the final buyers and consumers of honey in the City of Nairobi. The City of Nairobi was chosen because of its cosmopolitan nature, where the researcher expected to get a representative sample of honey distribution channels and outlets, consumers with varied incomes, backgrounds, various beliefs and values attached to honey; its harvesting and uses, etc as a step towards gaining a deeper understanding of both the traditional and modern apiculture industry practices.

Thus, the study limited itself to the honey producers in Muumoni Division, Mwingi District, Kenya; marketers and honey consumers in the Central Business District of the City of Nairobi, and carried-out market access surveys and research in the private and public offices, large and small scale business premises including hotels and restaurants, supermarkets and provision stores.

Due to the limited finances, the study sampled selected major producers in Muumoni Division, Mwingi District, Kenya and in addition sampled various consumers in selected residential areas in Nairobi through established supermarkets, provision stores and other outlets. A representative sample of respondents was selected for the study. This was due to lack of sufficient time, finances, and other resources. Never-

the-less, the study sought to determine the nature of competition and pricing in the market, of both the local and imported honey, and came up with detailed comparisons. The study was, however, not able to cover the opinions of all the producers and sellers/consumers of honey (local and imported) because tracing all of them would have required considerable time, resources and other logistics.

### **1.6.1 Assumptions of the Study**

In this study, the following assumptions were made, that:

- All respondents were to be cooperative and provide reliable responses.
- Honey was consumed in the city by a large number of households, and in the hospitality industry; and that
- There was free flow of honey from many producers (including those of Muumoni Division), majority of whom are based in remote rural areas, to the City of Nairobi.
- The researcher did not know the level of honey production in Muumoni Division, as well as the level of market access and potential of honey in the City of Nairobi (and by extension, Kenya).
- The Muumoni Division honey producers, who are seriously exploited by middlemen, were aware that their honey products can fetch prices which are three to four times higher, in the City of Nairobi.
- That entrepreneurial opportunities in apiculture exist for new firms wishing to deal in apicultural products, and that
- the only factors, that affect the apiculture industry, are the inefficient traditional honey harvesting practices, persistent droughts, occasional forest fires and limited market access and opportunities.

# **CHAPTER TWO**

## **2.0 LITERATURE REVIEW**

### **2.1 INTRODUCTION TO LITERATURE REVIEW**

The history of modern apiculture (or bee-keeping) dates back to the 1800s, when the modern beehives were developed in 1853 by an American by the name Reverend L. L. Langstroth; no wonder the most popular bee-hive, Langstroth bee-hive, was named after him. Reverend Langstroth, often referred to as “the father of modern bee-keeping,” revolutionized the practice of bee-keeping and honey production. Prior to this period, there is overwhelming evidence that most countries produced honey using the traditional log-hive, and processed honey and honey products through the use of traditional methods, such as pounding raw honey and sieving it or by simply boiling the raw honey and sieving it thereafter.

In this chapter, the researcher mainly focused on literature concerning the area of study under the following sections:

- i. The Conceptual Framework on the Correlates of Honey Production and Market Access.
- ii. Government policies and their impact on the apiculture industry in Kenya.
- iii. Background characteristics of honey producers, and the methods of honey production.
- iv. Current honey market access and marketing activities and practices in Kenya
- v. Firms marketing honey and honey products in Kenya, as well as the honey brands dealt.
- vi. Review of Past Literature and Studies done in this Field
- vii. Summary and Gaps to be Filled by the Study

## **2.2 THE CONCEPTUAL FRAMEWORK ON HONEY PRODUCTION AND MARKET ACCESS IN THE CITY OF NAIROBI**

The consideration of the inter-relationships between the honey producers in Muumoni Division, the middlemen, honey marketing outlets and consumers are the composite variables identified in this study to have had an influence on honey production and market potential. Figure 2.0 shows the conceptual model, which encompasses the major variables and their possible patterns of influence on each other and eventually on honey production and market access and potential.

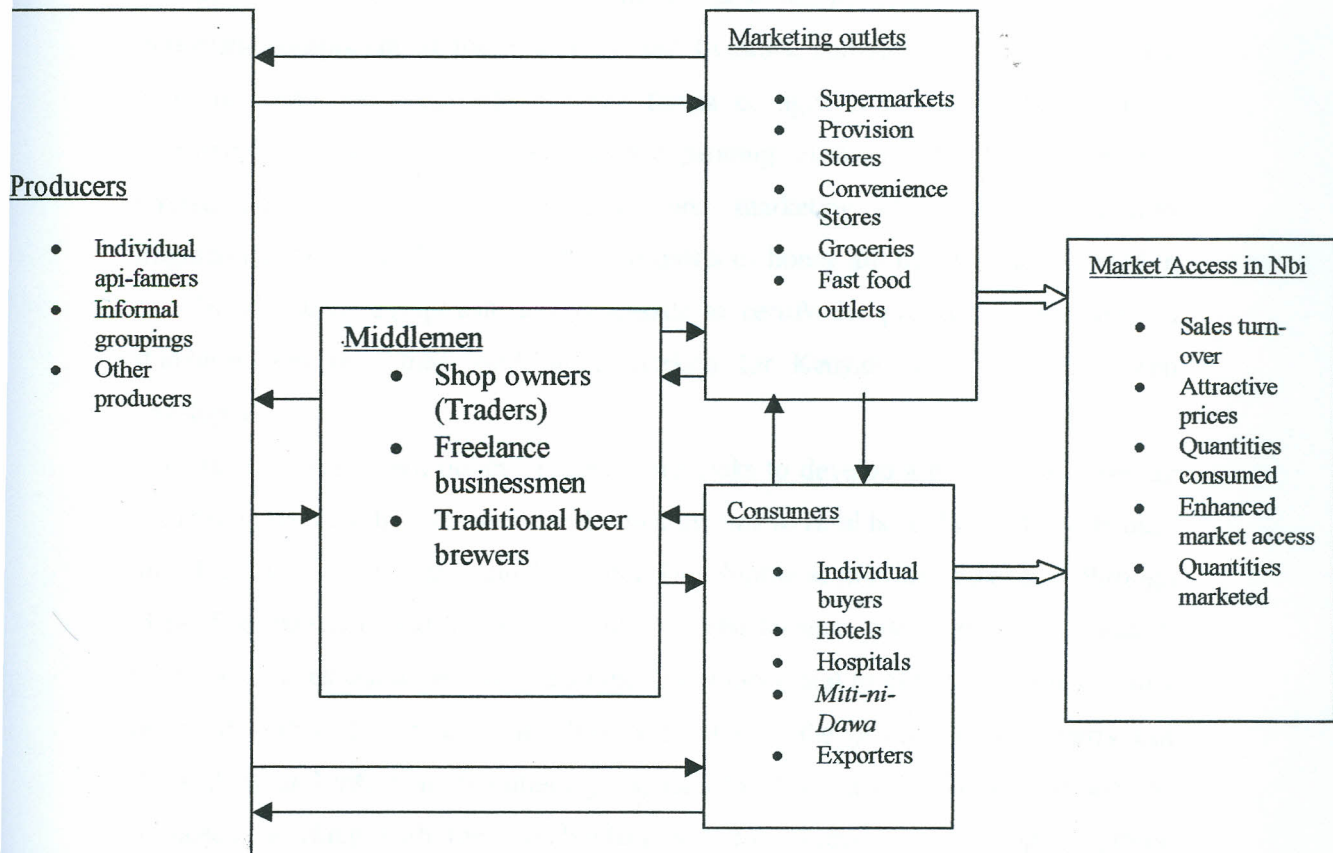
The effect of the two composite (independent and dependent) variables namely producers and consumers on the one hand, and market access on the other, are mediated by the role of middlemen and marketing outlets. What the structural model indicates, therefore, is that the activities of marketing outlets and consumers most directly influenced the honey market access and potential. However, on the other hand, it is indirectly influenced by producers and middlemen.

The model, therefore, suggests that the combined roles of producers, middlemen, marketing outlets and consumers influence the sales turn-over, quantity marketed, quantity sold and consumed and prices charged, all of which have a bearing on the enhancement of the market access, and resultantly, market potential.

In the context of the above conceptual framework, the theoretical underpinning of the study was that the market access, and consequently the market potential for honey produced in Muumoni Division, was only able to be evaluated effectively by reviewing the roles of the various players involved. Against this background and theoretical underpinnings, the study was guided by the variables indicated in the conceptual model.

Independent Variables

Dependent Variables



**Fig. 1.0: Conceptual Framework on Honey Production and Market Access in the City of Nairobi**

### 2.3 GOVERNMENT POLICIES AND THEIR IMPACT ON THE APICULTURE INDUSTRY IN KENYA

The development of modern bee-keeping in Kenya has progressively become a very important component of the apiculture and livestock sub-sector, particularly in the arid and semi-arid areas where other forms of agriculture cannot be sustained effectively. Production levels have been expanding. However, the data available is limited and the collection, processing and marketing of honey is extremely fragmented (Oyuga and Morton 2004). Exports of honey are insignificant, created in part by a lack of equipment and processes to certify the product to international standards. On the other hand niche markets for Kenyan honey have not been developed.

The current government policy on apiculture seeks to develop a modern bee-keeping industry in the country to provide additional income to rural households. In particular, the Ministry of Agriculture and Livestock Development, provides assistance through intensified extension and training of both staff and farmers, and carrying out research to improve hives and accessories and other equipment, and to improve product quality (KPRSP 2001). To achieve the objectives set out, the project aims to carry out stocktaking and information gathering, capacity building based on a detailed analysis of needs, working with the stakeholders and institutions in organizing integrated operations to build up replicable and scaleable models for producing, collecting, processing, testing and certifying, packaging and marketing (domestic and international) of honey and bee products.

The project started in Kenya in October 2003. Institutional support framework for this project includes Kenya Beekeepers Association, Ministry of Agriculture and Livestock Development, National Bee-keeping Station, Ministry of Health, Kenya Bureau of Standards, UNIDO's Women Entrepreneurship Development Project, Strengthening Informal Sector Training Enterprise and Kenya Industrial Research and Development Institute.

According to the Kenya Poverty Reduction Strategy Paper published by the Government of Kenya in June 2001 (KPRSP 2001), over the period 1994-1997, rural poverty increased in all but one of Kenya's seven rural provinces. The *KPRSP* also states that one in every two Kenyans (50% of the population of the country) lived below the poverty line defined as just Ksh 1239 per month (or less than US\$ 0.50 per

day). For the main provinces that are now targeted by the government, rural poverty (as expressed by the percentage of the population living below the stated poverty line) has increased by the following amounts between 1994 and 1997:

**Fig. 2.0: Percentage of population living below the poverty line**

Province:	1994	1997
Nyanza:	42%	63%
Western:	53%	58%
Coast:	55%	62%
Rift Valley:	43%	49%

Source: Government of Kenya Poverty Reduction Strategy Paper (KPRSP, June 2001).

Further, there is lack of income opportunities for small scale farmers and rural populations where many have been frustrated by government control over the marketing of tea, coffee, cotton and other cash crops. The KPRSP states that "Low agricultural activity and poor marketing was cited by many communities as the major source of poverty". It continues: "Mismanagement and collapse of agricultural institutions such as the Agricultural Finance Corporation, irrigation schemes, agricultural development corporations, National Cereals & Produce Board and Kenya Co-operative Creameries have contributed to poor marketing and low incomes; this has acted as a disincentive for farmers and has further impoverished many households."

In addition many large and state run agro-enterprises have collapsed. In many parts of the country, this problem is acute, with sugar companies, a national molasses plant, cashewnut factories and cotton ginneries all closing down over the last decade. These have not only removed employment opportunities for rural communities, but also affected the production of cash crops, which supplied those same industries, as well as the income of farmers who once grew them.

By assisting small-scale rural farmers - many of whom were earning less than US\$1 per day and living below the poverty line - get involved in bee keeping by providing them with access to loans, training, extension services, a guaranteed market, and cash on-the-spot payments for their honey, the government together with organizations such as Honey Care Africa has been able to provide these individuals with a much-needed source of income, Honey Care Africa (2004), Frequently Asked Questions (Brochure), Jiwa, Farouk.

#### **2.4. BACKGROUND CHARACTERISTICS OF HONEY PRODUCERS AND THE METHODS OF HONEY PRODUCTION**

Honey, the natural food of the honeybee, has many times been described as man's sweetest food. The credit, however, must never go to man but to the honeybee, which may be called "the golden insect". The honeybee is well distributed over the globe except in the severe cold of the polar regions.

