

UNIVERSITY OF KWAZULU-NATAL

Business challenges faced by apiculture SMMEs in Northern, Swaziland

**By
Brenda Samkelisiwe Masuku
209510763**

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Supervisor: Dr. M.A. Phiri

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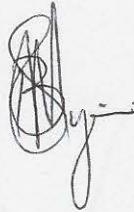
**University of KwaZulu-Natal
Faculty of Management Studies
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Abstract

Apiculture or beekeeping is a new initiative in Swaziland, aimed at improving livelihoods for rural people. There is a potential for growth in the industry, but the question is, “are the rural beekeepers gaining from this opportunity?” The aim of this study was to highlight business challenges that hinder rural beekeepers from exploiting the industry opportunities. In order to ascertain the challenges faced by the beekeepers, a sample of farmers from Northern Hhohho, Swaziland was studied.

A probability sample of 41 rural beekeepers was drawn from a population size of 384 beekeepers. The sample composed of 58.5% females and 41.5% males, with a majority of them, 29.3% falling between the ages of 31 – 40 years. Results of the study show that 53.7% of the respondents relied solely on beekeeping as their source of income, or livelihood. Northern Hhohho was chosen because of its natural vegetation and climate, which makes the area conducive for beekeeping. It is also a predominantly rural area. Data was collected through a questionnaire, developed for this research and administered to the beekeepers in that area. The study revealed that lack of input resources and an unstructured industry are the reasons for failure of the business ventures. A salient point is the lack of entrepreneurial skills of the beekeepers.

It is recommended that, improving entrepreneurial skills, for the SMME beekeepers and Swaziland government intervention in facilitating input resources could benefit the rural beekeepers, in terms of ensuring sustainability of their business. This would create value for both beekeepers and the Swaziland economy.

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

The focus of the current study was to determine the challenges faced by apiculture SMMEs in Northern Hhohho region in Swaziland. According to Bradbear (2009), Apiculture is the science and practice of bee keeping. Bradbear further argues that these words 'apiculture' and 'beekeeping' tend to be applied loosely and used synonymously.

Hhohho region covers the western part of Swaziland from the north and running southwards towards the centre of the country. The SMMEs in various sectors of the economy globally are faced by quite a number of challenges and barriers that hinder them from growing their businesses further and compete effectively with their competitors. Apiculture SMMEs in Northern Swaziland are not immune to those challenges facing other SMMEs globally.

1.2 Background of Study

The reason for the focus on beekeeping (apiculture) SMMEs was that the Swaziland Government was faced with a major challenge of creating jobs, increasing income generation capabilities to reduce poverty and improve the food security situation of households and the country as a whole. As a result, the Government considered agriculture as the main driver of the quest to address the above challenges. In addition, the Swaziland Government had selected beekeeping as the commodity to be promoted for the sub-sector to be able to derive the desired output and as a result the sub-committee on beekeeping had to be established (Ministry of Agriculture and Co-operatives, 2010).

In Swaziland where most of the SMMEs are in fact Micro-Enterprises (MEs), assistance to micro-enterprises as well as, small and medium-sized enterprises development is an integral part of overall economic reform together with enterprise development and sustainability, investment promotion and financial reform.

Apiculture is one of the most basic forms of subsistence farming. It has low start up costs, estimated to be SZL 2,270 and SZL 1,905 for Langstroth and Swazi Topbar hives respectively (Ministry of Agriculture and Co-operatives, undated). It requires little technical skills as well as labour, therefore has low operational skills. According to a study by Technoserve (2008), the annual local demand for honey is 156 tons yet supply, both in the formal and informal markets combined, is 83 tons per annum. Therefore, the current study sought to find out why, in the face of huge demand for the honey and other related products in local and international markets, Swaziland's locally produced honey accounts for only one percent of the market demand, yet it is an easily accessible and economically viable industry. It also seeks to establish the challenges facing Apiculture (Beekeeping) SMMEs.

A lot has been said, in terms of the literature, about the challenges facing SMMEs in various sectors of the economy worldwide. But there is very little research being done specifically on the challenges facing Apiculture SMMEs in Swaziland. In a study conducted by Thwala and Mvubu (2008) on the 'current challenges and problems facing small and medium size contractors in Swaziland', they found that they are constrained by limited access and high cost of capital as well as weak support programmes from government. They also found that there is also a lack of skills and access to finance. What is lacking in most of the research that has been done on SMMEs in Swaziland is detailed focus on the challenges of Apiculture SMMEs. The first objective is to look at why, in the face of an increased demand for the honey and other related products in local and international markets, Swaziland's locally produced honey accounts for only one percent of the market demand.

The review of literature, helped to ascertain if challenges faced by other SMMEs globally are the same as the challenges facing Swaziland Apiculture SMMEs. Previous research on apiculture SMMEs, in Swaziland, has not looked at the challenges facing Apiculture SMMEs using the value creation analysis. The current study used a value creation analysis approach with the aim of contributing new knowledge on the phenomenon under investigation. The limitation of the study is that it is a six months study, the time frame given is very short due to academic reasons and as a result, the researcher will focus only on beekeepers in one region rather than focusing on all four regions, of Swaziland.

1.3 Motivation of the Study

SMMEs play a crucial role in creating employment and contributing to the country's economy. But there is very little attention given to Apiculture SMMEs in Swaziland in terms of scholarly work. The available literature on SMMEs in Swaziland focuses mainly on those SMMEs that are not in the Apiculture Industry. Therefore, the present research will add to the existing literature in the field of Apiculture. The contribution that this study will give is that it will offer information to the Swaziland Government and other relevant stakeholders on the challenges facing Apiculture SMMEs. This research will encourage other researchers to do more research on the issues researched here and come up with more advanced findings. Recommendations from this study are aimed at improving entrepreneurship among beekeepers, so as to create economic value for them.

1.4 Problem Statement

Can formulation of good business strategies enhance productivity, improve profitability thus ensuring sustainability, which will inevitably lead to improved livelihoods for SMME apiaries in northern Swaziland?

1.5 Objectives of the Study

- To find out why the production levels of honey are significantly low and how productivity can be increased.
- To establish the challenges faced by bee keepers in the marketing of honey.
- To determine government's involvement in the improvement and support of beekeeping industry, locally and internationally.
- To determine whom the consumers and other end users are so as to align product with their needs.

1.6 Research (Key) Questions

- Why are the production levels of honey significantly low?
- What are the challenges faced by bee keepers in the production and marketing of honey?
- What is the government support service to the beekeeping industry in Swaziland?

- Who are the consumers and other-end users of bee products?

1.7 Research problems and objectives: broader issues to be investigated

It is clear, by looking at the local and international literature, that there are quite a number of challenges facing SMMEs from various sectors of the economy (Thwala and Mvubu, 2008). These challenges are common to all SMMEs globally. Therefore, the objective of the current study is to look at the challenges facing the SMMEs in the beekeeping industry from Hhohho region in Swaziland. There is very little literature that focuses specifically on the challenges facing beekeepers. The bulk of literature available, deals mainly with the challenges, barriers and problems facing SMMEs in all various sectors of the economy and there is not even one literature available that deals specifically with the challenges faced by Apiculture (Beekeeping) SMMEs in Swaziland and internationally.

Some of the studies that have been done in Swaziland were based on the production and economic situation of beekeeping in Swaziland to try and determine the potential opportunity for growing and up-scaling the contribution of this industry.

In a study conducted by Thwala and Mvubu (2008) on the 'current challenges and problems facing small and medium size contractors in Swaziland', it is found that they are constrained by limited access and high cost of capital and weak support programmes from government. They also found that there is also a lack of skills and access to finance. What is lacking in most of the research that has been done on SMMEs in Swaziland, is there is very little work on the challenges of Apiculture SMMEs. The first objective is to look at how productivity for local Apiculture farmers can be improved, in the face of an increased demand for the honey and other related products in local and international markets, as Swaziland's locally produced honey accounts for only one percent of the market demand.

The international competitiveness of majority of SMMEs is seriously impaired by their disadvantageous economies of scale, lower technology level, limited domestic technological capacity, and limited access to financial and other input resources (Koirala, 2006). Based on what Koirala (2006) says, the second objective of the study would be to establish whether these challenges mentioned by Koirala are the same challenges facing Apiculture SMMEs in Swaziland. This

includes recommending measures which reduce costs and risks while increasing speed and reliability of supply and ultimately increase sales using a value chain approach.

1.8 Ethical Considerations

In line with the university requirements and standards on Ethics, the researcher obtained ethical clearance from the university ethical clearance committee. An informed consent form was developed by the researcher and approved by the institution's ethics committee, this informed consent form was then attached to the questionnaires that were given to respondents (beekeepers). In the informed consent form, it was clearly spelt out that their participation was voluntary, no benefits will be given for participating in the study, and that they can withdraw from the study at any stage if they so wish and that anonymity will be maintained.

1.9 Limitations of the Study

There is very little literature broadly on apiculture in Swaziland, especially the challenges facing apiculture SMMEs in Swaziland. The respondents were hardly available, it took two full weeks for the researcher to complete data collection and had to rely on the services of the Ministry of Agriculture and Cooperatives' Extension Officers, for identification and location of beekeepers. The time frame for this thesis was very limited, as only six months was given to complete it.

1.10 General Structure of the Study

This chapter was an introductory chapter that gave the overall summary of the study. The focus is on background of the study, objectives of the study, research (key) questions, research problems and objectives: broader issues to be investigated, principal theories upon which the research project will be constructed (research design), ethical considerations and limitations of the study.

Chapter 2

This chapter, which is literature review, focuses on value creation through entrepreneurship for SMMEs.

Chapter 3

This chapter discusses the background on the Swaziland economy, the need for SMMEs, as

means to create employment and reduce poverty.

Chapter 4

This chapter is based on research methods (quantitative methods) used in the present study, the instrument used to collect data and the statistical packages used in data analysis. A structured questionnaire was used as an instrument to collect data.

Chapter 5

The data collected is presented in chapter 5, through the use of descriptive statistics.

Chapter 6

This chapter is based on the discussion and analysis of results presented in chapter 5 with particular reference to the main objectives of the study. The results are discussed in relation to the literature given in chapter 2 and 3 of the study.

Chapter 7

Chapter seven focuses on the conclusions and recommendations of the study. The recommendations are based on the findings of the study and recommendations for future research in related fields are made.

1.11 Conclusion

This chapter contains the background of the study, objectives of the study, research questions, research problems and objectives, broader issues to be investigated, principal theories upon which the research project was constructed (research design) with focus on value creation, followed by ethical considerations and the limitations of the study. The next chapter reviews literature in relation to the study and its main objective of improving entrepreneurship for Apiculture SMMEs in Northern Hhohho, Swaziland.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

There is no consensus amongst scholars regarding the definition of entrepreneurship. In a nutshell, there is no single definition of what is entrepreneurship (Baron and Shane 2008). Baron and Shane (2008) have argued that although there is no agreed-upon single definition of entrepreneurship, but Shane and Venkataraman, quoted in Baron and Shane (2008), came up with a definition that has been increasingly accepted. Therefore, Shane and Venkataraman, quoted in Baron and Shane (2008) define Entrepreneurship “as a field of business, which seeks to understand how opportunities to create something new (e.g. new products or services, new markets, new production processes or raw materials, new ways of organizing existing technologies) arise and are discovered or created by specific individuals, who then use various means to exploit or develop them, thus producing a wide range of effects”.

Stokes and Wilson (2006) argue that although there is diversity of different definitions of entrepreneurship, there is a general consensus that the definition involves a transformational process of market change undertaken by a particular breed of manager. For Stokes and Wilson (2006) entrepreneurship is seen as a fundamentally important part of modern economic and social life. They argue further by saying that entrepreneurs play a key role in our lives and yet there is an extraordinary lack of clarity concerning both what entrepreneurship is and exactly what entrepreneurs do and sets them apart from other managers.

Baron and Shane (2008) argue that by implication, the definition suggests that entrepreneurship is identifying an opportunity that is potentially valuable in the sense that it can be exploited in practical terms and yield sustainable profits and the activities involved in actually exploiting or developing this opportunity.

According to Allen (2010), entrepreneurship is a mindset or way of thinking that is opportunity focused, innovative and growth oriented. He further argues that although entrepreneurship is most commonly thought of in conjunction with starting a business, the entrepreneurial mindset can be found within large corporations, in socially responsible non-profit organisations, and anywhere that

individuals and teams desire to differentiate themselves from the crowd and apply their passion and drive to executing a business opportunity.

2.2 Entrepreneurship

According to Baron and Shane (2008), entrepreneurship, as a field of study, seeks to understand how opportunities to create something new arise and are discovered or created by specific individuals, who then use various means to exploit or develop them, thus producing a wide range of effects. An opportunity to create something new could involve, new products, new markets, new processing of raw materials or production processes or new ways of using existing technology. Concurring with Baron and Shane, Allen (2010), states that entrepreneurship is a mindset, a way of thinking that is opportunity-focused, innovative and growth oriented as well as being a set of behaviours.

Baron and Shane (2008), further view entrepreneurship as a process, rather than a single event, that unfolds over time through the following key phases:

Opportunity recognition: an opportunity is the potential to generate economic value and is viewed as desirable in the society in which they occur.

Decision to Proceed and Assembling of Essential Resources: the decision to proceed means doing something active about the opportunity, and it relies on the motives of the entrepreneur. Assembling essential resources involves business environmental analysis, and acquiring human and financial resources.

Launching a new venture: involves product development, as well as choosing the legal form of the new venture (The population demographics of the SMMEs in this study relate to four types of entrepreneurs, namely, the sole trader, partnerships, social entrepreneurship and cooperatives), and establishing roles of human resources.

A sole trader is a business form whereby the owner is the only person responsible for the activities

of the business and therefore is the only one who enjoys the benefits or profit and suffers the losses of the said business. It is the easiest and most inexpensive business form to create, yet the most risky as it has unlimited liability (Gartner and Bellamy, 2010). This is the case with most of the rural beekeepers.

Partnership is when two or more individuals join together and pool their capital and abilities, to form a business. These individuals should not exceed twenty people. The profits are shared amongst themselves at an agreed ratio and liability is assumed jointly or severally as per agreement of partnership (Gartner and Bellamy, 2010). With the population of the study, this form of business is mainly with family members. The main advantage of this business form is that business risks are not borne by one person, yet that could turn into a disadvantage in the sense that debts incurred by one partner results in the other partners being obligated to such debt (Gartner and Bellamy, 2010).

Social entrepreneurship, according to Gartner and Bellamy (2010), is an enterprise created to solve a social problem or address a market failure, while operating in a financially sound manner. The values of the organization focus on the community and the environment and are typically overseen by members of the community. These community members are accountable to a wider stakeholder group, which is concerned with making a social, environmental and economic impact on others. ESwatini Kitchens, an organization in Swaziland that deals in processing honey, provides technical aid, free of charge, to rural farmers who supply it with honey. This is a typical example of social entrepreneurship.

Co-operatives, according to Gartner and Bellamy (2010), are legal entities typically formed by people with similar interests, to reduce costs and gain economic power. Profits are shared amongst members in proportion to their contribution and there is limited liability. The apiculture industry, in Swaziland, is more oriented towards seller co-operatives, which is individual beekeepers jointly supporting market development and other business activities, so as to effectively compete with large competitors.

Building success and managing growth: this involves developing effective strategies for encouraging and managing growth. The study is focused on beekeeping entrepreneurs and the challenges they face, that prevent their enterprises to develop and be growth oriented. In the study, focus will be on

value chain approach as means of developing an effective strategy to counter challenges faced by the apiculture SMMEs.

Harvesting the rewards: choosing the best way of reaping the rewards of hard work and commitment. This phase may also involve finding an exit strategy for the entrepreneur.

Of note though is that, Strydom, Nieuwenhuizen, Antonites, de Beer, Cant and Jacobs (2007), state that, not everyone who starts a new business, is in reality, an entrepreneur, as entrepreneurs habitually create and innovate to build and grow something of recognised value. Not every SMME achieves anything new or different, nor do they all grow and become successful, thus they may not be deemed to be entrepreneurial. The lack of entrepreneurship in SMMEs often results in the failure of the business venture.

2.3 Creating Value Through Entrepreneurship

Beekeeping, in terms of the literature, is very important in terms of job creation and income generation for the rural poor communities, especially in Africa. Most of the communities in the Third World countries (developing countries), especially African communities, use beekeeping as a source of income generation and livelihood. Swaziland is not an exception, (Swaziland: SADC Trade, Industry and Investment Review, 2006), like all other developing countries, is faced with the problem of high unemployment rate, currently estimated at 40%, with 69% of the population living below the poverty line, especially in the rural areas. This prevalent poverty contributes to social ills such as increased crime rates and illiteracy. The current dire financial strait, that the country is experiencing, has exacerbated the problem of economic underdevelopment. Beekeeping is an appropriate form of income generation for communities in some of the most economically disadvantaged areas of Africa. Its role in promoting economic self-reliance and the need to enhance this role were identified in the important Banjul Bee Declaration of 1991 (Bees for Development 1991). Beekeeping is an on-farm diversification strategy that has significance to rural livelihoods in some of the most economically and environmentally marginalised regions of the world (Seagle, 2008).

Although beekeeping can only rarely become the sole source of income and livelihood for people in the Third World, its role as a source of supplementary earnings, food and employment should not be underestimated. Key points in the argument that beekeeping is a key element in promoting rural self-reliance are that:

Beekeeping promotes rural diversification and hence is an alternate source of income and employment, particularly in areas where arable land is restricted and demographic growth is resulting in insufficiently profitable landholdings. It is an activity that has successfully been adopted by women in many parts of the continent (Clauss 1992). Rodriguez, Riley, Shafron and Lindsay (2003) in Australia found that the majority of beekeepers operated from small holdings of land. The average area of land at the business premises was 42 hectares. This average was quite different across the states. New South Wales had the largest area of land with an average of 89 hectares, while Western Australia had the smallest with only 9 hectares. Rodriguez et al (2003) in their research findings further found that around 62% of beekeepers reported that they had used public land for honey production in the past five years. This proportion was 100% in Tasmania while in South Australia it was only 33%.

Beekeeping can reduce unemployment rates as it is an activity that can be done by people of employable age. In a study done by Moniruzzaman and Rahman (2009) in Bangladesh, they have found that 61% of the beekeepers in the study areas were between 31-59 years. The young people who were part of the study were between the ages of 15-30 years. These young people were about 37% of the total. There was only one beekeeper who above 60 years.

The economy of Swaziland is highly dependent on agriculture, with sugar cane being the major source of export income. Due to drought and loss of preferential trade agreements with the European Union, there has been an acute decline in export income. This has also resulted in job losses in the agricultural sector, as well as food shortage in the country. Efforts to increase direct foreign investment, especially in the manufacturing sector have been thwarted by companies' preference to South Africa (Swaziland: SADC Trade, Industry and Investment Review, 2006). Agricultural activities clearly have a key role to play in any rural development strategy: "Agricultural development is indispensable to guarantee local food security, to generate widespread employment and income sources and conserve environmental resources" (Gooneratne and Mbilinyi 1992). Overpopulation, environmental degradation, drought, marginal farming conditions, and supplementary income needs require production that is more than just subsistence. Transportation and storage difficulties, however, work against the attempts of small-scale farmers to compete as major suppliers of food to external markets. Honey and beeswax, though, are a high-value commodity with which to complement existing agriculture, are easy to transport and store, and

provide subsistence farmers with a valuable source of income.

Beekeeping has considerable merit as a self-reliance strategy that can augment the income of small-scale farmers with only a minimal financial outlay. Traditional beekeeping is being enhanced as a form of rural activity and income through the introduction of small, technologically appropriate improvements. Often this is due to limited, no dictatorial support offered by aid agencies that acknowledge the considerable benefits which beekeeping offers. Intervention has been designed to remove obstacles and increase productivity and income, thereby improving rural community self-reliance. Evidence from countries such as Malawi illustrates how suitable interventions can address existing constraints (Mensing, 1993a).

Beekeeping is a mechanism that can help address the employment challenges created by a growing population and increasing landlessness (Ntenga and Mugongo, 1991). Employment opportunities are also formed for craftsmen who manufacture hives, smokers, gloves, and other beekeeping equipment (Sosu, 1991). The important role that beekeeping plays as a source of employment is clear: Of the approximately 400, 000 people in the North-Western Province of Zambia, nearly 15,000 are beekeepers. The significant and potential earning capacity of beekeepers is vividly illustrated by evidence from Tanzania, where the more successful beekeepers, can earn incomes of up to approximately \$370 per year, compared with a state official, whose annual earnings average about \$56 per year. It is evident why "large-scale beekeepers in the villages have solid social and economic positions (Illgner, Nel and Robertson, 1998). This shows that in 1998, in Tanzania, income from beekeeping was approximately 6 times more than state officials' earnings.

Messely (2007) argues that beekeeping is an important component of agriculture and rural development programmes in many countries. The role of beekeeping in providing nutritional, economic and ecological security to rural communities at the household level and is an additional income generating activity. This being a non-land-based activity does not compete with other resource demanding components of farming systems. Huge agricultural and agro-based opportunities exist in the rural areas to generate income and employment. Messely (2007) also states that beekeeping is a useful means of strengthening livelihoods and has been identified as a viable agriculture practice that could alleviate poverty and sustain rural employment.

According to Messely, beekeeping has the potential to help many people to increase their incomes and their crop yields. Beekeeping is ideal for people who have no land and little space and little money. Beekeeping has a chance for many landless peasants and small holders to improve their livelihoods. Beekeeping, Ntenga and Mugongo, (1991), is a mechanism that can help address the employment challenges created by a growing population and increasing landlessness. According to Sosu (1991) employment opportunities are also formed for craftsmen who manufacture hives, smokers, gloves, and other beekeeping equipment.

In Malawi, Apiculture has traditionally been an important activity for many decades and has been a source of food, income and employment for people in the rural areas. There are approximately 3,500 people employed in the bee-keeping sector in Malawi with over half of them in the northern region. Malawi's economy is dependent on agriculture as explained above it follows that the role played by bees in pollinating crops is very crucial. The majority of people who are involved in agricultural production in Malawi are poor and live in the rural areas where large tracts of forests are found. As a result, the Government of Malawi has adopted poverty reduction as one of its development strategy, and apiculture is one of the industries that are being promoted in the rural areas to improve off farm incomes and employment (Situational Analysis of Beekeeping Industry, n.d.).

Berhane (2010:2) states that beekeeping is a good source of off-farm income to farmers in our country. It plays significant role in supplementing the annual income of the beekeepers through the sale of honey, wax, colonies and serving as a healthy food for the consumers. It almost requires no land, limited capital and does not take much of the farmer's time, yet generates a sizeable income (FAO 1984). The net return from a well-managed beekeeping operation is thought to be significantly large. Berhane (2010) strongly argues that, although beekeeping can only rarely become the sole source of income and livelihood for people in the third world, its role as a source of supplementary earnings, food, and employment should not be underestimated. Key points in the arguments that beekeeping is a key element in promoting rural self-reliance are that:

- Beekeeping promotes rural diversification and hence is an alternative source of income and employment, particularly in areas where arable land is restricted and demographic growth is resulting in insufficiently profitable land holdings.
- Beekeeping allows for a degree of risk avoidance by providing a reliable, high value product

that enables rural farmers to survive in times of economic crisis.

- Beekeeping is a low cost, sustainable undertaking with a low environmental impact.

Research conducted by Gidey and Mekonen (2010) in the Tigray Region of Northern Ethiopia, 45.7% of the bee keepers households responded “Yes” for the question “is beekeeping a major source of cash income supporting the family livelihood ?” and the majority (54.3 %) “No”. This suggests that beekeeping is not a major source of cash income for many of the farmers but as a supportive income to meet their demand for cash to pay debts and for their living conditions. The results also showed that the amount of money earned per year was generally low or too little to sustain the needs of the households. Coupled with the low local demand for honey, the respondents noted that the income from honey production is unsteady. Another problem of the respondents was related to the production, pricing and marketing of honey.

In Swaziland where most of the SMMEs are in fact Micro-Enterprises (MEs), assistance to micro-enterprises as well as, small and medium-sized enterprises development is an integral part of overall economic reform together with enterprise development and sustainability, investment promotion and financial reform (Ministry of Enterprise and Employment, 2005).

2.4 The Value Chain Approach

The focus of this study is to highlight business challenges, which threaten apiculture sustainability, for SMMEs, therefore it aims at creating value for the rural farmers. Value, as previously stated, for these farmers, means mainly the ability to generate income to meet basic needs and wants. To sustain the business, so as to have a dependable source of income, is therefore important for the beekeepers. This can be achieved if the beekeepers have entrepreneurial management strategies for their businesses. According to Stokes and Wilson (2006), entrepreneurial management involves the specific management behaviours which entrepreneurs must engage in, in order to drive the market process and produce innovation.

These specific management behaviours include:

- Opportunity discovery and exploitation, which requires the beekeeper to be alert for industry opportunities in terms of creating new business streams. New business streams could include, for example, product diversification and the success thereof comes from understanding the

market or consumer needs, as well as industry or business environment.

- Resource acquisition and co-ordination, which requires the ability to leverage resources from outside the business, so as to overcome internal resource constraints. In relation to rural beekeepers, it could mean, the use of the free technical aid from the Swaziland government, to enhance production and bee management skills.

In another study that was done by Abebe and Puskur (2010) on Beekeeping sub-sector challenges and constraints in Atsbi Wemberta District of eastern zone, Tigray Region, Ethiopia, they found that utilization of improved beekeeping practices were influenced by different constraints. The work done by Abebe and Puskur (2010) revealed that; drought, honeybee pests and disease, shortage of beekeeping materials, death of colony, lack of adequate extension support, marketing problem, shortage of bee forage, lack of beekeeping skill and reduction of honeybee colonies; were found to be the major constraints in the beekeeping development of the district, in their order of importance.

- Entrepreneurial networking, which involves gaining assistance from local institutions as well as other organizations, such as, in the case of Swaziland, donor agencies who support SMMEs.
- Entrepreneurial decision-making, which is the ability to make decisions irrespective of the limited decision making tools (for example, competitor analysis, historical trends), that rural SMMEs face.

Using the value chain approach, the study sought to improve entrepreneurial management strategies for apiculture SMMEs in Northern Hhohho, Swaziland. According to Ingram (2009), the term “value chain” refers to the full range of activities needed to bring a product or service from conception, through production and delivery to final consumers (and ultimately disposal after use). A value chain can be the way in which a firm develops a competitive advantage and creates shareholder value.

Value chain analysis encompasses issues such as organisation, co-ordination, power relationships between actors, linkages and governance aspects. These issues can be analyzed by individual organisations, as well as between actors within a chain. Drivers of value chain activities include economies of scale, learning, capacity utilisation, linkages among activities, the degree of vertical integration, timing of market entry, geographic location and institutional factors such as regulations,

union activity, or taxes (Ingram, 2009).

This approach suggested interventions aimed at addressing constraints and accelerating growth, thus ensuring sustainability. The focus being on marketing the available apiculture products as well as increasing the product base. The value chain concept, as developed by Michael E. Porter, seeks to identify ways of creating customer value, which would ultimately result in increased product demand and therefore create value for the business. Wheelen and Hunger (2010), define a value chain as a linked set of value-creating activities that begin with basic raw materials coming from suppliers, moving on to a series of value-added activities involved in producing and marketing a product or service and ending with distributors getting the final goods into the hands of the ultimate consumer.

According to Nieman and Bennett (2006), the value chain can be used as a systematic means of examining all the organization's functional activities and their effectiveness in creating customer value. These activities are categorised into primary and support activities and an analysis of each can highlight challenges and strengths of the business.

2.5 Brief History of Entrepreneurship

Stokes and Wilson (2006) argued that entrepreneurship is not a new phenomenon, and people have been referring to entrepreneurs for hundreds of years. The word itself originated from the French, which literally means someone who takes between or goes between. It is argued that the earliest use of the term reflected this sense of the middleman who directed resources provided by others. It is stated that in the Middle Ages, an entrepreneur was someone who managed large projects on behalf of the land owner or the church, such as building of a castle or a cathedral. In the seventeenth century, the concept was extended to include some element of risk and profit. In fact Entrepreneurs were those who contracted with the state to perform certain duties, such as collection of revenues or the operation of banking and trading services. As the price was fixed, the entrepreneur could profit or lose from performance of their contract (Stokes and Wilson, 2006).