Africa is blessed with numerous types of honey producing wild honeybees. They exist everywhere on the continent where man lives, from the equatorial evergreen rain-forest to the desert oasis, although they are more numerous in the drier savannah than in the wetter forest areas. They all produce honey, the nutritious natural food good for both man and animals. Honey is collected from tree branches, hollows and crevices in several regions of the country. Keeping bees in beehives is practiced in most parts of Kenya, although traditional bee-keeping does not make use of the correct equipment and modern techniques. A study carried out in Uganda by Maku Jackson (Maku 2004) revealed, as is the case in Kenya (Oyuga and Morton 2004), that honey is harvested by the use of live fire or torches which often burn the insects to death. In addition, the traditional wooden fires used have been known to light wild fires which destroy large parts of forests! Generally, in most parts of the country the methods of honey harvesting used are often barbaric. The insect collects nectar from flowers and then processes it in the hive and packs it in comb cells. The honey-tapper sometimes melts down both honey and beeswax into a container. The next morning the honey has cooled down, and the wax has hardened on top of it. The wax is then removed and thrown away. Thus the poor man loses additional income and his government also loses foreign exchange. This practice is going on to this day, as revealed by Honey Care Africa, Farouk Jiwa's extensive studies in sustainable bee-keeping in Kenya (Jiwa 2003)

Bee keeping has proven to be an ideal enterprise for small-scale farmers in many parts of rural Kenya because it complements existing farming systems, it is simple and relatively cheap to start, and it requires a very low level of inputs (land, labor, capital, and knowledge). With just four bee hives and with just 30 minutes of labour a fortnight, a smallholder farmer can earn a reliable annual income of between US\$ 200 to 250 - an amount that

is often enough to make the difference between living above or below the poverty line in Kenya.

It should also be stressed that the revenue from bee keeping is supplementary income; bee keeping still gives the small-scale farmer plenty of time to tend to other responsibilities such as farming and other small enterprises that they may have.

Over the last 2.5 years, through all its joint partnership projects across Kenya with numerous development sector organizations, Honey Care Africa (a newly formed company) has been able to get close to 2,200 small-scale farmers involved in bee keeping, each with an average of 4 hives per individual. That amounts to an estimated projection of US\$400,000 - \$450,000 per annum in income that these rural communities earn when all the hives are in full production.

In terms of the environmental value, bee-keeping generates positive environmental value than all other businesses. This is because bee keeping is inherently good for the environment because bees pollinate native trees and shrubs and do not harm the environment in any way; but indeed enhances the environmental benefits of bee-keeping, making it even better for the environment.

Bee keeping is one of the best examples of an economic activity that uses natural resources and the bio-diversity in a sustainable manner. By getting more people in Kenya involved in bee keeping, the country will develop an environmentally sustainable economic sector, which had not been properly developed previously. Further, bee keeping has provided rural communities with an alternative source of income to chopping down trees to sell as charcoal, a very common activity in some of the semi-arid regions of the country, as is the case in Muumoni Division, Mwingi District, Eastern Province.

In addition, given that bees are probably the best natural pollinating agents, bee keeping plays a central role in the successful reproduction and conservation of a wide variety of native trees, shrubs and grasses. Their role in preserving and maintaining bio-diversity cannot be over-emphasized. Likewise, the government is constantly stressing the connection between bee keeping and watershed protection, soil conservation, and the preservation of bio-diversity. It is strongly emphasized that this holistic approach to bee keeping is the only way that the good honey yields currently enjoyed will be maintained in the long-term.

Demonstrations, training programs, and discussions with the community, on the need for conserving Kenya's natural flora is being underlined. A number of the community-

based bee keeping projects are encouraged to operate parallel community-based tree nurseries and tree planting programs. A good example is the *Mituki Ya Iveti* Women's Group in Mwingi District, who operate their own tree nursery along-side their apiary, and have a program where the women plant ten trees around each member's household every year (KPRSP 2001).

In addition, the beekeepers neither import bees from other parts of the world (as is common in most other bee keeping operations in the world, including USA and Canada), nor are they required to transfer any bees from one region to another within Kenya. Endemic and local sub-species colonize the hives naturally, and it is these bees that are used for honey production. The government believes that this is the best way to proceed even though the yields may not be as high as elsewhere in the World. This is a significant contribution towards the conservation of bio-diversity in this region. Further, educating farmers and communities on the importance of bees as bio-indicators and encouraging community groups and other organizations to reduce the use of chemicals and harmful pesticides that harm bees, the environment is conserved through natural means.

Honey Care Africa, in conjunction with the Belgian Technical Co-operation and the Kenyan Government's District Forestry Development Program through the Ministry of the Environment and Natural Resources, recently established a concept called "Bees for Trees". Communities and individuals working to promote agro-forestry and the conservation of forests are given hives as a direct and immediate economic incentive to encourage individuals to plant and protect trees (Jiwa, Farouk 2002). This project, it is believed, would be especially effective to promote the growing of indigenous tree species that do not have a direct and short-term economic benefit, or require more intensive care and nurturing.

## **2.5. CURRENT HONEY MARKET ACCESS AND MARKETING ACTIVITIES AND PRACTICES IN KENYA**

Developing the local and export potential of honey and bee products in Kenya, is in the preparatory phase of the honey component of the Integrated Industrial Development Program of the Ministry of Industry and Trade of the Government of Kenya (UNDP 2004). The program aims to develop an enabling environment at the domestic level, facilitate trade and promote private sector investment as well as technology flows. It covers export development in fish, leather and leather products, dairy and most importantly, honey. The budget of the whole program stood at US\$4,014,500. A workshop for Kenyan horticulture and apiculture producers on how to access both local and export markets, was held from the 18th to the 19th of November 2004, sponsored and hosted by UNDP in Nairobi, to educate and offer practical and specialized guidance to Kenya's horticulture and apiculture producers on marketing activities. Carried out as one of the outputs for UNDP's project entitled "Reducing Poverty by Linking SMEs to Local and Export Markets" this workshop received huge welcome from Kenyan producers, local marketers and exporters by allowing them to directly benefit from the dissemination of knowledge and necessary skills and tools required to successfully compete in the local and international export markets. More specifically, this workshop was held to precede and prepare for two very important events held in 2005. Under UNDP's sponsorship, 12 Kenyan horticulture and apiculture producers were selected to represent Kenya and showcase its products at Gulfood 2005, (a world reknown hotel and equipment exhibition and Salon Culinaire Fair) in Dubai from 21-23 February 2005.

In addition, as a side event to this, UNDP has also organized a buyers-sellers meeting to bring together Kenyan exporters and producers with traders and importers from the Gulf Cooperation Council member countries: Mauritius, Seychelles and South Africa. Thus, this supplier preparation workshop provided the unique opportunity for producers, exporters and traders to receive very focused training to prepare for business meetings and negotiations and to adapt its product offerings to the specificities of participating buyers in the up-coming two events in Dubai. The workshop sessions were interactive, practical and focused and UNDP sponsored the invitation of senior experts of horticultural and apicultural products from the International Trade Centre and a group of key Kenyan trade support institutions to

facilitate the sessions. These experts were available for question and answer sessions, and took notes of individual information and assistance needs of the producers for future follow-up. This intense two day workshop was co-implemented with the Export Promotion Council of Kenya and the International Trade Centre and was well appreciated by all participants. It is expected that through this preparatory workshop and subsequent participation in the two events in Dubai, Kenyan producers will gain valuable experience in international business negotiations and familiarize themselves with international standards of world-class quality, which is demanded in the international arena. By building an internationally recognized customer reference and network, Kenyan producers, exporters, and traders will be able to further generate additional income and revenue to embark on product improvement and business expansion ( Adjare , 1990).

A report compiled by Miss Munguti (Head of Beekeeping Development Unit) of Baraka Agricultural College, in Molo, says about 70 per cent of the honey sold in Kenya is adulterated (2005, August 24, East African Standard, p. 20). The report attributes this adulteration to the get-rich-quick mentality by the emerging aggressive honey sellers out to make quick bucks by adding ingredients such as molasses, sugar, and some genuine honey to enhance the volume of honey sold. Miss Munguti says the genuine honey was facing stiff competition from the cheap impure/adulterated honey. The College, sponsored by the Catholic Church, has made progress in demonstrating how honey is refined, through use of its honey refinery, built with Irish Aid in 1995 – the College trains bee-keepers from Kenya, Tanzania, Zimbabwe, Uganda, Southern Sudan and Somalia.

Researcher Shona Blair from the University of Sydney has found that honey is marketed for use in various forms, and particularly, for use in the production of hydrogen peroxide, a known anti-bacterial agent, among other industrial and commercial uses (2005, June 17, The Standard, p. 7).

This study aimed at identifying the current honey production and marketing practices in Kenya, and how such practices can be improved.

## **2.6 FIRMS MARKETING HONEY AND HONEY PRODUCTS IN KENYA**

Marketing of honey under the name of the plants the honey comes from (as is the practice with Honey Care Africa) has the added benefit of raising awareness among consumers of the existence and importance of different species of plants and the need to protect the diverse ecosystems and agro-ecological zones that exist in Kenya. For example in the market, honey from Acacia species generally found in low-lying scrub and Savannah ecosystems flowers is marketed as "Acacia" honey (2003, January 2, The Standard, p. 21).

Several outlets in Nairobi including Uchumi, Chandarana, Continental, Nakumatt and other major supermarkets, as well as Karen, Spring Valley, Peponi, Organic Greens, La Baguette and other provision stores all sell honey of varied brands and flavours; both locally produced and quite a number of brands imported mainly from the U.S, South Africa and Australia. Major locally-incorporated firms processing substantial amounts of honey include Honey Care Africa (with its main factory in Jamhuri Park, Nairobi), Baraka Agricultural College (in Molo, Nakuru), ECO Honey (in Mwingi Town, Eastern Province); others include Jolly Honey Industries, Real Honey Ltd, African Bee-Keepers Ltd, Pure Health Products, Macuisine Honey Ltd, Greenforest Honey Ltd, Hillside Honey Ltd, Maluini Honey Ltd, Premier food industries Ltd, etc. Imported honey brands include Capilano Honey (from Australia), Little Bee Impex (of India), Golden Blossom Honey from America, etc (2001, July 26, Daily Nation: Supplement, p. 31) and (2003, January 2, The Standard, p. 2).

This study aimed to come up with a reasonable range of honey producers, marketing participants and marketing scope of honey in Nairobi City in particular, and in Kenya, in general.

## 2.7 REVIEW OF PAST LITERATURE AND STUDIES DONE ON THE APICULTURE INDUSTRY

A number of research studies carried out in this area have revealed that apiculture has gained prominence rapidly over the years. Apiculture, the study and keeping of bees, is a fascinating activity of all ages. Beekeeping is an excellent hobby and can provide extra money and valuable educational experiences in biology and business. Many studies in beekeeping have been done and various findings documented.

According to a research conducted at the Honey Research Unit at the University of Waikato in Hamilton, New Zealand in 1990, Dr. Peter Molan found that honey has numerous uses. In his research Molan discovered that honey, which normally has a high content of hydrogen peroxide, effectively kills all seven types of bacteria that can cause wound infection. Doctors therefore use honey for preventing infection, helping soothe ulcers, and in treating diarrhoea. He also found that Accasia honey, indigenous to Africa, has been found to kill the bacteria that forms ulcers in the stomach. Other uses of honey documented in this research include beewax, propolis, pollen, royal jelly or “bee milk”, and bee venom.

A research entitled, “Honey Market in Uganda” carried out in 2004 by Maku Jackson of the Apiculture Development Programme – Nile Region, Uganda, whose objective was to establish the honey market potential in Uganda, found that most of the honey produced in Uganda is either consumed at the homesteads or sold at the local markets, where prices are very low. And only a small portion finds its way to the lucrative markets in Kampala and Nairobi cities, where prices are three to four times higher. Maku found that in Uganda, beekeeping is becoming a particularly popular activity amongst women, where several organizations exist to give advice on management of bees and marketing of the honey. However, Maku (2004) notes that most beekeepers, men and women, still catch their bees from passing swarms during the dry season using an empty hive placed high in a tree. Further, Maku found that beekeeping in Uganda is largely associated with witchcraft, and resultantly, young men therefore do not keep bees, and beekeeping is considered to be the occupation of the old people in the society.

Maku (2004) notes that apiculture has many valuable contributions in development of agricultural activities and contributes greatly in the support of rural people and at the national and international level as diet food, source of cash, and as medicine. The study noted that the Government of Uganda is trying hard to bridge the gap between the rich and the poor. In its efforts, the Government of Uganda has put in place elaborate plans for the modernization of the apicultural sector. The Government has called on all interested investors to invest in the apiculture sector. Maku strongly recommended that, to improve the apiculture industry in Uganda, beekeepers, government, donor organizations and investors have to be involved and go into joint ventures in promoting apiculture as a worthy industry for the country.

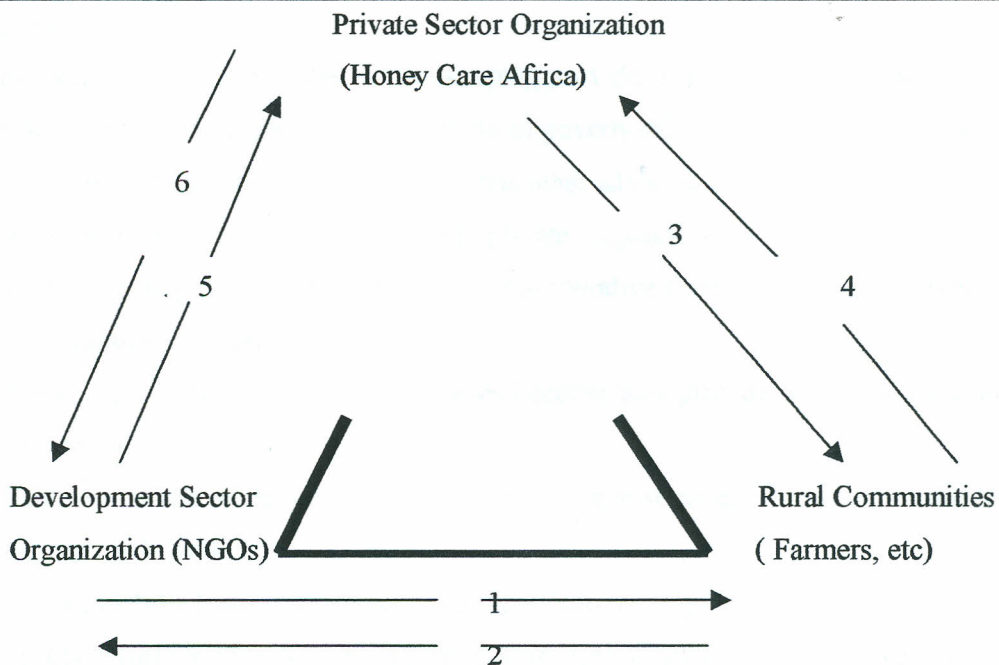
A study entitled "Sustainable Beekeeping in Kenya", carried out in 2002 by Farouk Jiwa whose objective was to find a private sector-driven solution to age-old problems of rural development in Kenya, focused on beekeeping, developed and formalized what is now widely recognized to be an innovative and novel way to improve the livelihoods of thousands of Kenyans through its promotion of Sustainable Beekeeping. At the heart of this approach is 'Honey Care Africa's Tripartite Model' developed by Farouk Jiwa in April 2002. The need for the development of this model arose from a clear recognition of the need for a more pro-active engagement of the private sector in development in Kenya. Jiwa felt that the private sector had a number of inherent skills and valuable experience that had never been properly tapped in an integrated manner to drive forward development in Kenya. The tripartite model sought to develop a synergistic partnership between the private sector, the development sector and rural communities. By virtue of their different backgrounds, Jiwa reasoned, each of the parties had a specific and complementary role to play.

The private sector organization injected a degree of economic reality into the project and ensures that the project operates within realistic market conditions at all times and is sensitive to supply-demand dynamics.

According to this model, the development sector organization has experience in working with rural communities, has finances and has an extensive outreach into the rural areas thereby making them the ideal conduits through which individuals in community groups and the private sector organization can communicate with each other initially.

The third partner in this symbiotic model, are the rural communities and small-scale/ subsistence farmers who are the honey producers, and one of the key beneficiaries of the entire initiative. This model creates a favourable environment for them in which to start beekeeping. This is achieved through a combination of adequate training and easy access to loans to acquire bee hives and other equipment, easy repayment terms, extension and advisory support, a guaranteed market for their produce at a mutually acceptable price, and cash-on-the-spot 'money for honey' payments.

Schematically, Jiwa's Tripartite Model can be represented as shown in figure 3 below:



1.
  - Capacity Building
  - Organizational and Management Skills
  - Loans to Rural Communities/Farmers
  - Independent Monitoring
  - Arbitration and Mediation
  - Collaborative Support
2.
  - Loan Repayment
  - Collaborative Support
3.
  - Technical Training
  - Extension Service
  - Guaranteed Market
  - Honey Collection from Farm-Gate
  - Cash-on-the-spot 'money for honey' payment
  - Collaborative Support

4.
  - Honey
  - Loan Repayment (to be remitted to Donor)
  - Collaborative Support
5.
  - Purchase of Hives and Equipment for Farmers
  - Independent Project Monitoring
  - Arbitration and Mediation
  - Collaborative Support
6.
  - Loan Repayment remittances from farmer recovered at time of honey harvest
  - Collaborative Support

**Figure 3.0: Schematic Representation of Honey Care Africa's Tripartite Model**

The output of the study was that, by working closely with development organizations, Honey Care Africa has enhanced access to easy credit, appropriate training, and guaranteed market. Resultantly, thousands of farmers have now started beekeeping across the country through socially, environmentally and economically sustainable projects.

In his model, Jiwa (2004) notes that *beekeeping* provides many poor farmers in Kenya with additional income and provides people in poverty-affected areas with additional regular income, helps the environment and has other advantages:

It is inexpensive - individuals and private organizations such as churches, women's groups, youth associations and co-operative societies can start up with a small amount of money;

It does not involve mass feeding of bees because they provide their own food all year round;

Beehives can be made locally by carpenters, though some equipment may need to be imported; and

It requires little land, so those with few assets can participate.

Jiwa (2004), further notes that the current government policy on apiculture seeks to develop a modern bee-keeping industry in the country to provide additional income to rural households. In particular the Ministry of Agriculture and Rural Development, is providing assistance through intensified extension and training of both staff and farmers, and research to improve hives and accessories and other equipment and to improve product quality. To achieve the objectives set out, the project is carrying out stocktaking and information gathering, capacity building based on a detailed analysis of needs, working with the stakeholders and institutions in organizing integrated operations to build up replicable and scaleable models for producing, collecting, processing, testing and certifying, packaging and marketing (domestic and international) of honey and bee products.

A study entitled "Honey and Pastoralists – a Case Study (Kenya)" carried out by J. Morton and J. Oyuga in October 2003 to May 2004 whose objective was to investigate the honey production, market potential, marketing system and how it is structured in the pastoral areas of Kenya, revealed that there are high levels of poverty in pastoral areas of Kenya.

Specific objectives of the study included evaluating the performance of the various honey production technologies; analyzing how market structure is influenced strategically; the nature of competition and pricing within the market; and to perform performance evaluation with the view to determine the relationships between market margins and costs. The study emphasized on stakeholder participation in all stages.

The study found that, given the high levels of poverty in pastoral areas where over 25% of Kenya's population live, beekeeping is one of the ways in which farmers can improve their incomes to ensure food security and technology adoption. The study noted that, in Kenya, approximately 80% of land is suitable for beekeeping and the potential for honey production is high.

The outputs of the study were

- Farmer evaluated, socially acceptable and economically feasible technology and marketing recommendations;

- Information about the market access, performance and efficiency of the market structure and how it can be used to enhance honey production; and

- Information on opportunities for investment in the honey sub-sector.

Oyuga and Morton (2004) notes that although beekeeping is considered to be an individual activity, in many communities it has brought farmers together, sharing equipment and learning from each other's experiences. In some villages, beekeepers have come together to form their own groups and associations. Lessons learned through working together have been used in other areas of their lives.

The study concluded that, beekeeping is, by all means, a viable economic activity in Kenya. What needs to be done is to explore and exploit its immense potential by opening up and fully accessing the local, national and international markets for the honey and honey products, in order to improve on the honey prices and overall apiculture incomes, which will lead to enhancement of the honey market potential in Kenya.

## **2.8 SUMMARY AND GAPS TO BE FILLED BY THIS STUDY**

Production and marketing information in the honey industry is scarce (Oyuga and Morton 2004). Consequently, there are difficulties in making decisions that would lead to the improvement of the sector. This study aims to investigate the honey production and marketing system and how it is structured in Muumoni Division (an arid/semi-arid area). Serious knowledge gaps exist in respect of various honey production technologies, market structure, relationships between market margins and production costs, the nature of competition and pricing within the honey market, the extent and effectiveness of the link between producers (based in remote rural areas), sellers (mainly middlemen) and final consumers in Kenya (Oyuga and Morton 2004). In her report, the Coordinator of Kenya Association of Forest Users (KAFU 2001), Esther Mugure reveals that marketing of honey in Kenya remains largely a local affair, where over 80 per cent of the households sell their honey within their villages or locations, while only 20 per cent finds its way outside their administrative district (2001, December 13), Daily Nation, p. 30. Mugure's study found that most honey producers in Kenya suffer from exploitation by middlemen. Majority of the producers sell their honey in raw form despite the significant price gains brought by semi-processing.

In their survey, Africa Now in collaboration with Honey Care Africa, outlined the various marketing approaches being initiated by the two organizations which are geared towards encouraging producers of honey to process their honey in order to yield higher prices in the market (2001, July 26), Daily Nation, p. 3.

This study, which traced the honey production and marketing activities right from the Muumoni Division grassroots level, role of middlemen, through to the market in the City of Nairobi, will contribute and add to the existing information and study findings in the apiculture sector. Stakeholder indulgence and participation was emphasized in all stages.

# **CHAPTER THREE**

## **3.0 RESEARCH METHODOLOGY**

### **3.1 INTRODUCTION**

This chapter focused on research design, target population, sampling procedures, data collection procedures, research instruments, data analysis and expected output. The study concentrated on honey producers in Muumoni Division, Mwingi District and on the honey outlets and consumers in the Central Business District of the City of Nairobi.

### **3.2 RESEARCH DESIGN**

The study adopted a descriptive research approach using a survey design, as a strategy for collecting and analyzing data that answer research questions in a way that allowed the researcher to gather information, summarize, present and interpret data for the purpose of classification. Gay (1981) notes that descriptive research refers to a process of collecting data in order to test hypothesis or to answer questions concerning the current status of the subjects in the study. The design was preferred because it made enough provision for protection against bias and maximized reliability (Kothari 1985). Borg and Gall (1989:5) notes that descriptive survey research is intended to produce statistical information about aspects of marketing that interest managers and policy makers.

### **3.3 TARGET POPULATION**

According to Kombo and Tromp (2006), in descriptive survey studies, two categories of respondents are crucial, namely, informed specialists (honey dealers) and consumers/users. Consequently, this study targeted individual honey producers, managers/procurement officers of honey outlets, institutional buyers/consumers, and exporters. As the researcher required a deeper understanding of the various obtaining

variables constituting the research problem, the target population was divided into three sets – honey producers in Muumoni Division, managers and/or procurement officers of marketing outlets and institutional buyers/sellers, and final consumers in the City of Nairobi.

It was estimated that Muumoni Division, with a population of approximately 45,000 persons, about 3000 are actively involved in honey production. However, the estimated number of honey producers available in the Division was only 1,016 apiculturalists.

### **3.4 SAMPLING DESIGN AND PROCEDURES**

From the estimated number of honey producers available in the Division, put at 1016 honey producers (target population), a simple random systematic sampling technique was applied to select a sample of 100 honey producers, which formed approximately 10% of the target population. The selection of the 100 honey producers, was carried out in a way that ensured that approximately 15 producers were picked from each of the five (7no) administrative locations constituting Muumoni Division.

A purposive sampling technique was applied to select 50 major honey outlets (supermarkets, provision stores, and other institutional buyers) from the target population in Nairobi. This sample size was believed to be representative considering that many of the outlets have several branches in various Nairobi City streets, some of them using different names and slightly differentiated range of products and business lines. The list of honey outlets and other institutional dealers was drawn from the City Council of Nairobi's list of licensed foodstuff outlets and institutions respectively.

A convenient sampling technique was applied to select a sample of 200 individual consumers in the Central Business District of Nairobi during day-time. Although the number of honey consumers (target population) was believed to be very large, this sample size of 200 was assumed to be representative as the subjects equitably represented the residents (who work in the city centre) from all the estates constituting the City of Nairobi.

Thus, the study consisted of three sets of target populations, and resultantly had three sets of samples selected, all giving a total of 350 targeted respondents. Out of the 350 targeted respondents, 100 were honey producers drawn from Muumoni Division,

Mwingi District, 50 were major buyers/outlets in Nairobi (consisting of 35 Supermarkets/Provision Stores, and 15 institutional buyers (hospitals, licensed *Miti-ni-Dawa* establishments, hotels and restaurants). The rest, 200 targeted respondents, were individual honey consumers in Nairobi – men and women, on a 50-50 basis.

### **3.5 DATA COLLECTION PROCEDURES**

The primary data collection instruments mainly included questionnaires prepared for the managers/supervisors of marketing outlets, and the consumers (all based in Nairobi) selected for the study. This group of targeted respondents consisted of subjects who were of fairly high levels of literacy and were therefore able to read, interpret and react to a questionnaire accordingly.