A French Economist by the name of J.B. Say who wrote in the 1800s distinguished between the profits of those who provided capital and the profits of entrepreneurs who used it. Say defined

entrepreneurship as 'someone who consciously moves economic resources from an area of lower, and into an area of higher productivity and greater yield' (www.jstor.org). In simple terms, entrepreneurship takes existing resources, such as people, materials, buildings and money, and redeploys them in such a way as to make them more productive and give them greater value.

It is further argued by Stokes and Wilson (2006) that the above given definition implies changing what already exists, it sees the entrepreneur as an instrument of change, someone who does not seek to perfect, or optimise ways of doing things, but searches instead for new methods, and new markets. According to Stokes and Wilson (2006), in the mid-twentieth century, Joseph Schumpeter took up this theme of the entrepreneur as a necessary destabilising force. Schumpeter argues that economic equilibrium, which optimises what already exists, does not create healthy economies. They further state that, in the 1980's Peter Drucker developed these earlier ideas, seeing the emergence of an entrepreneurial economy in USA as a most important and hopeful event. Drucker's argument is that, an entrepreneur is someone who always searches for change, responds to it, and exploits it as an opportunity. It is argued that Drucker, like Schumpeter, made innovation a necessary part of entrepreneurship. He focused on the management processes involved in what an entrepreneur does while others have taken this theme of entrepreneurship as a process, an action-oriented management style which takes innovation and change as the focus of thinking and behaviour (Stokes and Wilson, 2006).

On a brief history of the entrepreneurial revolution, Allen (2010) argues that the term entrepreneurship has been in existence for more than two-hundred-and-fifty years.

2.6 Job Creation

Strydom, Nieuwenhuizen, Antonites, de Beer, Cant and Jacobs (2007) argue that economic development can be directly attributed to the level of entrepreneurial activity in a country. They further argue by saying that in a high-growth, globally competitive economies, the ability to nurture this entrepreneurial activity and grow businesses actually creates wealth and also sustain competitive advantage is very much important. Strydom et al. (2007) further argue by stating that this is because there is a direct correlation between job creation and the level of entrepreneurial activity in an economy, as well as positive, statistically significant association between national economic growth and entrepreneurship. In their view, taken from Kao (1993), entrepreneurial businesses ensure growth in the economy by doing something new and/or innovative to create

wealth for the entrepreneur and to add value to society. Stokes and Wilson (2006) concur with the view that entrepreneurship creates value, they both argue by saying that there is a general consensus that entrepreneurship involves some kind of transformative process of social and market change that creates value for individuals and society. They further argue that this process can take place in a wide variety of contexts, but follows a simple formula with the progression from opportunity identification through to realizing value. It is stated that this value can take many forms, that is, personal wealth, family security, social inclusion or perhaps cultural and aesthetic pleasure.

To support what has already been stated above, most of the findings from the various literature studies on beekeeping indicate that people engage in beekeeping for a variety of reasons. Those reasons are for family support financially, for personal wealth, and others do it as a hobby.

According to Allen (2009) entrepreneurial ventures are responsible for significant job creation. Allen says entrepreneurial ventures and small businesses are related, but they are not the same in most respects. They are both economically important but each provides different benefits and outcomes. Allen (2010) quoted Schumpeter whereby he describes entrepreneurs as equilibrium disruptors who introduce new products and processes that change the way we do things, while small business owners typically operate a business to make a living, e.g. small businesses are shops, restaurants, and professional service businesses. It is stated further that they form what has been called the “economic core.” Allen (2010) warned that it should not be forgotten that most entrepreneurial ventures start small.

It is argued by Allen (2010) that entrepreneurial ventures have three primary characteristics; innovation, value-creating and growth oriented. From Allen’s view, an entrepreneurial venture brings something new to the market place, whether it is a new product or service, a new marketing strategy, or a new way to deliver products and services to consumers. According to Allen (2010), an entrepreneurial venture creates new value in a number of ways. In her view, entrepreneurs create new jobs that do not merely draw from existing businesses, and by finding niches in the market, entrepreneurs typically have a vision of where they want their businesses to go, and generally that vision is on a regional, national, or more often global level.

2.7 Rural Entrepreneurship Development as a Government Initiative

Research has shown that initiatives by government have a positive outcome for the rural beekeeping industry.

In Malaysia, rural entrepreneurship is recognised as a very important component that contributes to economic growth and development. Rural entrepreneurship is defined as the creation of a new organisation that introduces new product, serves or creates a new market, or uses a new technology in a rural environment. A rural entrepreneur is defined as someone living in a rural location and contribute to the creation of local wealth. Rural entrepreneurs can focus their attention on agriculture or areas that relates to natural resources. It is argued in Malaysia that entrepreneurship stimulates economic growth through the knowledge spill-over and increased competition of the entrepreneurs. In relation to rural entrepreneurship, it has been accepted as a central force of economic growth and development of a country. As a result of that, the Malaysian government has given much attention to ensure the success of the programme. The government, together with its institutions and individual citizens agree on the pressing need to promote rural enterprises as a huge employment potential and instrument to improve the well being of rural community (Ahmad, Yusoff, Noor and Ramin, 2011). This Malaysian way of supporting the introduction of rural entrepreneurship should be emulated by the Swaziland Government in helping beekeepers in the rural areas so they can surmount their challenges.

It is argued that rural entrepreneurship in its substance does not differ from entrepreneurship in the urban areas. The development of rural entrepreneurship programs started in the 1970s until today. The main objective of the government in introducing the New Economy Policy (NEP) in the 1970's was to reduce poverty and inequality amongst different groupings of the Malaysian population. The Ministry of Regional and Rural Development introduced various programmes and supports in order to enhance the development of rural entrepreneurship. Those programs included marketing programme, entrepreneurship training programmes, agriculture and tourism development programme, as well as financial schemes. The bold initiatives taken by the Malaysian government to boost income rural entrepreneurs is to facilitate the growth of One-District-One-Industry-programme in 2003 (Ahmad et al, 2011).

In Lesotho, it is stated that government support service to beekeeping industry in the country is through the Beekeeping Section of the Ministry of Forestry and Land Reclamation (MFLR). In Lesotho, the Beekeeping Section is manned by two people, that is, the Head of the Section and Conservation Officer. The Section offers training to prospective honey producers, they also assist in the importation of production inputs, assist in the extraction of honey as well as finding markets for honey. This is the support offered by the Section to beekeepers. The Section further assists in bee removals and elimination of destructive colonies. It also assists honey producers to source donor funds (Situation Analysis of the Beekeeping Industry, n.d.).

The literature also indicates that inadequate extension services and lack of skills training for beekeepers affects processing and packaging. Regarding packaging, there are just a handful of processors who package hive products in internationally approved and recommended materials. The most commonly used packaging materials are plastic jerry-cans and other plastic containers. Some industries have improved glass containers but these are only used by well organised processing plants like Reko Industries Ltd. For easy handling, transportation and grading, honey should be packaged in air-tight-lidded plastic buckets. The packaging materials for large-scale honey and other hive products for export are not readily available. It is said that those available are only affordable to large processors (Ugandan Apiculture Export Strategy, 2005).

In a situation analysis of the beekeeping industry that was done in South Africa, it is stated that most beekeeping training is done by white commercial beekeepers associations, sometimes they do it in partnership with tertiary education institutions. The training and development of black beekeepers is mainly done by the ARC through its Beekeeping Development Program which was initiated in 2003. This programme was aimed at targeting at least 5000 beneficiaries, and the aim was to address historical inequities within the South African beekeeping industry and also increase its size by 50%. According to the study that was done by the Agriculture Research Council (ARC), 97% of smallholder beekeepers were trained and had gone through mentored beekeeper development programme. The training of smallholder beekeepers is very critical to the commercialization agenda. It should be noted that these beekeeping training targeting smallholder producers are mainly government funded. There is very little technical support coming from the provincial Departments of Agriculture (Situation Analysis of the Beekeeping Industry, n.d.).

In Swaziland, The Ministry of Agriculture & Co-operatives (MOAC) supports the development of bee farming in the country. According to the Ministry's Beekeeping Specialist, at least 3, 000 farmers were trained by the Ministry in the introduction to beekeeping. But out of this number it was found that less than 10% of them are still active in bee farming (Situation Analysis of the Beekeeping Industry, n.d.).

2.8 The Role of Co-operatives in Rural Development

The role played by SMMEs and Co-operatives is almost similar in the sense that both try to address the problem of the rural poor. Co-operatives together with SMMEs can contribute immensely to a country's economy as well as improving the lives of its citizens in terms of poverty alleviation and creating employment.

According to the South African Integrated Sustainable Rural Development Strategy (ISRDS, 2000), 'rural' is characterized as an area where "populations are spatially dispersed. Agriculture is often dominant, and sometimes the exclusive economic sector and opportunities for resource mobilization are limited". The strategy further states that South African rural areas are "characterized by high levels of poverty". Approximately 70% of South Africa's poor people live in rural areas and about

70% of the rural residents are poor. Their incomes are constrained because the rural economy is not sufficiently vibrant to provide them with remunerative jobs or self-employment opportunities. Their cost of living is high because they spend relatively more on basic social services such as food and water, shelter, energy and education, transport and communications service (ISRDS, 2000). The situation at rural level needs to be changed by way of improving the living conditions there and hence countries introduced the term 'rural development' to address the socio-economic conditions of rural populations that are largely poor.

Rural Development is viewed in different ways by different people. Petrin (1994), for example, sees entrepreneurship as a strategic development intervention that could accelerate the rural development process. He notes that, "the entrepreneurial orientation to rural development accepts entrepreneurship as the central force of economic growth and development, without it other factors of development will be wasted or frittered away" (Petrin, 1994).

India's approach to rural development was aimed at provision of job opportunities to rural communities in order to raise their income. This was done by involving a number of programmes like poverty alleviation programme, Integrated Rural Development, development programmes for women and children, etc.

2.9 Conclusion

This chapter has focused on the role of entrepreneurship in creating value as well as employment creation. The focus was also on Co-operatives and SMMEs in relation to rural development, entrepreneurship, poverty alleviation and employment creation. This chapter has looked at the role the SMMEs and Co-operatives can play in the country's economy and in relieving the plight of the rural poor people. It has also looked at beekeeping and the economic impact it has. The present chapter has also looked at the success stories of Malaysia in relation to the study at hand. The next chapter, chapter 3, focuses on Swaziland together with its socio-economic situation, as well as the challenges facing beekeepers.

CHAPTER THREE

SWAZILAND BACKGROUND AND ECONOMY

3.1 Introduction

3.1.1 Geography and Climate

Swaziland is one of the smallest countries in Africa, it's the second smallest country, Gambia being the smallest. In terms of Swaziland's location in the continent, it is a landlocked nation bordered by South Africa to the North, West and South and Mozambique to the East with an area of 17,364Sq Km, of which 15-20% is arable. The population has increased gradually, the current population is estimated to be 1,067,920 people with a growth rate close to zero due to HIV/AIDS. This has had a tremendous impact on the child life expectancy since under five child mortality is 160/1000 according to UNICEF (2005). It is stated that life expectancy at birth is 37.5 years, the majority of deaths occurs among young people who are between 15 – 49 years of age (World Vision Swaziland, 2010:7). The population in the main areas is as follows: in Mbabane being the capital city, population was 61,400 in 2009, in Manzini the population is 93,400, Malkerns is 7,900 of the population, Nhlangano has a population of 7,000, Mhlume has also 6,900, Big Bend is at 6,800 of its population, Siteki has 5,900, Simunye is having 5,500, Hluti is having 5,400 of the population and Pigg's Peak has got 4,500 of the population (The Commonwealth Yearbook 2011, Swaziland). Northern Hhohho includes a minor part of Mbabane and Piggs Peak, has approximately 10 000 population.

Using the agro-ecological zones, the country has four main agro-ecological zones, those are: the Highveld (high rainfall), the Middleveld (medium rainfall), the Lowveld (low rainfall), and the Lubombo Plateau. These four zones are said to run approximately parallel to one another, from west to east (Swaziland Rural Sector Review, 2011). It is worth mentioning that, though comparable to the Highveld and Lowveld in terms of total land area, the Middleveld represents a more important agricultural zone through its relatively higher crop yields and accommodation of the smallholder farms. Between 1994/95, 40% of the crop growing holdings were located in this zone as compared to 28% and 24% in the Highveld and Middleveld zones, respectively. The Lubombo Plateau, between 1994/95, is said to be located in only 8% of the total land area, and had only 9% of the small-scale holdings (Magagula and Faki 1999). According to the Swaziland Rural Sector Review (2011), the country is traversed by four major river systems, which have high hydroelectric potential and are

increasingly used for irrigation. In the past years, the rainfall pattern has reportedly become more and more uncertain, characterised by periods of drought and intense heat. This situation has contributed to crop failures.

Regarding climatic conditions, the climate is generally sub-tropical with a high degree of variability. In terms of the temperatures, there are steep temperature and precipitation gradients correlating with the fall in altitude of 1200 metres over a distance of 80 kilometres. On average, the maximum and minimum monthly temperatures range from 22° C and 11° C in the Highveld and 29° C and 15° C in the Lowveld. Approximately 80% of the precipitation falls during the summer months that is October to March, as thunderstorms and frontal rains. It is estimated that the average annual rainfall in the Highveld is about 1,400 millimetres, in the Middleveld 860 mm, in the Lowveld about 560 mm, and on the Lubombo it is about 890 mm (World Vision Swaziland, 2010).

3.1.2 Context

Since Swaziland is predominantly a rural country, agriculture plays a very important role in the country's economy. Agriculture plays a significant role in terms of its contribution to the country's GDP and the majority of the population depends on agriculture as its primary livelihood source. As part of the National Development Strategy, the government has integrated agricultural and rural development as a central element of the National Development Strategy as a way strategic way of meeting the country's developmental goals. On the other hand, through its Government Program of Action 2008-13 (GPA), the government places agriculture at the centre of the economic growth agenda, with much focus and emphasis on intensification and diversification of smallholder agriculture and food security as the pillars for poverty alleviation. This Government Program of Action of 2008-13 is aligned with the other two poverty alleviation strategies, that is, Poverty Reduction Strategy and Action Program (PRSAP) which were approved in 2007 (Swaziland Rural Sector Review, 2007).

Since agriculture plays an important role in the country's economy, massive efforts have been made by the government to increase investments in the agricultural sector. It is argued that despite all of that, these investments have produced limited results. The agricultural sector continues to face significant development challenges, those challenges are that productivity

remains low, food production has failed to keep pace with population growth, and food insecurity is rising, especially in rural areas. As a result, the World Bank committed itself to consider stimulating rapid and sustainable rural growth by carrying out a Rural Sector Review intended to identify actions that could contribute to broad-based agricultural development and poverty reduction in Swaziland. Swaziland government and World Bank also agreed to narrow the scope of the Rural Sector Review by focusing on promising opportunities for raising productivity in the small-scale farming sector and better integrating smallholder farmers into markets.

3.2 Economy

There are many developmental challenges facing the Swaziland government. The challenges range from poverty, HIV and AIDS, unemployment and the removal of international preferential markets for sugar and textiles. Further to that, the Swaziland economy has slowed down from 2.1% in 2004 to 1.8% in 2005, and predicted to decline further up to 2009 against the static population growth of 2.9% (Swaziland Industrial Development Company [SIDC], 2007). It is argued by the Ministry of Economic Planning and Development (2006) that this continuing trend is further complicated by the increasing poverty in the rural areas, where about two-thirds of the population, derive their living through agriculture. Only about 30% of the rural population have enough to eat and the other 70% depends on off-farm income. As a result, the government of Swaziland has realised that rural development is a priority, as the rural residents are capable of agricultural and other activities for generating incomes and national broad-based growth. Huge investment now is on infrastructure, extension services and technology, markets, social and financial services. These huge investment strategies have focused on food security which is a key to alleviating poverty (Dlamini, Masuku and Dlamini, 2008).

In the Africa Research Bulletin (2011) it was reported that Swaziland's gross national income per capita of US\$2,600 (2008) qualifies it as a lower-middle-income country (LMIC). Swaziland is well-integrated economically, as a result, Swaziland benefits from a sub-regional political economy through its membership in the Southern African Development Community (SADC), the Common Market for Eastern and Southern Africa (COMESA), the Southern African Customs Union (SACU), and the Common Monetary Area (CMA). Swaziland, through its structural integration in southern African markets has benefit quite tremendously. Between the period of 2008-2009, import

duties that were obtained through SACU trade accounted for 60% of government revenues.

South Africa is a vital trading partner and a main source of foreign direct investment due to Swaziland's SACU membership. In terms of Swaziland's merchandise imports and exports, South Africa accounts for almost 80% and 30% of these. It is argued by scholars that close economic ties between the two countries, and dependence of Swaziland's economy on that of South Africa, imply that Swaziland's prospects for a sustained economic transformation and macroeconomics stability are, of necessity, situated in the context of changes in the performance of the South Africa economy.

According to Magagula and Faki (1999) Swaziland economy continues to underperform, this is a reflection of both the impact of the global economic crisis and key obstacles to growth. Looking at the country's GNP, the country's per capita GNP, at slightly over US\$1,000, is the fifth highest in the SADC region even though the country accounts for less than half a percent of the region's population.

It is stated (Africa Research Bulletin, 2011) that while real GDP growth is expected to have inched up to 2% in 2010, the rebound is moderate and has mostly been driven by public consumption. It is further argued that the country also continues to underperform in relation to its counterparts in the Southern African Customs Union (SACU), reflecting an overvalued exchange rate, continued structural impediments to growth and the heavy toll of HIV/ AIDS on economic activity. The country's economic outlook indicates a moderate growth, averaging 2% over the medium term. The inflation rate has slowed in recent months, it was 4.5% in October 2010, and is shown to remain moderate over the medium term.

3.2.1 Income Distribution

In terms of the Gini coefficient, the distribution of income in Swaziland is highly unequal, as reflected in a Gini coefficient of 0.6 (2007 data). It is stated that per capita income is roughly four times lower in rural areas than in urban areas. Food consumption in rural areas is about one-half as high as food consumption in urban areas. The poorest twenty percent of the population consume only 4.5% of the national income, while the richest twenty percent consume fifty six percent. Employment opportunities becomingly increasingly scarce and

very limited due to population growth which outstrips the rate of job creation (Swaziland Rural Sector Review, 2007).

3.2.2 Incidence of Poverty

It has been found that 63% of the population lives below the poverty line. This is a finding revealed in the 2009/10 Swaziland Household Income and Expenditure survey (SHIES) regarding poverty levels in Swaziland. Poverty is very widespread, it is 75% in rural areas and 49% in urban areas and about 21% of the population is chronically food insecure (FAO/WFP, 2008). The recent global events, such as soaring food and grain prices and increasing oil prices, have presented additional challenges for Swaziland's rural poor (Swaziland Rural Sector Review, 2007).

3.3 Agricultural Sector

3.3.1 Agriculture in the National Economy

Swaziland economy depends largely on agriculture. The sector is still the largest employer which provides work for approximately 70% of the population. Agriculture also accounts for a significant share of exports although agriculture's contribution to GDP has decreased from about 16 percent (1992) to 8 percent (2008). Three quarters of the country's total exports are made up of edible concentrates, sugar, textiles and wood pulp. The huge contribution made by agriculture to employment and exports indicates that the importance of the sector in the Swazi economy is much greater than would be suggested by its modest share of GDP (Swaziland Rural Sector Review, 2011).

In a May 2007 Special Report, it is stated that the agricultural sector in Swaziland contributes to the livelihoods of 80 percent of the population, the sector also provides raw materials for the largely agro-based industries. Maize accounts for roughly 86 percent of the entire land area cropped on communal Swazi National Land. It remains the staple food and is grown by the vast majority of rural households. Swazi National Land where almost 78 percent of the population lives and subsists, is marked by low productivity, low levels of commercialisation, relatively low incomes and increasing poverty. It is no longer characterised by self-sufficiency as it used to be. Only two thirds of all agricultural land is used for livestock and the remainder is devoted to arable agriculture and forestry (Special Report, May 2007).

Interventions by the World Vision Swaziland of 2010 are having a positive impact under difficult circumstances. World Vision Swaziland (WVS) has facilitated the formation of a Bee Keepers Association which currently has 15 members. The training along with material to build hives was provided and individual bee keepers have up to 17 hives and they are gradually increasing their business. The honey is harvested many times in a year. Each hive produces about US\$67 worth of honey per harvest and the honey is sold to a local company for processing. This kind of activity is very profitable since it helps farmers to diversify, keeps some youth in rural areas and sustainably uses the extensive forest resources available (World Vision Swaziland, 2010).

3.3.2 Apiculture in Swaziland

Apiculture as a cash “crop” is a relatively new concept in Swaziland, especially for rural farmers. Its introduction has been necessitated by the drought and other climatic changes in the country. These climatic changes have negated traditional crop production, thus the introduction of beekeeping.

3.3.2.1 Background on Beekeeping in Swaziland

It is important to note that there is scarce literature on beekeeping in Swaziland, very little attention has been paid on beekeeping, but the government is beginning to pay some attention on beekeeping due to the crucial economic role it plays in alleviating poverty, employment creation and income generating. The most useful, crucial and detailed information on beekeeping is only found on the regional situational analysis on beekeeping. To support these claims, it is stated in the situational analysis document that beekeeping in the country has not yet been fully developed to optimize its potential. This is despite the declaration of this sector as an important agro-business enterprise for rural development.

Swaziland is endowed with natural and man-made forests. The major part of the country's highlands in the Hhohho and Shiselweni regions is covered by gum/grandis man-made forests which are used for timber. These plantations are both owned by local companies and the large multinational corporations. The Lowveld has a vast natural environment which in some of the areas is not yet disturbed. About 71.1 percent of the country's area is covered by the forests (CSO, 2000). Production of honey has a complimentary effect to the vegetation and hence the promotion of bee farming in the country has a significant potential. Experience has shown that the domestication of bees plays a crucial role in minimising the incidence of forest fires, which is a great

threat to the local forestry industry, despite the provision of valuable income for those involved in this business (Situation Analysis of Beekeeping Industry, n.d.).

The Ministry of Agriculture and Co-operatives (MOAC) supports the development of bee farming in the country and at least 3, 000 farmers were trained by the Ministry in the introduction to bee-keeping. But out of this number it was found that less than 10 percent of the farmers are still active in bee farming. In general, the majority of the farmers perceived this kind of enterprise as a hobby and as a result the average number of hives per farmer was less than five. It was established that the lack of adequate technical support, lack of market information, un-organized marketing channels and the high fragmentation of the bee farmers were the major challenges. Further to that, lack of understanding about the honey production industry meant that aspiring commercial entrepreneurs would not get support for loans from the financial banks.

The WK Kellogg Foundation (WKKF) played a crucial role by supporting the development of the beekeeping industry in the country in 1997 through IDEAA I working with the Tikhuba Communities in the Lubombo Region. The initiative by the WK Kellogg Foundation in developing programs on economic opportunities, such an initiative has been up-scaled to cover most parts of the country. The main thrust of the current initiative is to uplift the profile of bee-farming as an important economic driver through generating relevant information, capacity building and further creating institutional measures that could foster and sustain the growth of this industry (Situation Analysis of Beekeeping Industry, n.d).

3.3.2.2 Beekeeping history in Swaziland

Beekeeping was first started in the late 1980s and its thrust was in diversifying local agriculture production and addressing the poverty situation. It was spearheaded and developed through the support from the donor community. One of the donor communities who were part of the initiative was the Israeli Government which supported the training of the extension officers. Local officers attended medium-term training in Israel, as part of the training exchange program; they will then come back and train other extension staff and the farmers. A Bee School at the Lutheran Farmer Training Centre (LFTC) in the Hhohho region was born out of this partnership with the donor community and passionate individuals that pioneered beekeeping in the country. The major objective of this school was to support training on bee-keeping by providing participants with

practical education that would enable them to quickly engage in bee-keeping (Situation Analysis of Beekeeping Industry, n.d).

The small-holder farmers in the rural areas were main group that was targeted for bee-keeping. They will undergo one-week of training in the introduction to bee-keeping at the Bee School. The local agricultural system is zoned into 17 Rural Development Area (RDA) programs which cover the four regions (Hhohho, Manzini, Shiselweni and the Lubombo Plateau) in the country. To intensify the extension support to the farmers, each RDA was supposed to have at least one Officer who would be adequately trained in bee keeping to provide support to the farmers that were trained, however only a few specialists are still visible.

3.3.2.3 Beekeeping Groups

In Swaziland, there is a National Beekeeping Association called Lujilo LweMaswati. The association is made up of members from bee-keepers from the whole country. This association has a national executive committee that is tasked to co-ordinate and promotes all beekeeping in the country. This includes facilitating training for aspiring beekeepers and helping in developing markets for the honey. This committee, as stipulated in their terms of reference, should have representatives from all the four regions in the country which should facilitate communication and feedback between the national body and the regional membership.

There are other small beekeeping groups that are scattered all over the country. These groups came as a result of donor support that was given to these communities to engage in beekeeping as an income generating project. The Lutheran Farmer Development Foundation (LFDF), Red Cross, Yonge Nawe and the WKKF Program were amongst major stakeholders that supported beekeeping. The WKKF Program is closely working with the Lubombo Beekeepers Trust and the Luju LweMvelo in the Ngwempisi area.

3.4 Beekeeping Production

It was estimated, in 2008, that 83 tonnes of honey were produced in the country (Technoserve, 2008). This comprised of honey from both the small-holder farmers and the commercial farmers. The precise calculation of honey production in the country is very difficult since farmers are

presently not well organised and do not keep adequate records. As a result, the calculation was based on information obtained from the farmers and confirmed by the Extension Service Staff in the different areas. This information was gathered based on the number of farmers, the number of hives held, the average harvest load per hive and the average number of harvests in the year. The number of bee hive colonies fluctuates a lot due to swarming which is caused by inadequate management and sometimes difficult weather conditions.

To understand the honey production situation in the country it is imperative to present the scenario on the basis of the country's regional experience so that one can understand the situation of honey production. The interviews conducted with the key beekeeping stakeholders indicated that presently the performance of the different areas depends on the intensity of bee-keeping extension support that the communities receive from the MOAC staff. Due to Government budget constraints, a rapid diminishing of the rural coverage of the extension service has been seen. This has led to the reduction in the number of beekeeping training courses that were provided to the small-holder farmers. From the data that was found from various regions, production from the small-holder farmers was estimated to be about 30 tonnes. But data was not readily available from some areas in the Hhohho Region, which is the main focus of the present study. The three areas like Manzini, Shiselweni and Hhohho have the highest honey producing areas in the country. The interviews conducted indicated that these areas have large manmade eucalyptus trees and the natural vegetation. Again, these above mentioned areas usually get better rainfall as they are in the highveld. The average harvest load per hive was around 18kg. There is a new trend that is developing whereby the farmers enter into agreements with the forest companies to establish appropriate apiaries within the plantation to take advantage of the tree blooms. It was discovered that in these areas, a farmer has at least three harvests in a year. The Lubombo Region was established to lag behind in production. The Region is semi-arid and lacks a wide diversity of the vegetation that can sustain the bees throughout the year. As a result, it was established that the farmers on average do not harvest more than two times in a year. The average harvest load per hive was established to be estimated at 13kg (Situation Analysis of Beekeeping Industry, n.d.).

3.4.1 Commercial Beekeeping

In the country, commercial beekeeping is beginning to emerge and presently there are at least three commercial bee-keeping groups managing about 1,900 hives. These three commercial beekeeping groups are the Mavimbela Brothers, TPT and Sunnyside. They manage apiaries within the Mondli

Paper Eucalyptus Plantations in the Hhohho Region. These commercial beekeepers use langstroth hives and practice migratory bee-keeping most often to the citrus plantations in Ngonini and Tambuti. The present number of hives in these plantations is still minimal despite the commitment from the local forestry industries to support beekeeping.