However, due to the relatively low literacy levels amongst the honey producers in Muumoni Division, data collection required the assistance of the research assistant who translated the questions in local (Kikamba or Kiswahili) languages and enabled the subjects to respond appropriately to the questions. The research assistant then recorded the responses on the questionnaire in English. Whereas in the case of literate honey producers the questionnaires were dropped at their farms/homesteads and picked later, the questionnaires for the illiterate honey producers were administered by the research assistant personally at their pre-arranged convenient time.

In the case of honey outlets and consumers in Nairobi, most of who were office or industrial workers and/or were business people with specified business premises, questionnaires were dropped at the subjects' premises and picked afterwards. For the consumers without specific workplaces, and who were mainly found in city streets, parks, hotels and restaurants, the questionnaires were administered at their convenience, in terms of place and time.

The questionnaires captured both qualitative and quantitative data through the use of both open and closed-ended questions administered on the identified subjects.

Due to the volume of work involved, the researcher had hired two research assistants (one of which had 3 years' experience in business research work) who assisted in data collection and related research work. The principal researcher trained, tested and qualified the inexperienced research assistant during the period of pre-testing the questionnaires.

### **3.5.1 Research Instruments**

According to Mugenda and Mugenda (1999), in business and social science research, the most commonly used instruments are: questionnaires, interview schedules and observation forms. In this study, the researcher used questionnaires designed to seek answers to the questions administered to the respondents. Questionnaires contained open-ended, as well as closed-ended questions. The open-ended questions were used in order to allow the respondents to record their response in full without being restricted to pre-conceived answers. The respondents gave their views, experiences and suggestions fully. The closed-ended questions were used to provide factual data for qualitative analysis. As there were three sets of target populations, the study was carried out using three sets of questionnaires, firstly, on Muumoni Division honey producers, secondly, on selected main honey outlets, and thirdly, on final consumers in Nairobi. Questionnaires, unlike interviews, allowed a large sample to be reached and hence the results were more reliable and dependable.

A pilot study was conducted before the researcher engaged in the actual research. Self-administered questionnaires were pre-tested on 10% of the targeted respondents and relevant adjustments made to the questions. After pre-testing the self-administered questionnaires, the final questionnaires, were then administered on the sampled respondents, and after making the relevant adjustments to the questions, the researcher embarked on the research, which took two months.

In addition, the researcher employed participatory observation and group discussion as the supplementary method of eliciting particular information.

### **3.6 DATA ANALYSIS**

As this study wished to infer things, describe trends and draw conclusions about the population at large from information taken from a small sample of that population, the data collected from the primary sources was processed and analyzed with the aid of Statistical Packages for Social Sciences (SPSS) computer package. Descriptive statistics such as frequency, percentages and inferential statistics were used to analyze the data obtained from various segments of the target population (producers, buyer / sellers and consumers) and enabled the researcher to understand the honey market

access and potential, and the factors impacting on it. The researcher subsequently presented data on the findings of the research study.

### **3.7 OUTPUTS OF THE STUDY**

The outputs of this study were

Information on the socially acceptable and economically feasible honey production technology and practices in Muumoni Division;

Vital information on the honey market access in Nairobi, and how Muumoni Division honey producers can enhance honey production to fully exploit this market;

Information to current and aspiring honey producers on available opportunities for investment in the honey sector;

Information on comparison of prices for various honey brands sold at the local, national and international markets; and

Information on the available honey brands in the market, both local and imported, and how they compete at the market place.

## **CHAPTER FOUR**

### **4.0 RESEARCH FINDINGS, PRESENTATION AND DISCUSSION**

#### **4.1 Introduction**

The purpose of this study was to carry out an entrepreneurial assessment of the market access and potential for honey and honey products in the City of Nairobi. Despite the fact that the apiculture sub-sector has a high potential as evidenced by the expanding production levels, the available data on the market access and market potential in Kenya (and the City of Nairobi in particular) is limited, and the available information on collection, processing and marketing of honey is extremely fragmented. . Experts have called for significant investment in honey production within indigenous forests because it promises high economic returns to rural families. However, information on investment opportunities, and by extension the market access and potential, is very scarce. The study concentrated on honey producers in Muumoni Division, Mwingi District and on the honey outlets and consumers in the Central Business District of the City of Nairobi, and adopted a descriptive research approach using a survey design.

This chapter presents the findings of the study under the following sub-headings:

1. Questionnaire Response Rate
2. Analysis and comparison of the prices of honey and honey products offered in Muumoni Division with those offered in the City of Nairobi.
3. Establishment of the main types of marketing outlets for honey and honey products in the City of Nairobi.
4. Major honey brands sold in Nairobi and their preference by consumers.
5. Quantities of honey and honey products sold/handled by the various outlets in Nairobi and evaluation of the potential per outlet.
6. Critical challenges Muumoni Division honey producers face in trying to access the market (consumers) in the City of Nairobi.
7. Opportunities available to potential entrepreneurs wishing to invest in marketing honey and honey products in the City of Nairobi.

## 4.2 Response Rate Analysis

**Table 4.1 Questionnaire Response Rate**

<b>Category of Respondents</b>	<b>Targeted Sample Size</b>	<b>Actual Response</b>	<b>Percentage Response</b>
Producers	100	100	100%
Institutional Dealers	50	50	100%
Individual Consumers	200	186	93%
<b>Total</b>	<b>350</b>	<b>336</b>	<b>96%</b>

Source: Survey Data 2006

Table 4.1 shows that the study consisted of three sets of target populations and, resultantly, had three sets of samples selected, all giving a total of 350 targeted respondents. These consisted of 100 Muumoni honey producers; 50 supermarkets and institutions buying and / or selling honey, and 200 individual honey consumers in the City of Nairobi.

The response rate to the questionnaire for individuals producing honey in Muumoni Division, Mwingi District was 100 per cent. Notably, most of the honey producers in Muumoni Division were very enthusiastic and wanted to fill in a questionnaire, with many of them enquiring how they can get to fill the questionnaire, and hence the overwhelming response.

50 out of the 50 targeted supermarkets and institutional buyers / sellers of honey in Nairobi, responded. Thus, for this category the response was 100 per cent.

186 out of the targeted 200 individual consumers of honey in Nairobi responded. Hence, the response rate for this category was 93 per cent. At 93 per cent, this was the lowest rated response, and may be attributable to the dynamism and untraceability of some of the respondents who promised to avail the questionnaires the next day, but did not honour their promise. The overall response rate was 96 per cent, and was considered adequate for the study.

### 4.3 Analysis and comparison of the prices of honey and honey products offered in Muumoni Division with those offered in the City of Nairobi

**Table 4.2 Comparisons of Selling Prices of Honey in Muumoni Division and in the City of Nairobi**

Prices per Kilogram		Frequency		Percentages	
(a) Unprocessed Honey		Muumoni	Nairobi	Muumoni	Nairobi
	< 50.00	0	0	0	0
	50.00 - 100.00	86	0	86%	0
	101.00 - 150.00	12	6	12%	6%
	151.00 - 200.00	2	8	2%	8%
	> 200.00	0	2	0	2%
<b>Sub Total</b>		<b>100</b>	<b>16</b>	<b>100%</b>	<b>16%</b>
(b) Processed Honey					
	< 250.00	0	1	0	1%
	251.00 - 350.00	0	11	0	11%
	351.00 - 450.00	0	62	0	62%
	451.00 - 550.00	0	8	0	8%
	> 550.00	0	2	0	2%
<b>Sub - Total</b>		<b>0</b>	<b>84</b>	<b>0</b>	<b>84%</b>
<b>Grand Total</b>		<b>100</b>	<b>100</b>	<b>100%</b>	<b>100%</b>

Source: Survey Data 2006

As shown in Table 4.2 above, the study revealed that from the sample of 100 honey producers that was considered in Muumoni Division, 86 per cent of the farmers sold their unprocessed honey at shs 50.00 – 100.00 per kilogram, whereas 12 per cent sold theirs at kshs. 101.00 – 150.00, and only 2 per cent of the farmers sold at a price of kshs. 151.00 – 200.00, a kilogram. Hence, majority of the farmers, who constitute 86% of the total sample, sold their produce at shs. 50.00 – 100.00 whereas 12% sold their produce at prices of shs. 101.00 – 150.00, a kilogram. 6% of the farmers sold their unprocessed honey directly in the City of Nairobi, where it fetched between shs. 101.00 and 150.00, a kilogram, whereas 8% and 2% of the farmers sold their unprocessed honey in Nairobi where it fetched shs 151.00 – 200.00 and above shs 200.00, respectively. The study further revealed that 62%, a clear majority of the

sampled farmers, indicated that their processed honey fetched shs. 351.00 – 450.00 per kilogram in Nairobi. Amazingly, indications were that no farmer in Muumoni Division sold any processed honey, whatsoever.

**TABLE 4.3: Comparison of Buying Prices of Unprocessed and Processed honey by Consumers in the City of Nairobi**

	Prices per Kilogram	Frequency	Percentages
(a) Raw (Unprocessed) Honey			
	< 100.00	46	25%
	101.00 - 200.00	86	46%
	201.00 - 300.00	50	27%
	301.00 - 400.00	2	1%
	> 400.00	2	1%
	<b>Total</b>	<b>186</b>	
(b) Processed Honey			
	< 100.00	8	4%
	101.00 - 200.00	12	7%
	201.00 - 300.00	40	22%
	301.00 - 400.00	106	56%
	> 400.00	20	11%
	<b>Total</b>	<b>186</b>	<b>100</b>

Source: Survey Data 2006

Table 4.3 above, which depicts the comparison of consumers' buying prices of both the unprocessed and processed honey in the City of Nairobi, revealed that 25% of those sampled, bought raw honey at less than shs. 100.00, 46 per cent bought at shs. 101.00 – 200.00 and 27 per cent bought at shs. 201.00 – 300.00, a kilogram. On the other hand, 56 per cent of the 186 sampled consumers bought the processed honey at prices ranging from shs. 301.00 to 400.00 per kilo, while 22 % bought the processed honey at shs. 201.00 to 300.00, a kilo and 11per cent bought at over shs. 400.00. This shows that majority of the buyers in Nairobi prefer processed to raw honey, and are prepared to pay proportionately higher prices for it. Hence, in Nairobi processed honey is more popular.

#### 4.4 Establishment of the main types of marketing outlets for honey and honey products in the City of Nairobi

Table 4.4 below, presents the survey data obtained to establish the main types of honey marketing outlets in the City of Nairobi.

**TABLE 4.4: Retail Outlets for honey in the City of Nairobi**

Marketing Outlets	Frequency	Percentage	Cumulative %
Supermarkets in Nairobi CBD	55	29.6%	29.6%
Supermarkets in City Estates	14	7.5%	37.1%
Hawkers	25	13.4%	50.5%
Shops/Provision Stores in CBD	14	7.5%	58.0%
Shops/Provision Stores in estates	3	1.6%	59.6%
Individuals from Upcountry	73	39.3%	98.9%
Others	2	1.1%	100%
<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

The study revealed that out of the 186 consumers considered, 39.3 per cent bought their honey from the individuals from upcountry, 29.6 per cent bought from supermarkets in the Nairobi Central Business District, 13.4 per cent bought from hawkers, whereas an equal 7.5 per cent each bought from Supermarkets in City Estates and shops / provision stores in the City's Central Business District. Individuals from upcountry, followed by supermarkets in Nairobi's Central Business District emerged the major sources of honey bought in Nairobi, and are therefore the main honey marketing outlets in Nairobi, where 39.3% and 29.6% consumers respectively bought their honey from. Hawkens provided honey to 13.4% of the consumers, and the rest was shared amongst the other outlets. The high acquisition of honey supplies from individuals from upcountry may be attributable to, firstly, the major role played by middlemen in the honey marketing process and, secondly, to the inherent consumers' belief / fear that a significant portion of the honey sold in Kenya is adulterated. It would appear, therefore, that consumers have special confidence and trust in individuals from upcountry to provide them with the honey they consume, as they believe it is pure, natural and un-adulterated with other additives.

**TABLE 4.5: Sources of Honey Sold in Major Outlets in Nairobi**

	<b>Source</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Individual Producers	7	11.5%	11.5%
2	Middlemen / Traders	24	39.3%	50.8%
3	Imported	2	3.3%	54.1%
4	Honey Processing Companies	19	31.1%	85.2%
5	Others: Hawkers	9	14.8%	<b>100%</b>
	<b>TOTALS</b>	<b>61</b>	<b>100%</b>	

Source: Survey Data 2006

From table 4.5 above which shows the sources of honey sold in the marketing outlets discussed below, there is overwhelming evidence that individuals from upcountry (deemed to constitute individual producers, middlemen, hawkers and other sole traders) forms the main sources of honey sold in the City of Nairobi. 39.3 per cent of the managers / procurement officers of firms buying / selling honey sampled sourced the honey they dealt in from middlemen / traders, an indication that indeed, middlemen / traders from upcountry were the main suppliers of honey consumed in the City of Nairobi. Thus, a reasonable number of traders from upcountry have access to the honey market in the City of Nairobi, followed closely by the honey processing companies which accounted for 31.1 per cent of those considered.