3.4.2 Beekeeping Farmers

Farmers that have undergone training in basic beekeeping since the beginning of the beekeeping section are estimated at over 3, 000 according to MOAC. But the reality is that less than ten percent of these farmers are still active bee keepers. Investigations have revealed that the lack of meaningful extension support, inadequate market information and the lack of organized market systems were the major constraints. Despite the availability of starter kits from the training, the majority of farmers had problems with managing the hives. Some of them would not catch any colony and in this way give up at the end. Swarming incidents were also reportedly high.

3.4.3 Beekeeping Training

Training is provided by the Beekeeping Section in the MOAC. There are three stages of such training with each taking a week. The basic training course gives information on the bee behaviour and biology, bee catchment and some elements of hive management. The second stage focuses on the management of the hive by providing practical experience in hive inspection, disease prevention and control and some bit of harvesting. The last stage focuses on harvesting, processing and the marketing of the honey. The problem is that there are a limited number of service providers that have the competence to provide the training. There is also a lack of follow up support, this has meant that a number of the training beneficiaries are unable to keep up with this initiative when they get back home. The WK Kellogg Foundation Program is collaborating with MOAC as a way of coming up with strategies that interested farmers go through training get the necessary support (Situation Analysis of Beekeeping Industry, n.d.).

3.4.4 Vegetation

Through the assessment carried out indicated that the eucalyptus and the natural vegetation are the major sources of nectar flow for the bees in the country. The local vibrant timber industry is the

main potential catalyst for the speedy transformation of the local beekeeping industry. Besides the provision of the adequate flora, these can also help develop sustainable industries for the production of essential equipment such as the hives.

In the Shiselweni Region, a young farmer, who was interviewed during the pilot study, has entered into a mutual agreement with a farm owner in the area to manage a meaningful apiary to cross-pollinate over ten hectares of avocado trees for export to the European markets. It is being hoped that the accreditation of the farm and the annual audits by these European markets will form a positive base for this beekeeper.

3.4.5 Fruit Trees Production

Certain individual small-holder farmers realised the important contribution of fruit tree production to honey production. These are making efforts to establish orchards that will provide bee flora and also fruits for an extra income. MOAC has a Horticulture Section that offers extension advice on fruit tree production to the farmers. Presently there are some individual bee-keepers that have planted about 40 trees of mango, citrus and litchis. It is said the strengthening of the horticulture production effort will enhance the economic contribution of the local honey and also facilitate the differentiation and positioning of this local honey product. The Ngonini and Tambuti Citrus plantations have also expressed willingness to support local farmers to migrate their colonies into their plantations during the tree bloom (Situation Analysis of Beekeeping Industry, n.d.).

3.4.6 Beekeeping Products

Currently, honey is the major product that is derived from beekeeping. This is differentiated into honey comb and bottled honey for marketing. Other products that are also produced by the local beekeepers are propolis, pollen and royal jelly. Propolis is being used by the farmers as a bait to catch colonies.

3.5 Marketing

The local market for honey is very fragmented. Last year the market was estimated at 105 tonnes a year. In 2004, 20 tonnes of honey was imported from South Africa. Swaziland did not have any exports. The random visits that were made in the local shops also indicated that some of this honey was coming from Zambia and it is estimated that almost 38 tonnes of the locally produced honey was

absorbed by the local market. The informal market for the honey accounts for 60 percent of the whole local market. In a study done in Ethiopia by Girma, Tegegne, Ballo and Alemayehu (2008) on the challenges and opportunities for market-oriented apiculture development in Ethiopia, they found that beekeepers have established a long tradition of selling honey-comb to passer-by consumers on the main Addis-Djibouti highway. As a result, 97% of the honey is sold to traders at the village level.

The supermarkets and chemists are the main markets for the local honey. The Spar chain stores (Mbabane, Matsapha, Manzini & Nhlanguano), Shoprite (Mbabane & Manzini), Pick'n'Pay at Ezulwini and the Score chain stores are the main markets for the local honey. The local commercial beekeepers have standing orders with the supermarkets.

An economic analysis has shown that the benefits from the local honey production are high. Existence of the prevailing market price and existence of a wide natural environment can ensure that the farmer derives a meaningful income from this venture. It was found that using the local Topbar hive, a farmer can derive a net income of approximately E600 (US\$85.70) per hive. If the farmer processes the honey manually, his net income increases to approximately E900 (US\$120.85) per hive. This means that if the small-holder farmer is developed to manage at least 20 hives, he can possibly generate a net income of over E18, 000 (US\$2,417.00) in a year. This income can further be improved through the introduction of the langstroth hive which is more productive. This is a meaningful income stream which can greatly contribute to the standard of living for the family (Situation Analysis of Beekeeping Industry, n.d.).

3.6 Conclusion

As the majority of the local people live in the rural areas, commercial beekeeping can provide job opportunities and meaningful income to the rural communities to alleviate the level of poverty. It is essential however to elevate the profile of this industry through creating effective national and regional trade linkages to improve the marketing and processing.

The focus of this chapter was based on the background about Swaziland, its location, GDP, population, inflation, exports and imports of apiculture, job creation and apiculture, and apiculture in Swaziland as a whole.

CHAPTER FOUR

STUDY RESEARCH METHODOLOGY

4.1 Introduction

Research methods may be understood as, all those methods or techniques that are used for conducting research. Research methodology is the way to solve research problems systematically. Therefore, research methodology is not only concerned with research methods but also with the logic behind the use of a particular method vis-à-vis other research methods (Rao, 2005).

The current chapter focuses on the methodological procedures that were used in the study. It should be noted that a theoretical perspective cannot be used in isolation from the research activity and research methods are of little use without any theoretical activity. The focus was on research models used, sampling in respect of apiculture SMMEs, data gathering tools (questionnaires) and data analysis.

4.2 The Research Paradigm

According to Punch (2006) paradigm means a set of assumptions about the social world and about what constitutes proper techniques and topics for inquiring into that world. In simple terms, it is a way of looking at the world. It's a view of how science should be done and is a very broad term encompassing elements of epistemology, theory and philosophy, along with methods. Paradigms can also be thought of as perspectives or positions which might lie behind a piece of research. Adopting a particular perspective in any piece of research might have an influence on the researcher in many ways, that is, it might influence both the discourse and the methods of the research, for an example, favouring the use of certain methods and 'prohibiting' certain others. A theory is a set of propositions which together describe and explain the phenomenon being studied.

4.3 Research Design

Punch (2006) states that research design, on a practical level, means connecting the research questions to data. It is the basic plan for a piece of empirical research and includes five main ideas, that is, strategy, conceptual framework, who or what will be studied, and the tools and procedures to be used both for collecting and for analysing empirical materials. Punch (2006) further states that there

are five main questions for research design. They are as follows:

- What strategy will be followed?
- Within what time frame?
- From whom will the data be collected?
- How will the data be analysed?

Rao (2006) says preparation of the design for the research project is known as “research design”. A research design is “the formulation of a design for collection and analysis of data relating to the research problem with minimum cost and maximum results”. It is a conceptual structure used to conduct research. Research design, in practical terms, is the “blue print” of what the researcher is going to do in future.

Research designs (Creswell, 2009), on the other hand, are plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection and analysis.

This plan involves several decisions, and the overall decision involves which design should be used to study the topic. Informing this decision, Creswell (2009) further argued, should be the world view assumptions the researcher brings to the study; the procedures of inquiry (called strategies); and specific methods of data collection, analysis, and interpretation. The selection of a research design is also based on the nature of the research problem or issue being addressed, the researcher’s personal experiences and the audiences for the study.

4.4 Important Features of a Research Design

It is a plan (Rao, 2006) that specifies the available resources (time, money, people, material) and types of information needed for a research study. It is a strategy that specifies what method(s) will be used to analyse the data. However, a research design, Rao argues, found very effective in one situation may be found useless in another situation. Therefore, according to Rao (2006), one single design cannot serve the purpose of all types of research problems.

4.5 Methods of Data Collection

In the current study, the researcher will use a quantitative method. The quantitative dimension is provided by the use of questionnaires, both structured and open-ended questions.

4.5.1 Quantitative Method

Quantitative research describes, explains and tests relationships. It examines cause-and-effects relationships. The diagnostic feature is that the techniques used always generate numerical data. The data collected is then analyzed. The analysis can be simple in mathematical terms involving the production of tables, charts and diagrams. This type of interpretation is referred to as descriptive statistics. In the present study, descriptive statistics will be used to analyze data. Descriptive statistics will be used to organize data in various ways to point out where data values tend to concentrate and help distinguish the largest and the smallest values through the use of frequency distribution. Further to that, frequency distribution tables will be used in the present study to present and analyse data. Statistical percentages will also be used to analyse data.

Quantitative research (Creswell, 2009) is a means for testing objective theories by examining the relationship among variables. Creswell (2009) says that these variables can be measured on instruments, so that numbered data can be analysed using statistical procedures. Bless, Higson-Smith, and Kagee (2006) say that quantitative research methodology relies upon measurement and uses various scales. Bless et al. (2006) further argue by saying numbers form a coding system by which different cases and different variables may be compared. Numbers, according to Smith et al, numbers have the advantage of being exact and can be analyzed using descriptive and inferential statistics.

4.5.2 The Questionnaire

The questionnaires were used to collect data. Sekaran and Bougie (2010) say a questionnaire is a pre-formulated written set of questions to which respondents record their answers, usually within rather closely defined alternatives. They further argue by saying that questionnaires are an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest. Questionnaires can be administered personally, mailed to the respondents, or electronically distributed. In this study, questionnaires were used as an instrument to collect data, and they were administered personally, on a face to face basis.

Questionnaires are regarded as a series of questions, each one providing a number of alternative answers from which the respondents can choose. Questionnaires generate data in a very systematic and ordered fashion. In a questionnaire, the responses to the questions are quantified, categorized and subjected to statistical analysis. At the early planning stage, the researcher should

decide which kind of analysis (either descriptive or inferential statistics) s/he intends to apply because this will determine the way the questionnaire is designed (White 2000).

Personally administered questionnaires, according to Sekaran and Bougie (2010), have an advantage to:

- Establish rapport with the respondents while introducing the survey
- Provide clarification sought by respondents on the spot, and
- Collect the questionnaires immediately after they are completed

In that sense, there is a one hundred percent response rate. Rao (2006) argue that the structured nature, i.e. inbuilt inflexibility, of a questionnaire may limit the usefulness of information collected. But some negative aspects of structured questions, like over-restrictive response possibilities or exclusion of important ones, can be greatly reduced by adding an open-ended option (Bless, Higson-Smith and Kagee (2006). Further to that, Bless et al. (2006) argue by saying that the two types can be used to gain the confidence and co-operation of respondents in different ways. Open- ended questions may relieve the anxiety of respondents of giving “false” answers since they can speak freely. But easy, structured questions will also reassure participants who recognize that they are able to answer precise, straightforward questions without difficulty. These are some of the advantages of questionnaires.

Bless, Higson-Smith and Kagee (2006) state that the disadvantages of both open-ended questions and structured questions, is that the open-ended questions are not based on already conceived answers. They are, in this way, well suited to exploratory studies, case studies, or studies based on qualitative analysis of data. Further to that, answers may be quite complex and not easily comparable to those of other respondents. Their recording and scoring give rise to some difficulties. In contrast, structured questions, by restricting the number of possible answers, may produce bias if important categories are left out (Bless, Higson-Smith and Kagee, 2006).

For the purpose of this study, questionnaires (Appendix 2), were administered to the apiculture farmers (SMMEs) in Hhohho region from Swaziland. The reason for administering questionnaires is that respondents could read and respond to the questions on their own as they were literate enough.

The process was time consuming but worth the effort.

4.5.3 The Pilot Study

A pilot study involves testing the actual instrument on a small sample taken from the community for whom the programme is planned. The advantage of conducting a pilot study is that it allows the evaluator to identify any difficulty with the method or materials and appropriateness of any instruments that have been developed. A pilot study assists in testing for reliability and validity of the instrument. According to Cooper and Schindler (2006), reliability is a characteristic of

measurement concerned with accuracy, precision and consistency. Validity, according to Cooper and Schindler (2006), is the ability of the instrument to measure what it is supposed to measure.

In this study, a pilot study was undertaken involving five beekeepers, from Shiselweni region in Swaziland. Three of these beekeepers were individual semi-illiterate rural subsistence farmers and the two were small-scale commercial farmers. Although not used in the final survey, the test was used to determine whether the questions related to both subsistence and commercial farmers. It also helped determine the simplicity of the questions, in terms of the level of understanding, as the population of the study is located in a rural area. A question on the involvement of Government in terms of assisting in legal support and access to legal entities was introduced after four of the five farmers pointed out that it is a challenge for them to access formal markets as they have legally binding contracts which they do not understand.

4.6 Location of Study

The study was conducted in the northern Hhohho region. The Hhohho region covers the western part of Swaziland from the north and running southwards towards the centre of the country. The researcher, being a Swazi citizen, is familiar with phenomenon under investigation and that stimulated an interest in the researcher.

4.7 Population and Sampling Framework

According to Bless, Higson-Smith and Kagee (2006) the entire set of objects or people which is the focus of the research and about which the researcher wants to determine some characteristics is called; the population. On the other hand (Sekaran and Bougie, 2010), say that population refers to the entire group of people, events or things of interest that the researcher wishes to investigate. It is the group of people, events, or things of interest for which the researcher wants to make inferences based on sample statistics.

Swaziland is divided into four regions, namely, Hhohho, Manzini, Lubombo and Shiselweni. Therefore, the population for the current study is all the Swaziland Beekeepers in rural Northern

Hhohho region. There are 384 beekeepers in total in the Northern Hhohho region only (Ministry of Agriculture and Co-operatives, internal memorandum 4 June 2010).

A sample is a subset of the population. It comprises of some members selected from it. In other words, some, but not all, elements of the population form the sample. It is a technical accounting device to rationalize the collection of information, to choose in an appropriate way the restricted set of objectives, persons, events and so forth from which the actual information will be drawn (Sekaran and Bougie, 2010; Bless, Higson-Smith and Kagee, 2006).

Probability sampling was used in the study and systematic random sampling. Systematic random sampling was applied in selecting the sample size, (Sekaran and Bougie, 2010); it involves every n th element in the population starting with a randomly chosen element between 1 and n . Since this was a 6 month project and there were deadlines to be met, a total of 40 beekeepers were randomly selected from a total number of 384 beekeepers in the Hhohho region. A random starting point was selected and every 10th member of the population was selected to form part of the sample. The 10th member was chosen given the formula n th = N/n , where N is total population of 384 and n is sample size of 40.

4.8 Coding and Data Entry

Sekaran and Bougie (2010) state that data coding involves assigning a number to the participants' responses so they can be entered into a database. Sekaran and Bougie (2010) suggest that it is a good idea to use a coding sheet first to transcribe the data from the questionnaire and then key in the data. This method, according to Sekaran and Bougie avoids confusion, especially when there are many questions and a large number of questionnaires as well. Nominal measurement, as a classification system, was used in the current study. Nominal scale, as a coding system, was used in the present study. Nominal scale (Sekaran and Bougie, 2010) is a scale that categorizes individuals or objects into mutually exclusive and collectively exhaustive groups and offers basic, categorical information on the variable of interest. The codes were formulated and thereafter transferred from the questionnaires onto data sheets. On data entry, once the responses were coded, they were transferred onto a datasheet and analysed through the use of a Statistical Package for Social Sciences (SPSS) software programme. All the questions in the questionnaire were allocated a number so that they could be easily identifiable. Once this process was completed, checking for inconsistencies was done.

4.9 Editing Data

Once the data coming from the questionnaire was keyed in, it was edited. Illogical, inconsistent or illegal data and omissions in the information returned by the respondents was attended to. According to Sekaran and Bougie (2010), if there are inconsistencies in the responses that can be logically corrected, they should be rectified and edited at this stage. For the current study, the researcher ensured that all questionnaires were properly answered and that there were no inconsistencies in the questionnaire.

4.10 Data Processing

Once data processing was completed, tables and figures, were used to present and summarise the quantitative aspects of data and a statistical analysis was presented to infer some properties of the population from the sample results.

4.11 Computer Programming and Statistical Techniques

The services of a computer programming specialist, who assisted in the formulation of a

programme, were employed so that statistical analysis could be done. Through this process, tables indicating frequency distribution and percentages of the responses in the questionnaire were drawn up. Inconsistencies were checked for.

4.12 Conclusion

This chapter has discussed the procedures and statistical techniques for data gathering. Those procedures and techniques include the research paradigm, the research design, important features of research design, methods of data collection, quantitative method, questionnaires, pilot study, choice of locale, population and sampling framework, coding and data entry, editing data, data processing and computer programming and statistical techniques have all been discussed in the

present chapter. In the next chapter, the focus will be on data presentation, using descriptive statistics.

CHAPTER FIVE

PRESENTATION OF DATA

5.1 Introduction

This chapter discusses the findings of the research and the results in relation to the questions in the questionnaire. Data has been analysed and presented using descriptive statistics based on the SPSS programme outputs. The results are based on the following research problem statement, objectives and research questions. A structured questionnaire was used in the collection of data.

5.1.1 Research Problem Statement

Can formulation of good business strategies enhance productivity, improve profitability thus ensuring sustainability, which will inadvertently lead to improved livelihoods for SMME apiaries in northern Swaziland?

5.1.2. Research Objectives

- To find out why the production levels of honey are significantly low and how productivity can be increased.
- To establish the challenges faced by bee keepers in the marketing of honey. • To determine government's involvement in the improvement and support of beekeeping industry, locally and internationally.
- To determine the consumers and other end users so as to align product with their needs.

5.1.3 Research Questions

- Why are the production levels of honey significantly low?
- What are the challenges faced by bee keepers in the production and marketing of honey?
- What is the government support service to the beekeeping industry in Swaziland?

- Who are the consumers and other-end users of bee products?

5.2 Demographic Profile

5.2.1 Age of Respondents

Age	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20-30	10	24.4	24.4	24.4
31-40	12	29.3	29.3	53.7
41-50	8	19.5	19.5	73.2
Above 50	11	26.8	26.8	100.0
Total	41	100.0	100.0	

Table 5.1: Age of Respondents

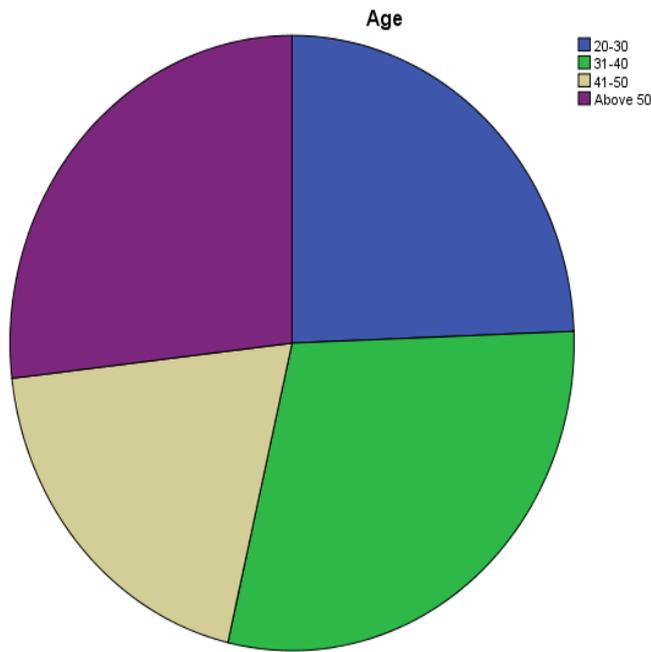


Figure 5.1: Respondents' Age

Table 5.1 and figure 5.1 show that a majority of the respondents, 12 (29.3%), are between the age of 31 and 40 years. The other 11 (26.8%) are above 50 years and the least numbers, 8 (19.5%) are between the age of 41-50 years.

5.2.2 Gender

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	17	41.5	41.5	41.5
Female	24	58.5	58.5	100.0
Total	41	100.0	100.0	

Table 5.2: Gender of Respondents

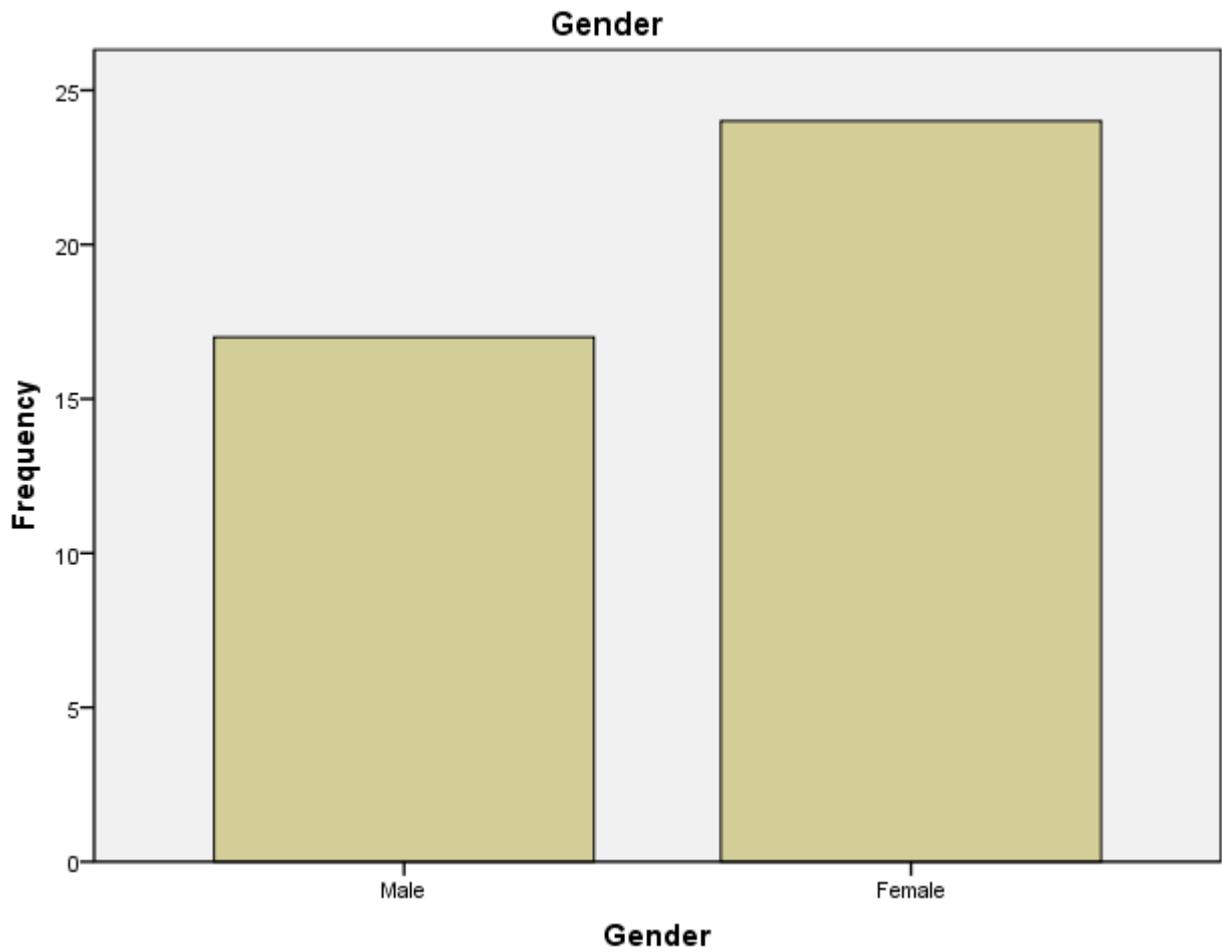


Figure 5.2: Respondents' Gender

Looking at the above table, 24 (58.5%) are females and 17 (41.5%) are males.

5.2.3 Educational Qualifications

Highest Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Valid High School	13	31.7	31.7	31.7
Diploma	10	24.4	24.4	56.1
Degree	11	26.8	26.8	82.9
Other	7	17.1	17.1	100.0
Total	41	100.0	100.0	

Table 5.3: Highest Education Level

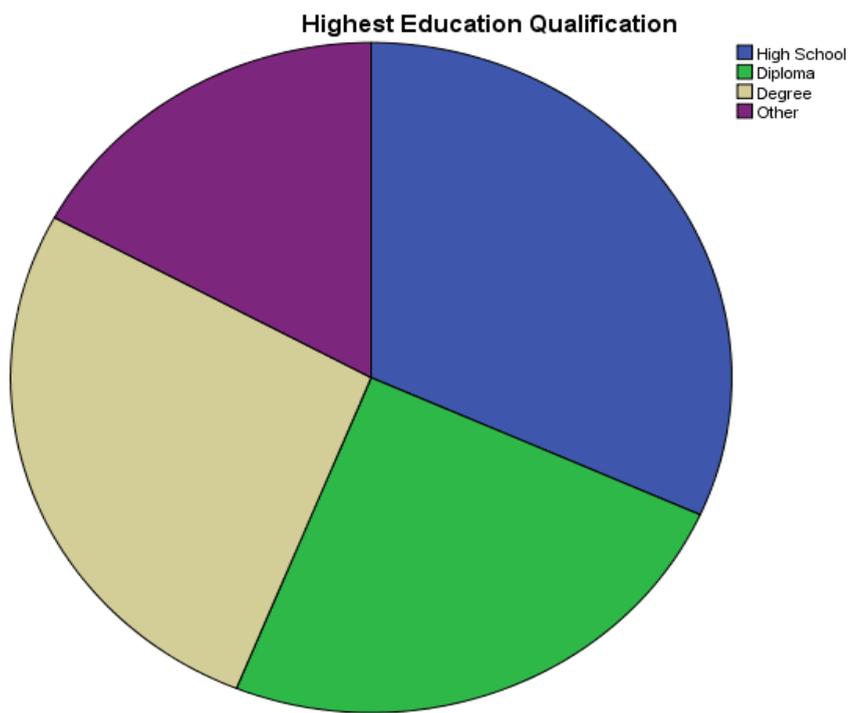


Figure 5.3: Highest Education Level

From the above table 13 (31.7%) are high school leavers, 11 (26.8%) have a university degree and 10 (24.4%) hold a diploma.

5.2.4 Number of years in beekeeping

No. of Years in beekeeping		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5	17	41.5	41.5	41.5
	6-10	19	46.3	46.3	87.8
	Above 10	5	12.2	12.2	100.0
	Total	41	100.0	100.0	

Table 5.4: Years in Beekeeping

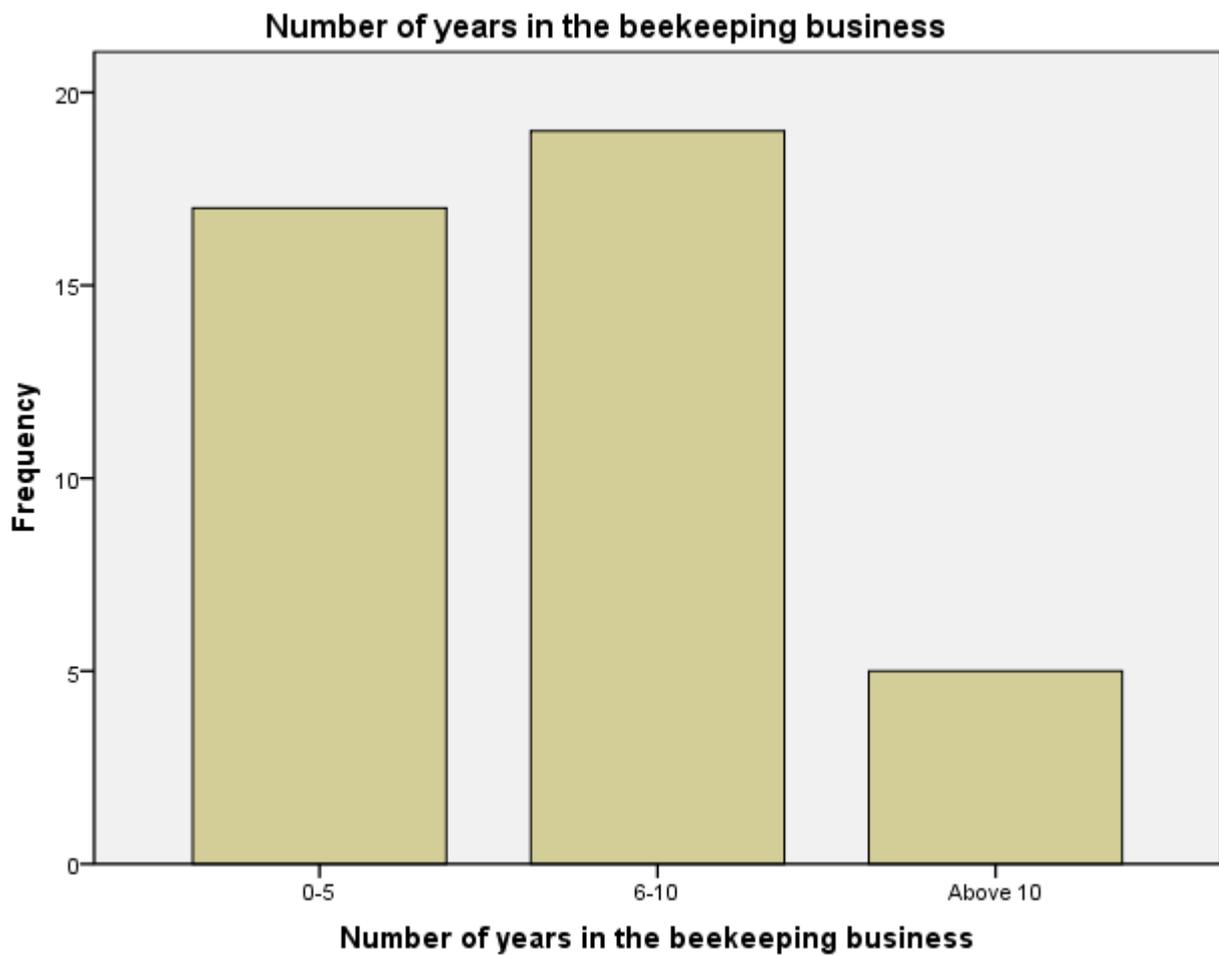


Figure 5.4: Years in Beekeeping

The frequency bar chart shows that a majority, 19 (46.3%), of the respondents have six to ten years of experience in beekeeping, followed closely by 17 (41.5%) who have zero to five years of experience. Very few 5 (12.2%) have more than ten years of experience.