## 4.5 Major honey brands sold in Nairobi and their preference by consumers

**TABLE 4.6: Type of Honey Sold / Bought in the City of Nairobi**

<b>(a) Supermarkets / Institutional Buyers</b>				
	<b>Form / Type of Honey</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Raw (Unprocessed)	6	12%	12%
2	Processed	40	80%	92%
3	Both	4	8%	100%
4	Other form	0	0	<b>100%</b>
	<b>TOTAL</b>	<b>50</b>	<b>100%</b>	
<b>(b) Individual Buyers / Consumers</b>				
	<b>Form / Type of Honey</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Raw (Unprocessed)	108	58.1%	58.1%
2	Processed	62	33.3%	91.4%
3	Both	16	8.6%	100%
4	Other form	0	0	<b>100%</b>
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

As indicated in table 4.6 above, the study revealed that 80% of the 50 supermarkets and institutional buyers considered bought processed honey, 12% bought raw, 8% bought both and none bought honey in any other form. Thus, majority (80 per cent) bought processed honey. This is attributed to the fact that consumers in Nairobi are largely busy working-class people who prefer to buy commodities that are ready for use. Hence, it makes good business sense for supermarkets mainly buying honey for resale to individual customers, to deal in properly processed and conveniently

packaged honey. Hence, prospective investors who plan to deal in processed honey are likely to land a lucrative market for processed honey in Nairobi.

Conversely, the study revealed that 58.1% of the 186 individual consumers considered bought unprocessed honey, 33.3% bought processed honey while only 8.6% bought both, and none bought it in any other form. Thus, majority or 58.1 per cent of those considered bought unprocessed honey. Majority in this category indicated that they had fears that a substantial portion of the processed honey being sold in Nairobi was believed to be adulterated with chemicals and other impurities.

**TABLE 4.7: Factors / Attributes influencing choice of honey brands bought in Nairobi**

	Main Attributes / Factors	Frequency	Percentage	Cum. %
1	Affordable prices	37	19.8%	19.8%
2	Availability in outlets all year round, all the time	31	16.7%	36.5%
3	Purity of the honey being offered	27	14.5%	51.0%
4	Supply of honey of natural flavour, texture and colour	20	10.8%	61.8%
5	An un – adulterated and chemical free honey	17	9.0%	70.8%
6	High quality of honey	16	8.6%	79.4%
7	Honey of original taste	15	8.1%	87.5%
8	Good packaged and high nutrition honey	12	6.5%	94.0%
9	Origin of honey, trust, personality and general presentation of the individual sellers	7	3.8%	97.8%
10	Well – preserved honey	4	2.2%	100%
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

From the analysis in table 4.7 above, the study revealed that 19.8 per cent of those considered felt prices were a major attribute consumers consider when buying honey,

16.7 per cent cited availability of the honey in outlets all year round, as the second major factor considered; whereas 14.5 per cent sought an assurance that the honey being offered for sale was pure, and 10.8 per cent would only wish to buy honey of natural flavour, texture and colour.

The researcher's preliminary survey indicated that many consumers believed that majority of honey brands available in Nairobi are not original brands. Hence, entrepreneurs wishing to invest in marketing of honey in Nairobi should craft a marketing mix strategy which emphatically focuses on prices, availability of honey, honey quality (purity, flavour, texture and colour) of honey offered, in order to maximize on their return on investment.

According to a report compiled by Miss Munguti (Head of Beekeeping Development Unit) of Baraka Agricultural College, in Molo, about 70 per cent of the honey sold in Kenya is adulterated (2005, August 24, East African Standard, p. 20). The report attributes this adulteration to the get-rich-quick mentality by the emerging aggressive honey sellers out to make quick bucks by adding ingredients such as molasses, sugar, and some genuine honey to enhance the volume of honey sold. Miss Munguti said that the genuine honey was facing stiff competition from the cheap impure / adulterated honey.

**TABLE 4.8: Brands of Honey sold in the City of Nairobi and their preference by Consumers**

	<b>Main Brands bought</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Kitui Pure Natural Honey	55	29.6%	29.6%
2	ECO Honey	8	4.3%	33.9%
3	Amboseli Honey	11	5.9%	39.8%
4	Green Forest Honey	8	4.3%	44.1%
5	Real Honey	5	2.7%	46.8%
6	Nasali Pure Natural Honey	12	6.4%	53.2%
7	Woodland Honey	4	2.2%	55.4%
8	Tharaka Honey	14	7.5%	62.9%
9	Mwingi Honey	2	1.1%	64.0%
10	Pure Natural Honey	37	19.8%	83.4%
11	Machakos Honey	10	5.3%	89.1%
12	Q- Tee Honey	2	1.1%	90.2%
13	Makueni Honey	4	2.2%	92.4%
14	“ Local” Honey	9	4.8%	97.2%
15	Do not Know any	5	2.8%	<b>100%</b>
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

Table 4.8 presents information on 14 different brands identified by the 186 subjects who responded in this study.

The study revealed that the five most popular brands bought in the City of Nairobi are Kitui Natural Honey, Pure Natural Honey, Tharaka Honey, Nasali Natural Honey and Amboseli Honey in that order, represented by 29.6, 19.8, 7.5, 6.4 and 5.9 per cent, respectively. This revealed that Kitui Natural honey is the most popular and commands close to 30% of the market share in the City of Nairobi.

According to a study entitled 'Honey and Patoralists – a case Study, Kenya (Oyuga and Morton, 2004) several brands of honey (both local and imported) are on sale in virtually all major supermarkets and provision stores in Nairobi. Some of the brands identified in the supermarket shelves included Green Forest honey, Kitui Natural Honey, Nasali, Q – Tee, Capilano and Little Bee, among many others. The researcher's independent survey carried out in 2006, revealed that over 30 different honey brands are currently on sale in the Kenyan market, and the number is steadily growing.

**TABLE 4.9: How Customers Gain awareness of honey brands they usually buy**

	<b>Mode / Medium of information</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Introduced by other Customers / Friends	8	4.3%	4.3%
2	Displays in Supermarkets / Shops	66	35.5%	39.8%
3	Door to door sellers (Hawkers)	41	22%	61.8%
4	Honey Dealers (Beekeepers / Farmers)	33	17.8%	79.6%
5	Mass Media / Advertisements / Shows	35	18.8%	98.4%
6	Others (personal experience, etc)	3	1.6%	<b>100%</b>
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

From table 4.9 above, the study further revealed that of the consumers of honey considered on how they got to know of the existence of the honey brand they usually bought, a whopping 35.5 per cent said they got to know of the brand from displays in supermarkets and shops. This was the most frequently cited means of information while the second frequently cited one was the door to door hawkers, represented by 22 per cent, followed by mass media represented by 18.8 per cent, and beekeepers / farmers represented by 17.8 per cent. This is attributed to the existing marketing information gaps between Muumoni producers and buyers of honey in the City of Nairobi. Most of the honey produced in Muumoni Division is mainly bought by middlemen for re-sale directly to consumers, supermarkets and other dealers in Nairobi. Only an insignificant number of farmers / beekeepers sell their honey directly to consumers and other dealers in Nairobi. The rest of the honey is consumed locally in Muumoni Division.

#### **4.6 Quantities of honey sold / handled by the various outlets in Nairobi and evaluation of the potential per outlet**

The following table numbers 4.10, 4.11 and 4.12 presents the various quantities of honey handled by the various parties both in Muumoni Division and in the City of Nairobi.

**TABLE 4.10: Quantity of Honey (in Kgs) Produced by Muumoni Producers per Year**

	<b>Quantity (in Kgs)</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	< 50	10	10%	10%
2	50 to 100	18	18%	28%
3	101 to 150	20	20%	48%
4	151 to 200	32	32%	80%
5	201 to 250	12	12%	92%
6	> 250	8	8%	<b>100%</b>
	<b>TOTAL</b>	<b>100</b>	<b>100%</b>	

Source: Survey Data 2006

The study revealed that over 50 per cent of the respondents produced between 100 and 200 kgs of honey per year, whereas 28 per cent produced up to 100 kgs per year and only 20 per cent produced over 200kgs of honey annually. Table 4.13 details various critical challenges Muumoni farmers face when trying to enhance their honey production with some of the most critical ones being lack of reliable transport between Muumoni and Nairobi, lack of finances, corruption, lack of harvesting equipment , etc. This shows that there is room to produce more, and capacity and potential to enable this exists and / or can easily be activated. This finding is corroborated by a survey carried out in Mwingi District by ICIPE in 2003, which found that the district had a potential of producing about 5000 tons of honey and honey products annually (2003, March 3, BioVision Newsletter, p. 1). However, the survey estimated the production then at 3000 tons, out of which approximately 1500 tons (about 4% of Kenya's total annual output then) was believed to come from Muumoni Division, of Mwingi District.

**TABLE 4.11: Quantities of Honey sold per Month by various outlets (sellers) in the City of Nairobi**

	Quantity in Kgs Per Month	Unprocessed honey		Processed honey	
		Frequency	Percentage	Frequency	Percentage
1	< 100 kg	2	33.3%	2	4.8%
2	100 - 200 kg	2	33.3%	4	9.5%
3	201- 300kg	1	16.7%	2	4.8%
4	301- 400kg	0	0	2	4.8%
5	> 400kg	1	16.7%	32	76.1%
	<b>TOTAL</b>	<b>6</b>	<b>100%</b>	<b>42</b>	<b>100%</b>

Source: Survey Data 2006

As depicted in table 4.11 above, the study revealed that over 66 per cent of the outlets sampled sold up to a maximum of 200 kilogram of unprocessed honey per month or 2400 kilograms per year; while 76.1 per cent sold over 400 kgs of processed honey per month or 4800kgs per year. Going by the response rate,  $6/50 \times 100 = 12\%$  for the unprocessed, compared to  $42/50 \times 100 = 84\%$  for processed honey, it can be concluded that processed honey is more popular to Nairobi consumers, compared to

the unprocessed honey. This scenario could be attributed to the general low purchasing power, low average per capita incomes and the fact that compared to other related commodities (sugar, jam, marmalade, etc), semi-processed honey, currently going for an average of shs. 380.50 a kilo, is by all means, an expensive commodity. This indicates that there exists a vast market for honey whose potential is high, and this means that the various marketing outlets have vast room for handling more quantities of honey. By producing and availing more quantities of honey in the market, it is expected that the market dynamics will settle on a favourable price equilibrium which ensures optimal purchases by the consumers.

**Table 4.12: Quantities bought per month by Customers in the City of Nairobi**

	Quantity in Kgs Per Month	Frequency	Percentage	Cumulative %
1	< 1 kg	130	69.8%	69.8%
2	1 - 2kg	34	18.3%	88.1%
3	2.1 - 3kg	10	5.4%	93.5%
4	3.1 - 4kg	6	3.2%	96.7%
5	4.1 - 5kg	4	2.2%	98.9%
6	> 5kg	2	1.1%	100%
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

As shown in table 4.12 above, the study revealed that over 69 per cent of the consumers sampled bought up to a maximum of 1 kilogram of honey per month or 12 kilograms per year; while 18.3 per cent bought quantities of honey ranging from 1 to 2 kgs per month. This scenario could be attributed to the general low purchasing power, low average per capita incomes and the fact that honey faces stiff competition from sugar, jam, marmalade, etc. As earlier revealed in table 4.7 section 4.5, factors including affordable prices, availability of honey in all outlets all year round, purity and quality of honey being offered, etc all have a bearing on the quantity of honey bought in Nairobi. This indicates that if the honey offered for purchase in the various outlets was of reasonably affordable prices, was pure and of high quality, whose

availability all year round was guaranteed, then most customers will buy more of it. This points to the existence of an unexploited vast room for availing more honey to the various outlets in Nairobi

#### 4.7 Critical Challenges Muumoni Division Honey Producers Face in Trying to Access the Market (Consumers) in the City of Nairobi

**TABLE 4.13: Critical Challenges Muumoni Honey Producers face in trying to access the Market in the City of Nairobi**

	<b>Critical Challenge</b>	<b>Frequency</b>	<b>Percentage</b>
1	Poor Muumoni – Nairobi transport means	100	100%
2	Lack of Finances	86	86%
3	Corruption	78	78%
4	Use of poor and/or lack of harvesting equipment	74	74%
5	Lack of modern storage facilities	72	72%
6	Lack of knowledge of the existence, uses and benefits of honey by potential consumers	72	72%
7	Un-affordable high selling prices in Nairobi	68	68%
8	High incidence of honey adulteration	64	64%
9	Lack of Government support	60	60%
10	Cartel-like practices by Middlemen (traders)	56	56%
11	Poor traditional harvesting technology	52	52%
12	Inadequate rainfall (drought) - low quantities	40	40%
13	Seasonality of honey production	38	38%
14	Unavailability of reliable steady markets for honey	29	29%
15	Limited access to educational seminars and workshops on modern honey production methods	28	28%
16	Lack of proper packaging materials	26	26%

Source: Survey Data 2006

From table 4.13 above the study showed that the 10 most frequently cited challenges that Muumoni honey producers face when trying to access the market in the City of Nairobi included lack of reliable Muumoni – Nairobi transport and communication networks (cited by 100%), lack of funding (loans) by co-operative unions or lobby groups to champion farmers interests (cited by 86%), corruption by traffic police on Muumoni – Nairobi road who demand heavy bribes or impose high fines (cited by 78%), use of poor and/or lack of harvesting equipment (cited by 74%), lack of

modern honey storage facilities – a lot of honey goes to waste ( cited by 72%), prospective consumers’ lack of knowledge of the existence, uses and benefits of honey and honey by-products (cited by 72%), un-affordability of honey due to very high selling prices leading to low quantities consumed (cited by 68%), high incidence of honey adulteration by adding chemicals, ripe bananas and other substances – leading to consumers’ avoidance of honey (cited by 64%), Lack of Government support (cited by 60%) and cartel-like practices by middlemen/brokers leading to low selling prices of honey (cited by 56%) – all these discourage honey production and marketing and negates the need for producers and dealers to bother with market access in the city of Nairobi. The least serious challenge cited was lack of proper packaging materials leading to use of re-cycled dirty paint, detergent and cooking fat tins as packaging containers.