5.2.5 Beekeeping as a Source of Income

Beekeeping as source of income		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	22	53.7	53.7	53.7
	No	19	46.3	46.3	100.0
	Total	41	100.0	100.0	

Table 5.5: Source of Income

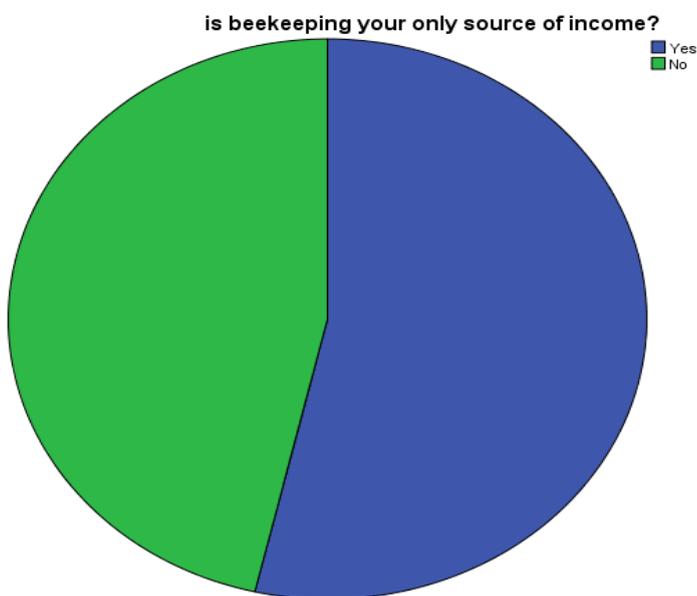


Figure 5.5 Source of Income

The majority of respondents 22 (53.7%) have indicated that beekeeping is their only source of income whilst the other 19 (46.3%) respondents indicated that it is not only their source of income.

5.2.6 Other Sources of Income

Some of the beekeepers have other sources of income. Some are agricultural economists, secretary, farmers, shop owner, dairy, raising chickens, accountant, teacher, technician, self employed-selling fruits and vegetables, as well as chickens and milk. This indicates that some beekeepers do not rely on beekeeping as their only source of income.

5.2.7 Employment Before Beekeeping Business

Employment before beekeeping business		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	48.8	48.8	48.8
	No	21	51.2	51.2	100.0
	Total	41	100.0	100.0	

Table 5.6: Previous Employment

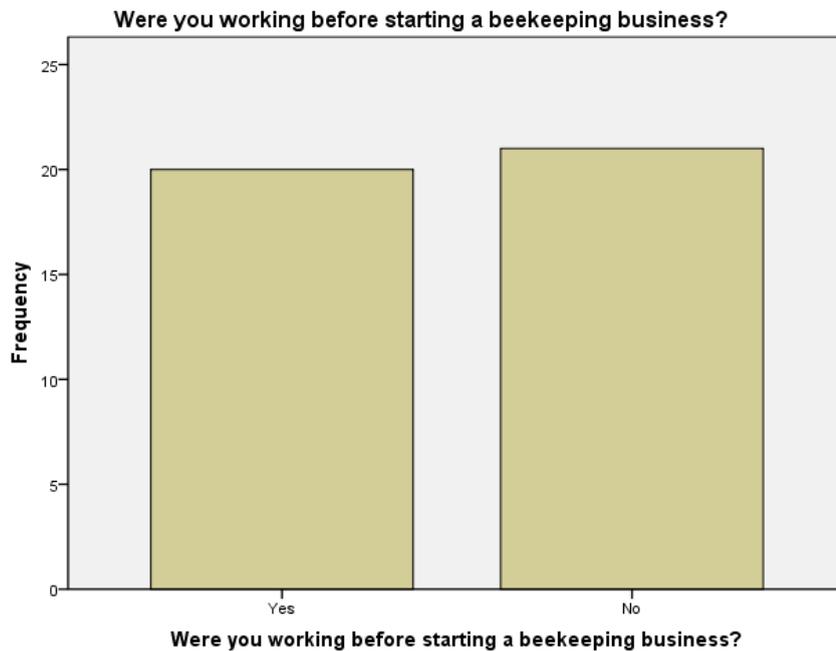


Figure 5.6: Previous Employment

The above table indicates that approximately 21 (51.2%) of beekeepers were not working and the other half, 20 (48.8%) were previously employed before taking up apiculture.

5.2.8 Reasons for Leaving Previous Employment

Some of the reasons given were as follows: early retirement due to ill-health; felt it would give enough money to sustain myself; did not leave my job but I am doing it as a hobby; retired; still employed; lost my job; not enough income from my previous job; retrenched. Very few indicated that they were not employed before starting beekeeping.

5.2.9 Type of Business

Type of business	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Sole trader/Family business	20	48.8	48.8	48.8
Cooperative/Society	18	43.9	43.9	92.7
Company	3	7.3	7.3	100.0
Total	41	100.0	100.0	

Table 5.7: Legal forms of Business

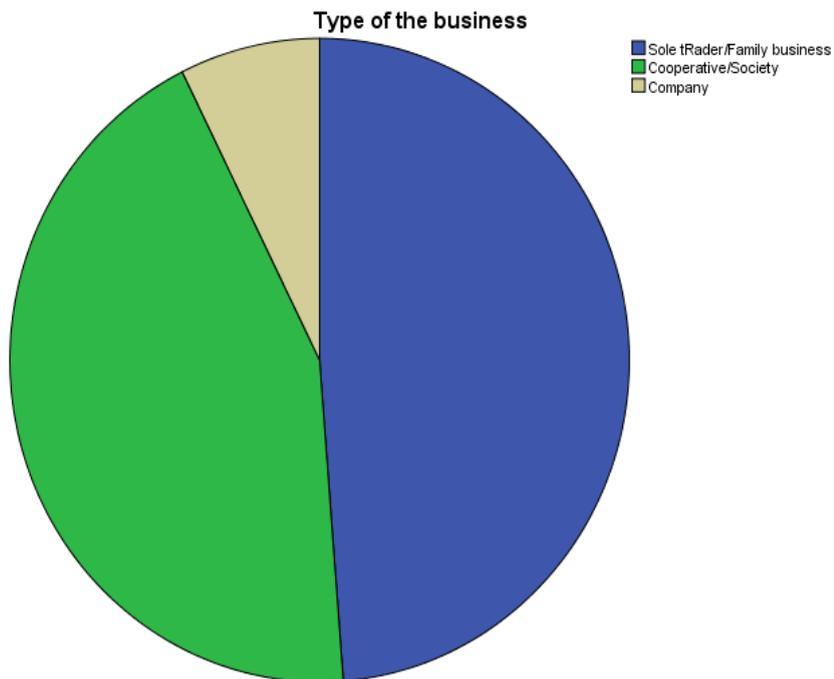


Figure 5.7: Business Types

The table shows that the legal form of the beekeeping business, is mainly sole traders of family business, 20 (48.8%). Co-operatives or Societies make up 18 (43.9%), and 3 (7.3%) shows that they are companies.

5.3. Production Challenges

5.3.1 Land Issues

Access to land	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Own land	14	34.1	34.1	34.1
Renting from relatives	15	36.6	36.6	70.7
Renting from Forestry company	8	19.5	19.5	90.2
Renting from Citrus plantations	4	9.8	9.8	100.0
Total	41	100.0	100.0	

Table 5.8: Access to Land

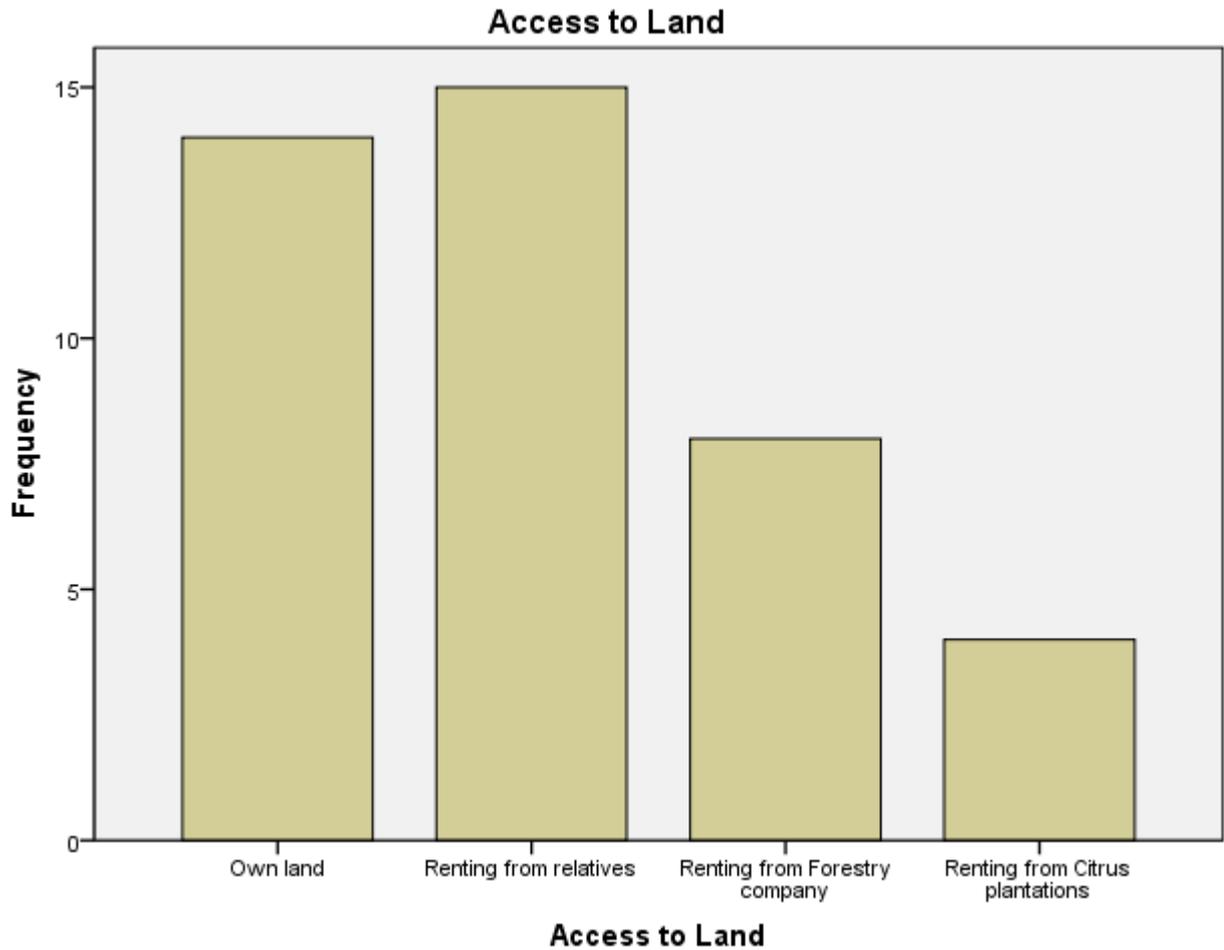


Figure 5.8: Access to Land

A majority of beekeepers 15 (36.6%) rent land from relatives whilst 14 (34.1%) own land. The other 8 (19.5%) are renting from Forestry company, while the other 4 (9.8%) rent from Citrus plantations.