#### **4.8 Opportunities Available to Potential Entrepreneurs Wishing to Invest in Marketing Honey and Honey Products in the City of Nairobi**

**TABLE 4.14: Categories of Honey Buyers in the City of Nairobi**

	Customer	Frequency	Percentages	Cumulative %
1	Individual Consumers / Buyers	28	56%	56%
2	Hotels	9	18%	74%
3	Hospitals	8	16%	90%
4	Miti ni Dawa Joints	4	8%	98%
5	Exporters	1	2%	100%
6	Do not know	0	0	<b>100%</b>
	<b>TOTAL</b>	<b>50</b>	<b>100%</b>	

Source: Survey Data 2006

Table 4.14 above shows that 56 per cent of honey sold in Nairobi is bought by individual consumers, 18 per cent by hotels, 16 per cent by hospitals, 8 per cent by *miti ni dawa* joints and only 2 per is exported. The researcher’s preliminary survey

revealed that the total production of honey and honey products in Kenya presently stands at approximately 40,000 to 60,000 tons annually, whereas the existing Kenyan market for these products is about 100,000 tons, and therefore the deficit must be covered by imports (Mugure, 2001). Honey products have a wider potential market than most other non-timber forest products due to the varied uses to which honey can be put. Its common uses are as a food source, in local brew-making and in mixtures of traditional medicines. It is easily sold in supermarkets unlike products such as herbs and medicines which are either too bulky or may require special permits.

Section 4.5 above presented detailed analysis of the vast quantities of honey and honey products dealt in by both sellers and consumers in the City of Nairobi. A pointer that potential entrepreneurs wishing to invest in the marketing of apicultural products in Nairobi, should feel encouraged to do so, as indications are that the products have a vast market in the City.

**TABLE 4.15: Evaluation of the Level of Honey Market Access**

<b>(a) In Kenya (in general)</b>				
	<b>Access rate</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Very high	47	25%	25%
2	Medium	82	44%	69%
3	Low	35	19%	88%
4	Do not know the level of access	22	12%	<b>100%</b>
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	
<b>(b) In the City of Nairobi (in particular)</b>				
	<b>Access rate</b>	<b>Frequency</b>	<b>Percentages</b>	<b>Cumulative %</b>
1	Very high	71	38%	38%
2	Medium	65	35%	73%
3	Low	37	20%	93%
4	Do not know the level of access	13	7%	<b>100%</b>
	<b>TOTAL</b>	<b>186</b>	<b>100%</b>	

Source: Survey Data 2006

As can be deduced from table 4.15, the study revealed that 44 and 25 per cent of the sample considered believed that the honey market access in Kenya (in general) was

mainly medium and very high, respectively; whereas 19 per cent felt it was very low, while 12 per cent did not know the level of access.

Out of the 186 considered, 38 per cent indicated the market access was very high, 35 and 20 per cent felt the access was medium and very low, respectively; while 7 per cent did not know the level of access in the City of Nairobi, in particular. This scenario is attributed to the relatively low quantities of honey produced in Kenya compared to the vast market both at the national level in general, and in the City of Nairobi, in particular.

In section 4.6, table 4.10 demonstrated that over 50 per cent of the producers in Muumoni Division produced between 100 and 200kgs of honey per producer annually, whereas table 4.8 revealed that over 66 per cent of the sellers sold up to a maximum of 200kgs of unprocessed honey monthly, while over 76 per cent of the sellers sold over 400kgs of processed honey monthly. Table 4.12 shows that over 69 per cent of the buyers bought up to a maximum of 1kg monthly, an indication that there is vast market access and potential in the City of Nairobi; and that the major determinant of the quantities bought was the price charged for a unit of honey. Low purchasing power was also identified as a key factor determining the amount of the quantities of honey bought. Maku (2004) found that most of the honey produced in most developing countries is either consumed at the homesteads or sold at the local markets, where prices are very low. And only a small portion finds its way to the lucrative markets in their capital cities, where prices are three to four times higher. Maku (2004) strongly recommended that, to improve the apiculture industry in Uganda, beekeepers, government, donor organizations and investors have to be involved and go into joint ventures in promoting apiculture as a worthy industry for the country.

## **CHAPTER FIVE**

### **5.0 CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The purpose of this study was to carry out an entrepreneurial assessment of the market access and potential for honey and honey products in the City of Nairobi. The researcher's preliminary surveys have shown that most honey producers in Kenya suffer from exploitation by middlemen. Despite the fact that the apiculture sub-sector has a high potential as evidenced by the expanding production levels, the available data on the market access and market potential in Kenya (and the City of Nairobi in particular) is limited, and the available information on collection, processing and marketing of honey is extremely fragmented. Experts have called for significant investment in honey production within indigenous forests because it promises high economic returns to rural families. Information on investment opportunities, and by extension the market access and potential, is extremely fragmented. Consequently, there are difficulties in making entrepreneurial decisions in this industry, hence the researcher's motivation to have carried out an entrepreneurial assessment of the market access and potential for honey and honey products in the City of Nairobi.

Hence, apiculturalists based in Muumoni Division, Mwingi District, (a remote rural pastoral area in Kenya), have very little information on the honey market access and potential in Nairobi, which means that much of the honey produced there is sold locally, at very low prices, and producers often suffer from exploitation by middlemen. Thus, identifying steady markets for their product is believed to spur growth in this sector, as well as enhance the employment opportunities, and resultantly ensure increased incomes for the Muumoni Division apiculturalists.

Due to these existing marketing information gaps, necessary to effectively link the honey producers (in remote rural villages in Muumoni Division) with the major customers (specifically, the Nairobi City dwellers), the study aimed at establishing a sound marketing linkage between the two broad parties (producers and sellers), as well as determining the role of middlemen and other honey dealers.

The study concentrated on honey producers in Muumoni Division, Mwingi District and on the honey outlets and consumers in the Central Business District of the City of Nairobi and adopted a descriptive research approach using a survey design, as a strategy for collecting and analyzing data that answer research questions in a way that allowed the researcher to gather information, summarize, present and interpret data for the purpose of classification. In order to achieve the objectives of this study, a three-in-one questionnaire was developed with detailed questions aimed at assessing the honey market access and potential in the City of Nairobi for honey produced in Muumoni Division. Data was collected from three categories of samples: 100 Muumoni honey producers; 50 supermarkets and institutions buying and / or selling honey, and 200 individual honey consumers in the City of Nairobi.

The specific objectives of this study were to analyze and compare the prices of honey and honey products offered in Muumoni Division with those offered in the City of Nairobi; to establish the main types of marketing outlets for honey and honey products in the City of Nairobi; to determine the honey brands (local and imported) sold, as well as establish the most preferred brands by consumers, in the City of Nairobi; to determine the quantities of honey and honey products sold/handled by the various outlets in Nairobi, as well as determine the potential per outlet; to determine the most critical challenges Muumoni Division's honey producers face in trying to access the market (consumers) in the City of Nairobi and to determine the opportunities available to potential entrepreneurs wishing to invest in marketing honey and honey products, in the City of Nairobi.

This chapter presents the summary and conclusions of the research findings, and recommends areas for further research.

## **5.2 Summary, Conclusions and Recommendations**

### **5.2.1 Questionnaire Response Rate**

At 96 per cent overall response rate, the study was considered to have an effective response. Hence, it is hereby reasonably inferred therefore that the study elicited reliable findings.

### **5.2.2 Analysis and Comparison of the Prices of Honey and Honey Products**

The study found that majority (86 per cent) of the producers sold their unprocessed honey for shs. 50 – 100 per kilogram mostly in their administrative locations in Muumoni Division, and only a mere 16 per cent of the producers directly sold their unprocessed honey in the City of Nairobi where it fetched over shs. 100 per kilogram. Conversely, 62 per cent, a clear majority of the sampled farmers sold their semi-processed honey in Nairobi at shs 351 – 450 a kilogram. Further, the study found that no Muumoni honey producer sold honey in processed form, whatsoever. This shows that whereas majority of honey buyers in the rural villages mainly bought unprocessed honey, majority of the buyers in Nairobi preferred semi-processed to raw honey and are prepared to pay proportionately higher prices for it.

Hence, semi-processed honey is more popular with consumers in the City of Nairobi. Further, the study concluded that honey is mainly sold in raw form in the rural villages at very low prices, compared to semi-processed honey which is mainly sold in the high potential cities where it fetches prices which are three to four times higher. From the study, it is hereby recommended that for honey producers to realize maximum return on investment from their produce, they should endeavour to ensure that they sell their honey only after semi-processing it, in order to enjoy the significant price gains brought by semi-processing, for honey sold in high potential such as the City of Nairobi.

### 5.2.3 Main Types of Marketing Outlets for Honey Products in Nairobi

The study found that individuals from upcountry and supermarkets, in that order, were the two main retail outlets of honey in Nairobi where 39.3 and 29.6 per cent of the consumers respectively bought their supplies from. The high acquisition of honey supplies from individuals from upcountry may be attributable to, firstly, the major role played by middlemen in the honey marketing process and, secondly, to the inherent consumers' belief / fear that a significant portion of the honey sold in Kenya is adulterated.

From the study, there is overwhelming evidence that individuals from upcountry (deemed to constitute individual producers, middlemen, hawkers and other sole traders) forms the main sources of honey sold in the City of Nairobi. Over 39 per cent of the managers / procurement officers of firms buying / selling honey sampled sourced the honey they dealt in from middlemen / traders, an indication that indeed, middlemen / traders from upcountry were the main suppliers of honey consumed in the City of Nairobi.

It can thus be concluded that majority of the honey sold in the main retail outlets in Nairobi is supplied by middlemen and traders from upcountry who have reasonable access to the honey market in the City of Nairobi, followed closely by the honey processing companies which accounted for 31.1 per cent of the total supplies.

It is hereby recommended that entrepreneurs intending to invest in apiculture should aim at sourcing their merchandise from middlemen / traders from upcountry and honey processing companies (such as Eco Honey in Mwingi), and subsequently ensure that the merchandise is sold to or through the main retail outlets in Nairobi which, in their order of importance, include individuals (middlemen, traders and hawkers), supermarkets and shops, etc in order to realize the highest sales volume and turnover.

#### **5.2.4 Major Honey Types and Brands Sold in the City of Nairobi**

The study revealed that 80 per cent of the supermarkets and other institutional honey dealers bought processed honey for resale. This was attributed to the fact that consumers in Nairobi are largely busy working-class people who prefer to buy commodities that are ready for use.

Conversely, the study revealed that majority or 58.1 per cent of those considered bought unprocessed honey. Majority in this category indicated that they had fears that a substantial portion of the processed honey being sold in Nairobi was believed to be adulterated with chemicals and other impurities, and hence their resolution to buy raw honey, believed to be pure and natural.

The study identified several major honey brands sold in the main retail outlets in Nairobi, including Kitui Pure Natural Honey, Pure Natural Honey, Tharaka Honey, Nasali Pure Natural Honey, Amboseli Honey, Machakos Honey, Eco Honey Mwingi, etc.

On how consumers gained awareness of the honey brands, the study found that 35.5 and 22 per cent of the consumers considered said they got to know of the brand they usually buy from displays in supermarkets / shops and through door to door hawkers, respectively.

The study therefore concludes that it makes good business sense for supermarkets mainly buying honey for resale to individual customers, to deal in properly processed and conveniently packaged honey. Hence, it is hereby recommended that prospective investors who plan to invest in honey deal in processed honey, as they are most likely to land a lucrative market for processed honey in Nairobi, where 80 per cent of the outlets sell processed honey. However, the entrepreneurial investor should beware of the stiff competition from the established brands already being offered in the market. To succeed in this dynamic market environment, it is recommended that the entrepreneurial investor embraces a marketing mix which entails display of the products in supermarkets / shops' shelves, advertising the products in the mass media, etc as a way to creating awareness of the availability of the honey products, in order to claim a reasonable share of the honey market in the City of Nairobi.

### 5.2.5 Quantities of Honey Handled by Various Outlets in Nairobi

The study found that majority or 52 per cent of the producers produced 100 – 200 kilograms per year. On types of honey sold by retail outlets in Nairobi, the study observed, through simple computations, that 84 per cent of the various retail outlets in Nairobi sold semi-processed honey, and only 12 per cent sold unprocessed honey.

In addition, over 66 per cent of the outlets in Nairobi sold 100 – 200 kilograms per month or 1200 kilograms per year of the unprocessed honey, while over 76 per cent of the outlets sold over 400 kilograms per month or over 4800 kilograms per year of semi – processed honey.

On the other hand, the study found that majority (over 69 per cent) of the consumers in Nairobi bought up to a maximum of 1 kilogram per month or 12 kilograms per year of honey.

From the above revelations, coupled with the critical challenges identified under subsection 4.7 table 4.13 which affect honey production in Muumoni Division, it can be concluded that although majority of the Muumoni farmers produce 100 – 200 kilograms annually, there is a lot of potential and ample room for the farmers to produce more honey – what needs to be done is to come up with a deliberate move to address the critical challenges facing the farmers together with the hurdles affecting honey production in general.

Thus, one can infer that whereas with enhanced capacity the producers can produce more to fill the existing room for more honey, the retail outlets have the capacity to handle more quantities, as evidence from a survey carried out by the researcher showed that most retail outlets had serious concerns on the perennial unavailability and seasonal production of honey, which disappoints most of their customers.

It is therefore recommended that the government and other stakeholders needs to address the critical challenges affecting the honey sub-sector, in order to make it a more viable economic activity. This will resultantly attract investors in the sub-sector – both in honey production and marketing activities necessary to accelerate the growth of incomes in this sub-sector.

Further, compared to the quantities of the honey substitutes (sugar, jam, marmalade, etc whose quantities bought range from 2 to 5 kilograms per month or 24 to 60 kilograms per year) honey, with the majority buying a maximum of 12 kilograms per year, it can easily be concluded that going for an average of sh 380.50 a kilogram in

Nairobi, honey is by all means, an expensive commodity. As seen in sub-section 4.5 table 4.7, factors including affordable prices, availability of honey all year round, purity and quality of honey, etc all have a bearing on the quantity of honey bought by consumers in Nairobi.

It is therefore recommended that entrepreneurs wishing to invest in honey production and marketing should have the assurance that there is a vast producers base and potential as well as the existence of a vast untapped honey market; and that all the investor needs is to craft a marketing strategy which ensures availability of the product (honey) in the market in Nairobi, at reasonable prices, thereby ensuring that it is available in outlets all year round, is pure and of high quality, etc in order to tap the full gains from the investment in honey.

#### **5.2.6 Critical Market Access Challenges Muumoni Honey Producers Face**

The study revealed that over 50 per cent of the honey producers in Muumoni Division strongly believed that the most critical challenges which affect honey production in Muumoni include, in their order of criticality, the following: lack of reliable Muumoni – Nairobi transport and communication networks, lack of funding (loans) by co-operative unions or lobby groups to champion farmers interests, corruption by traffic police on Muumoni – Nairobi road who demand heavy bribes or impose high fines, use of poor and/or lack of harvesting equipment, lack of modern honey storage facilities – a lot of honey goes to waste, prospective consumers' lack of knowledge of the existence, uses and benefits of honey and honey by-products, un-affordability of honey due to very high selling prices leading to low quantities consumed, high incidence of honey adulteration by adding chemicals, ripe bananas and other substances – leading to consumers' avoidance of honey, Lack of Government support, and cartel-like practices by middlemen/brokers leading to low selling prices of honey– all these discourage honey production and marketing and negates the need for producers and dealers to bother with market access in the city of Nairobi. The least serious challenge cited was lack of proper packaging materials leading to use of recycled dirty paint, detergent and cooking fat tins as packaging containers.

As revealed above, indeed the honey producer faces serious challenges in trying to produce honey. Therefore, a lot needs to be done in addressing these challenges if production of honey is to become an economically viable activity both in Muumoni in particular, and in Kenya in general.

It is recommended that the government improves the muumoni – Nairobi road infrastructure in order to enhance transport means – this is expected to translate in increased honey quantities being availed to the final consumer in Nairobi. This will essentially attract investors in this sector with tremendous increase in incomes of the industry participants.

Further, deliberate efforts by the government needs to be put in place to ensure that honey producers are educated through seminars on the need and means of forming cooperative unions necessary to champion their interests including pooling finances together or even endeavouring to attract funding (bank loans, NGO financing, etc) from external lenders in order to revamp their production levels. This will resultantly attract other investors in the sub-sector, necessary for the expansion of the industry.

As corruption was cited as one of the critical challenges, it is recommended that the farmers come together or form a company, get necessary trade licences and permits for transporting and selling honey in Nairobi, so as to avoid unnecessary police harassment. This will translate into a myriad of economic gains – high sales turn-over, profits and return on investment.

Because of the of the inherent lack of modern harvesting equipment and storage facilities, it is recommended that beekeepers in Muumoni should approach established companies such as Honey Care Africa, who through their tripartite approach to the development of rural Kenya, are helping similar rural communities to acquire modern hives and other equipment, at easy repayment terms, extension and advisory support, a guaranteed market for their produce at a mutually acceptable price, cash-on-the-spot ‘money for honey’ payments and other favourable packages.

It is recommended that, to enhance the knowledge of the existence, uses and benefits of honey by potential consumers, publicity campaigns, mass media bulletins and advertisements, etc be employed in order to increase consumer awareness of the benefits of honey over other related products (sugar, jam, etc) in order to claim a larger market share, with resultant advantages and benefits

The study concluded that consumers have profound fears on the high incidence of honey adulteration with chemicals and products such as bananas, etc which spoil the

original texture, purity and quality of honey. Hence, as this has been crowned an age – old problem affecting the quality of honey being sold in the market in Nairobi, it is recommended that producers and marketers educated in order to avoid the get-rich-quickly mentality, as this is likely to ruin this potentially lucrative economic venture.

The study found that government support in the apiculture industry was conspicuously lacking. Jiwa (2004), noted that the government policy on apiculture sought to develop a modern bee-keeping industry in the country to provide additional income to rural households. In particular the Ministry of Agriculture and Rural Development, was providing assistance through intensified extension and training of both staff and farmers, and research to improve hives and accessories and other equipment and to improve product quality. Hence, it is recommended that Muumoni honey producers should urgently lobby for such government support.

In sub-section 4.4 table 4.4, the study found that middlemen, who operated through cartel-like practices, accounted for 39.3 per cent of the total sources of honey sold in major outlets, thereby implying that much of the honey produced by farmers is normally bought by middlemen for resale to retail outlets in Nairobi. Producers should therefore endeavour to brand and market their products directly to the consumers in Nairobi in order to realize all the price gains after eliminating the middlemen who usually exploit them.

### **5.2.7 Opportunities Available for Investment in Marketing of Honey**

The study found that, of the total honey bought in Nairobi, 56 per cent of the total quantity was bought by individual consumers. It can therefore be concluded that individual buyers form the largest segment of the honey buyers in the City of Nairobi. It is therefore recommended that entrepreneurs intending to invest in the marketing of honey need to firstly target and lay emphasis on individual consumers, followed by hotels and hospitals, in order to maximize on the sales volume and turnover, profits and return on investment

Further, the study found that whereas 69 per cent of the respondents believed that the honey market access in Kenya (in general) was mainly medium to very high, 73 per cent believed that the market access in Nairobi (in particular) was mostly very high to medium. According to the respondents view, it can be concluded that market access in Nairobi is higher compared to the access in Kenya, in general. It is therefore recommended that investors planning to invest in apiculture should take note of the existing vast untapped honey market potential in Kenya, and should make deliberate attempts - such as semi-processing and packaging the honey in order to exploit it, with specific emphasis on the high concentration of the affluent consumers in the City of Nairobi. Government Development Agencies should also take note of this scenario and endeavor to develop policies on apiculture which seeks to develop a modern bee-keeping industry in the country to provide additional income to rural households. In particular the Ministry of Agriculture and Rural Development, should provide assistance through intensified extension and training of both staff and farmers, and research to improve hives and accessories and other equipment and to improve product quality. In order to enhance market access rate for honey, the government should carry out stocktaking and information gathering, initiate capacity building based on a detailed analysis of needs, working with the stakeholders and institutions in organizing integrated operations to build up replicable and scaleable models for producing, collecting, processing, testing and certifying, packaging and marketing (domestic and international) of honey and bee products. 0

### **5.3 Recommendations for Further Research**

From the study, 86 per cent of the honey producers identified lack of finances as one of the most critical challenges affecting honey production. However, the study did not fully address the reasons behind an explanation as to why the sector does not attract funding and / or external loans, etc to improve its activities. Hence, in this regard, further research might be necessary to establish in detail the reasons behind this lack of funding for the apicultural sector producer activities.

The study noted that over 88 per cent of the consumers in Nairobi bought upto a maximum of 2 kilograms of semi-processed per month at an average price of shs. 380.50 a kilogram. Compared to related products such as sugar, for which the

consumers buy upto 5 kilograms per month at an average price of shs. 100 a kilogram, the study did not clarify why consumers in Nairobi bought such little quantities of an otherwise superior product like honey. Hence, further research may be necessary to carry out a comparative analysis between honey and other related products (close substitutes such as sugar, jam, marmalade, etc) to establish the relationship between the quantities bought, prices charged, availability in the retail outlets all year round, etc in an attempt to get an explanation on why consumers in Nairobi perennially buy relatively low quantities of honey, a product widely believed to be superior to most of its substitutes.

The study indicated that although 80 per cent of the major outlets (supermarkets, shops, hotels, hospitals, etc) in Nairobi bought semi-processed honey for resale to all types of buyers, only 33.3 per cent of the interviewed individual consumers indicated that they bought semi-processed honey. Surprisingly, a whopping 58 per cent indicated that they bought unprocessed honey. Of the outlets and individual consumers considered, only a mere 8 and 8.6 per cent respectively indicated that they bought both processed and unprocessed honey, and no outlet or individual bought honey in any other form. This inconsistency does not properly explain the market access and buying patterns of both the processed and unprocessed honey in Nairobi. In other words, there appears to be other additional factors that are important in explaining the honey market access and buying patterns of the processed and unprocessed honey in the City of Nairobi, that have not been considered in this study. Hence, further research might be necessary to establish whether other factors, which may include high prices charged for semi-processed honey, high incidence of adulteration often associated with processed honey, consumers' limited knowledge of the existence, uses and benefits of honey, seasonality of honey production, etc have any implication on honey market access in the City of Nairobi.

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## APPENDIX I

### **LIST OF HONEY DEALERS: (A) MARKETING OUTLETS AND OTHER (B) INSTITUTIONAL DEALERS IN THE CITY OF NAIROBI, AND (C) MUUMONI DIVISION HONEY PRODUCERS**

	<b>A) Marketing Outlets in Nairobi</b>
1	Tusker Mattresses
2	Ukwala Supermarket
3	Sky-matt Limited
4	Uchumi S/Market - A/K Walk
5	Jack & Jill Supermarket
6	Manu Consumer Products
7	Convenience Provision Store
8	Nakumatt - Down Town
9	Jokam Supermarket
10	Multi-Commodity Shoppers
11	Woolmatt Limited
12	Santa Wholesalers
13	Sere Traders
14	Kantaria Commercial Stores
15	Inoi Provision Store
16	Sasha Store (K) Limited
17	Greenforest Supermarket
18	Chandarana Supermarket
19	Star Mart Shoppers
20	Family Choice
21	Select Convenience Store
22	Quickshop Provision Store
23	New Bonjour Shop
24	La Baguette Stores
25	Continental Supermarket
26	Organic Greens Provision Store
27	Neo – Lucky Stores
28	Karia Supermarket
29	Economy Supermarket
30	Mini – Price Supermarket
31	Sunshine Supermarket
32	Century Supermarket
33	Esajo Supermarket
34	Mambo Supermarket
35	Penny Price Provision Store

<b>B) Institutional Buyers/sellers in Nairobi</b>	
1	Hotel Intercontinental
2	Terminal Hotel
3	Down Town Hotel
4	Meridian Court Hotel
5	Oakwood Hotel
6	Solace Hotel Limited
7	Omni Hotel Limited
8	Green Corner Restaurant
9	Malindi Dishes Cafe
10	Homepark Hotel
11	Ambassador Hotel
12	Grand Regency Hotel
13	Caeser Restaurant
14	Hotel Exotica
15	Hotel Salama
<b>C) Muumoni Division Honey Producers</b>	
1	William Maluki (Pastor)
2	Smith Kitheka
3	Mwanzia Muvali
4	Mwisiwa Nzelu
5	Mwenga Nzioka
6	Muema Makoko
7	William Kimau (Pastor)
8	Mukanda Muvali
9	Mutungu Kanyaru
10	Ndetengo Nzelu
11	Mutemi Kakii (sons)
12	Manzi Kimau
13	Musyoka Kanyaru
14	Tito Mwangangi
15	Kisai Musee
16	Musili Nzumbi
17	Gedion Mwinza
18	Muthengi Karungu
19	Manzi Mbiti Nguu
20	Viru Kitheka
21	Sai Mwangangi
22	Matili Mwisiwa
23	Mwiru Nzeru
24	Zakayo Mukwini
25	Mwangangi Mukiti
26	Mwangangi Muthui

27	Mukuni Nzelu
28	Duncan Kiteme
29	Muthui Mwangangi
30	Mutemi Kitheka (Kasomba)
31	Mati Murugi
32	<i>Muthui Mutulwa</i>
33	<i>Mutemi Kimau</i>
34	Mwandikwa Kimwele
35	Muteti Kalua
36	Katingu Mathuku
37	Mukiti Mulwa
38	Mutambu Mutemi
39	Mutemi Mwinzi
40	Kimaku Munyithya
41	Kaniu Munyithya
42	Maluki Nzeu
43	Mumbu Mathuku
44	Muthui Wambua
45	<i>Manzi - Kinyunyi</i>
46	Munyasya Kianda
47	Mwinza Mukungi
48	Mukinya Nguli
49	Moses Nguli
50	Musyimi Ngata
51	Kimarai Mukungi
52	Musya Kimarai
52	Kavate Mutunga
53	Musyimi Kimwele
54	Manzi Musuku
55	Masila Muliwa
56	Vetelo Maluki
57	Muli Ngumbi
58	Shadrack Nguli
59	Manzi Maluki
60	Muthui - Kamile
61	Kariambu - Kitulu
62	<i>Kathuni Mwangangi</i>
63	<i>Muema Makoko</i>
64	Kavindu Kasenga
65	Mutava Maluki
66	Mwasya Mutambu
67	Katumbo Maluki
68	Muthami Musili
69	Kioko Muli
70	Muthui Ngando
71	Simon Kimau
72	Mwendwa Mutulya

73	Mwandikwa Munyasya
74	Ngari Kavoya
75	Mati Kithaala
76	Mwinzi Ngando
77	Nzeka Ilai
78	Kavungi Karuma
79	Muthuri Nyaga
80	<i>Mwenda Mbugi</i>
81	Ndonga Mbandi
82	David Ndeto
83	Muthambii Kiiti
84	Nzelu Mburu
85	Mwendwa Mwangangi
86	Muthui Masaku
87	Musili Mwavu
88	Mukiyi Kiiti
89	Musyoki Mwangangi
90	Ilai Masaku
91	Mutua Mutava
92	Mutegi Njue
93	Njoka Mpembe
94	Kivuri Machaki
95	Mwendwa Kinandu
96	Kazi Itute
97	Muthui Kitheka (Ikuru)
98	Kimanzi Musyoka
99	Manzi Kirenge
100	David Mutisya

Your co-operation is appreciated.

Yours Sincerely,

Joseph S. Mutitu

Email: [jmutitu@kshrc.or.ke](mailto:jmutitu@kshrc.or.ke)

Mobils: 0722 797 797

## APPENDIX 11

### INTRODUCTION LETTER

Dear Respondent,

I am a student pursuing a Master of Business Administration Degree, Entrepreneurship Option, at Kenyatta University. I am carrying out a study to investigate the honey market potential in the city of Nairobi. The aim of this questionnaire is to gather data that will aid me in this study.

You have been chosen as one of the respondents in the above study. Your response will be very useful and will be treated as absolutely confidential.

Your co-operation will be valuably appreciated.

Yours Sincerely,

Joseph S. Mutisya

Email [jmutisya@KPLC.Co.Ke](mailto:jmutisya@KPLC.Co.Ke)

Mobile 0722 705736

QUESTIONNAIRES

(A)

A QUESTIONNAIRE FOR INDIVIDUALS PRODUCING HONEY IN MUUMONI DIVISION, MWINGI DISTRICT

**Instructions:** Tick appropriately in the box or fill in the gaps provided.

**1. What is your main occupation(s) ? ( eg Farmer, Teacher, etc) 1.** \_\_\_\_\_  
2. \_\_\_\_\_ 3. \_\_\_\_\_

**2. How much honey (in Kilograms) do you produce per year ?** \_\_\_\_\_

**3. What do you with the honey ?**

- Consumes it all at home
- Sells it in Muumoni Division (Specify Markets) 1. \_\_\_\_\_ 2. \_\_\_\_\_
- Sell it in Mwingi Town ( District Headquarters)
- Sells it in the City of Nairobi
- Others (Specify): 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**4. In what form do you sell your Honey ? (can tick more than one)**

- Raw (unprocessed) form
- Processed form
- Sometimes raw, some other times processed.
- Other (Specify) 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_

**5. What are the major uses of honey?**

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

**6. What other honey by-products do you produce and sell ?**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**7. Where do you sell honey and other honey by-products (Specify)**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_  
4 \_\_\_\_\_

**8. Please indicate the prices per Kilogram which your :**

**(a) Raw (unprocessed) honey fetches in the following markets:**

- Muumoni environs / markets: Kshs \_\_\_\_\_ Per Kilogram
- Mwingi Town (Market): Kshs. \_\_\_\_\_ Per Kilogram
- Nairobi City: Kshs. \_\_\_\_\_ Per Kilogram
- Other ( Specify) \_\_\_\_\_ Kshs \_\_\_\_\_ Per Kilogram

**(b) Processed honey fetches in the following markets:**

- Muumoni environs / markets: Kshs \_\_\_\_\_ Per Kilogram
- Mwingi Town (Market): Kshs. \_\_\_\_\_ Per Kilogram
- Nairobi City: Kshs. \_\_\_\_\_ Per Kilogram
- Other (Specify) \_\_\_\_\_ Kshs \_\_\_\_\_ Per Kilogram

**9. In the markets mentioned in (7) above, please rank the buyers in terms of the quantity of honey bought, starting with the highest buyer**

- a) \_\_\_\_\_
- b) \_\_\_\_\_
- c) \_\_\_\_\_
- d) \_\_\_\_\_
- e) \_\_\_\_\_

**10. Which major Processors ( refineries ) of honey do you know of ?**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**11. List down the major Buyers / Sellers of honey based in Nairobi, you know of**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**12. Name the traders (middlemen) who buy your honey for re-selling to other markets** 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**13. Which are the other honey markets (outside Kenya) where Kenyan honey is sold ?** 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**14. Which major factors do you think affects the marketing of honey and honey products (mention, and briefly explain how)** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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**15. What do you think should be done to enhance access to the honey market in the city of Nairobi?**

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**16. What do you think is the role of the Government, NGOs and other stakeholders in the honey industry?**

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**Thank you very much for your participation.**

(B)

**A QUESTIONNAIRE FOR MANAGERS / PROCUREMENT OFFICERS OF SUPERMARKETS AND INSTITUTIONS (HOTELS AND HOSPITALS, ETC) BUYING / SELLING HONEY AND HONEY PRODUCTS IN THE CITY OF NAIROBI**

*Instructions: Tick appropriately in the box or fill in the gaps provided.*

**1. What type of honey do you deal (buy / sell) in ?**

- Raw (unprocessed)
- Processed
- Both
- Other honey products (Specify) 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**2. List the honey and honey products you buy/sell**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**3. Which of the following constitute your sources of honey ?**

- Individual producers \_\_\_\_\_
- Middlemen / Traders \_\_\_\_\_
- Imported \_\_\_\_\_ (Specify) 1. \_\_\_\_\_ 2. \_\_\_\_\_
- Honey Processing companies \_\_\_\_\_ eg 1. \_\_\_\_\_ 2. \_\_\_\_\_
- Other (Specify) 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**4. Please indicate your buying prices for each of the following:**

- (a) Raw (unprocessed) honey ? Kshs \_\_\_\_\_ Per Kilogram
- (b) Processed honey ? Kshs. \_\_\_\_\_ Per Kilogram
- (c) Other ? \_\_\_\_\_ Kshs. \_\_\_\_\_ Per Kilogram

**5. What quantities (in kilograms) of honey do you buy/sell per year?**

- (a) Raw (unprocessed) \_\_\_\_\_ Kgs / year
- (b) Processed \_\_\_\_\_ Kgs / year
- (c) Other (specify) \_\_\_\_\_ Kgs / year

**6. Rank your major customers in order of their importance to you**

- Individual buyers / consumers
- Hotels
- Hospitals
- "Miti ni Dawa" joints
- Exporters
- Other, (Specify) \_\_\_\_\_

7. Of the customers listed under (6) above, which two categories forms the largest buyers? 1. \_\_\_\_\_ 2. \_\_\_\_\_

8. Please indicate other honey markets (outside Kenya) where honey produced in Kenya is sold.

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

9. Which major factors do you think affects the marketing of honey and honey products? (mention briefly, and by ranking them in order of importance, explain how)

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10. What do you think should be done to enhance the honey market access in Kenya?

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11. Which packing material (used to pack honey) do you prefer?

- Plastic jars / bottles
- Glass bottles / jars
- Plastic-bag satchets
- Other (Specify) 1. \_\_\_\_\_ 2. \_\_\_\_\_

Thank you very much for your participation.

(C)

## A QUESTIONNAIRE FOR INDIVIDUALS WHO BUY AND CONSUME HONEY IN NAIROBI

1. Name the various uses of honey

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_ 5. \_\_\_\_\_

2. Which type of honey do you buy / consume ?

- Raw (unprocessed) honey
- Processed honey

3. Please list down the honey products / by-products of honey

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

4. Which brands of honey do you buy ?

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_ 5 \_\_\_\_\_

5. Where do you buy honey from ?

- Individuals from upcountry
- Hawkers in the Nairobi city's CBD
- Supermarkets in the City of Nairobi
- Shops / Provision Stores in the City of Nairobi
- Supermarkets in the Residential Areas of the City of Nairobi
- Shops / Provision Stores in Nairobi City's Estates
- Other (specify) 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_ 4 \_\_\_\_\_

6. How did you get to know of the existence of the honey (brand) you usually buy ?

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**7. What factors (attributes) influence you to choose the honey brand(s) you buy? (Rank them in order of importance)**

1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_  
 5 \_\_\_\_\_  
 6 \_\_\_\_\_

**8. Please list down the imported honey brands sold in Nairobi**

1 \_\_\_\_\_ 2 \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**9. Which of the two types of honey do you prefer?**

- Imported (foreign) honey
- Locally produced ( Kenyan) honey
- Indifferent

**10. How would you evaluate the honey market access**

**(a) In Kenya (in general)?**

- Very high
- Medium
- Low
- Do not know the level of access

<b>Any</b>	<b>other</b>	<b>Comments</b>
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**(b) In the City of Nairobi (in particular)**

- Very high
- Medium
- Low
- Do not know the level of access

<b>Any</b>	<b>other</b>	<b>Comments</b>
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**11. How much honey (in Kilograms) do you buy per month ?**

\_\_\_\_\_ Kilograms

**12. What prices per kilogram do you buy the honey at, when**

- (a) Raw (unprocessed)? Kshs \_\_\_\_\_ Per Kilogram  
(b) Processed? Kshs. \_\_\_\_\_ Per Kilogram  
(d) Other? \_\_\_\_\_ Kshs. \_\_\_\_\_ Per Kilogram

**13. Which packaging materials (used to pack honey) do you prefer ?**

- Plastic tins / bottles  
 Glass tins / bottles  
 Plastic – bag Sachets  
 Other(Specify) 1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_

**14. Please indicate other honey markets (outside Kenya) where honey produced in Kenya, is sold.**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_ 4. \_\_\_\_\_ 5. \_\_\_\_\_

**15. Which major factors do you think affect the marketing of honey and honey products? (mention briefly, and by ranking them in order of importance, explain how)**

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**Thank you very much for your participation.**

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