5.3.2 Access to Input

Access to Bees and Equipment		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Purchased Colony	15	36.6	37.5	37.5
	Renting colony from Citrus plantations	4	9.8	10.0	47.5
	Absconding colonies	7	17.1	17.5	65.0

Inadequate equipment used in Beekeeping	4	9.8	10.0	75.0
Lack of proper disease management	5	12.2	12.5	87.5
pest control	1	2.4	2.5	90.0
Animal disturbance (Domestic and/or wild animals)	4	9.8	10.0	100.0
Total	40	97.6	100.0	
Missing System	1	2.4		
Total	41	100.0		

Table 5. 9: Access to Bees and Equipment

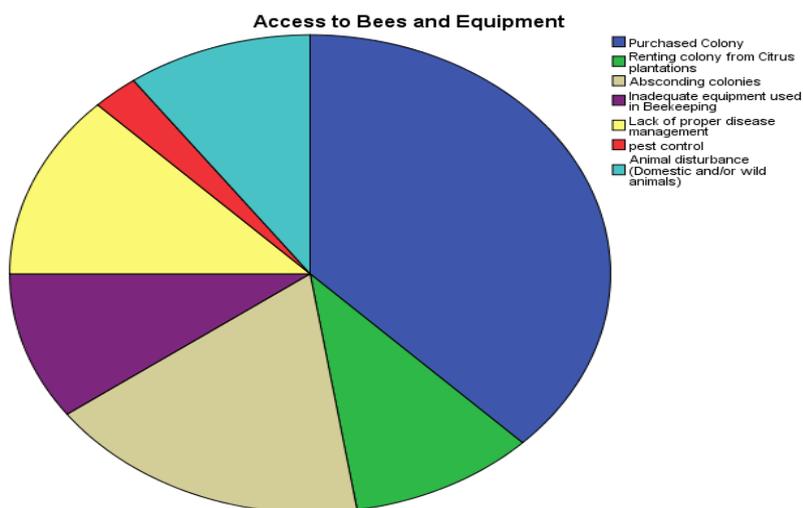


Figure 5.9: Access to Bees and Equipment

Table 5.9 above shows that, 15 (36.6%) of respondents have indicated that they purchase the colony, while 4 (9.8%) rent colony from Citrus plantations. Other challenges indicated include, the absconding of colonies 7 (17.1%), the 5 (12.2%) indicated lack of proper disease management. Inadequate equipment 4 (9.8%), animal disturbance 4 (9.8%) and lack of proper disease management 1 (2.4%) , were amongst the minor input challenges that the respondents faced.

5.4. Marketing Challenges

5.4.1 Pricing

Pricing challenges	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Price set by buyers	13	31.7	31.7	31.7
Price set farmer	13	31.7	31.7	63.4
Price set by Government regulators	14	34.1	34.1	97.6
Other	1	2.4	2.4	100.0
Total	41	100.0	100.0	

Table 5.10: Price Setting

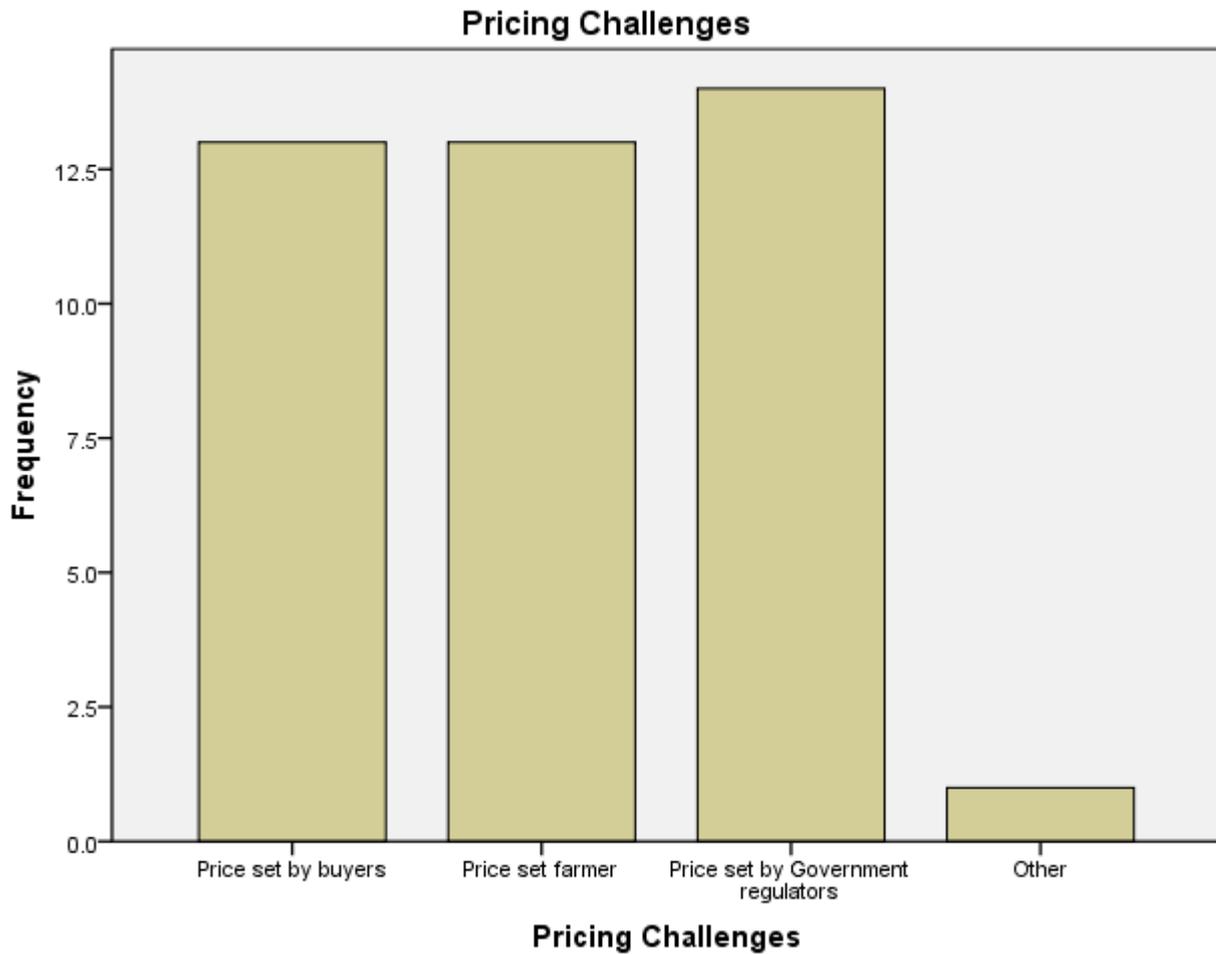


Figure 5.10: Price Setting

Most of the beekeepers 14 (34.1%) indicated that prices are set by the government, 13 (31.7%) states that prices are set by the buyers, the other 13 (31.7%) indicated that prices are set by the farmers.

5.4.2 Logistics

Packaging and distribution		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Access to packaging	4	9.8	10.0	10.0
	Branding of product	8	19.5	20.0	30.0
	Access to transport	10	24.4	25.0	55.0
	Access to infrastructure (Storage facilities)	10	24.4	25.0	80.0
	ease of communication	8	19.5	20.0	100.0
	Total	40	97.6	100.0	
Missing	System	1	2.4		
Total		41	100.0		

Table 5.11: Packaging and Distribution

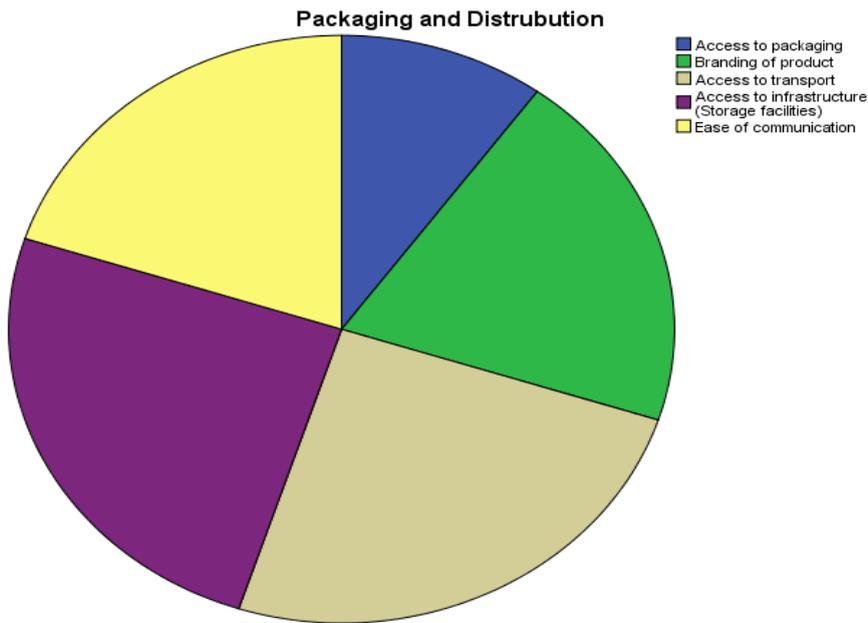


Figure 5.11: Packaging and Distribution

An equal number of respondents 10 (24.4%), have indicated access to infrastructure (storage facilities), and access to transport as the main marketing and distribution challenges. Of note is that 8 (19.5%) indicated branding of product and ease of communication, and 4 (9.8%) indicated access to packaging.

5.4.3 Marketing Accessibility

Market Accessibility	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Competition from other SMME farmers	14	34.1	34.1	34.1
Lack of collaboration with other SMME farmers	6	14.6	14.6	48.8
Competition from big companies	10	24.4	24.4	73.2

Lack of knowledge of market	6	14.6	14.6	87.8
Lack of access to formal markets	5	12.2	12.2	100.0
Total	41	100.0	100.0	

Table 5.12: Barriers to Entry

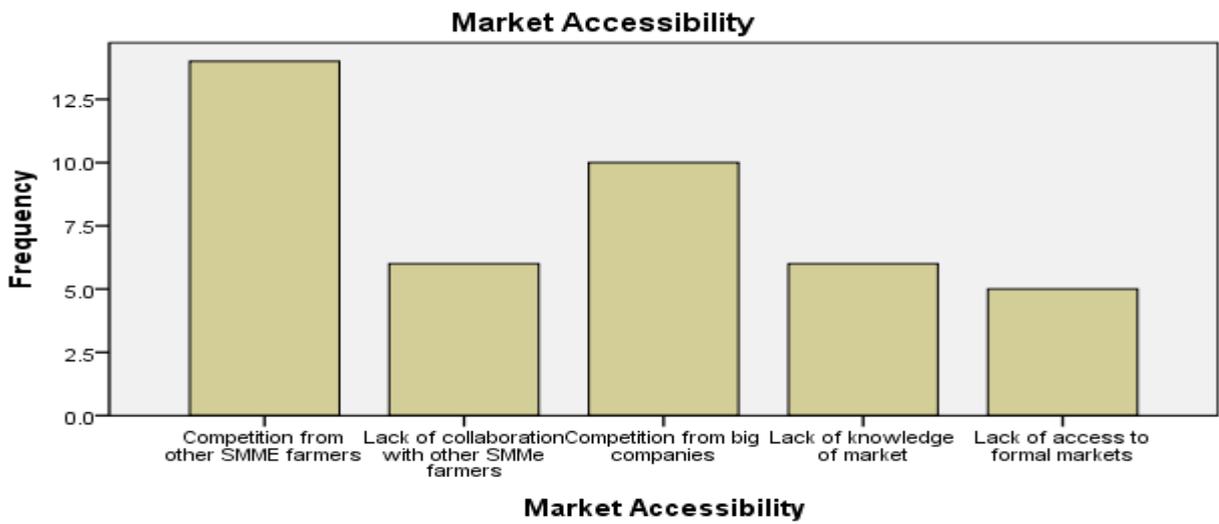


Figure 5.12: Barriers to Entry

Table 5.12 shows that, a majority, 14 (34.1%), of respondents reported competition from other SMME farmers as a challenge to accessing market share, and the minority of respondents, 5 (12.2%), reported lack of knowledge about markets.

5.4.4 Product Diversification

Product Diversification		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Honey	21	51.2	52.5	52.5
	Beeswax	7	17.1	17.5	70.0
	Propolis	3	7.3	7.5	77.5
	Honey, Beeswax & Propolis	9	22.0	22.5	100.0
	Total	40	97.6	100.0	
Missing	System	1	2.4		
	Total	41	100.0		

Table 5.13: Products Sold by Beekeepers

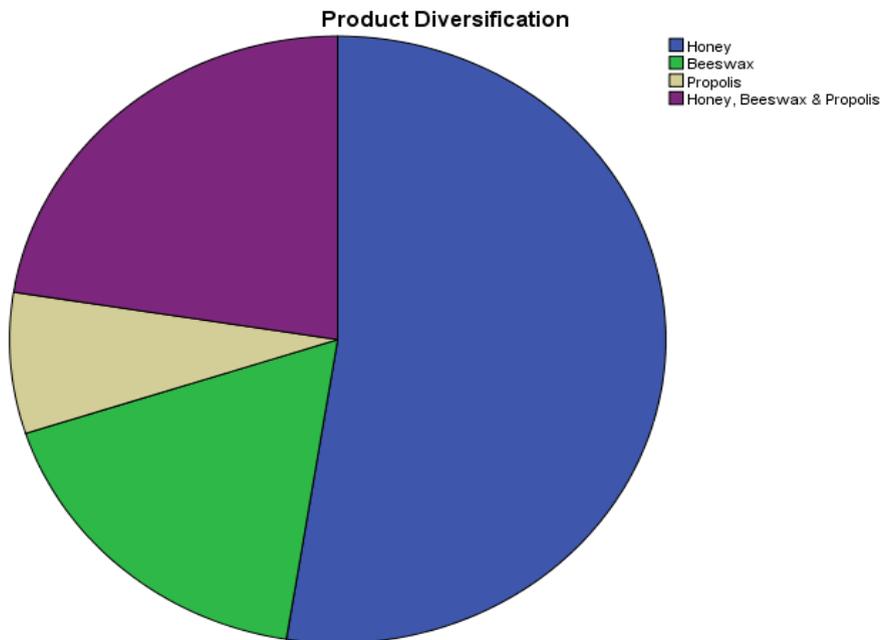


Figure 5.13: Products Sold by Beekeepers

From the above, 51.2% respondents indicated honey as the only product they produce and 9 respondents (22%) have diversified products, which include honey, beeswax and propolis.

5.5 Government Support

5.5.1 Government Ministerial Role

Government support		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Offers funding	9	22.0	22.5	22.5
	Assists in access to financial services	3	7.3	7.5	30.0
	Organizational or Industry support	4	9.8	10.0	40.0
	Ease of business registration	11	26.8	27.5	67.5
	Offers all the necessary resources and equipment	3	7.3	7.5	75.0
	Provides logistical support	5	12.2	12.5	87.5
	Improves access to legal entities	1	2.4	2.5	90.0
	Access to government interventions and technical aid	2	4.9	5.0	95.0
	Offers support to business management skills development	2	4.9	5.0	100.0
	Total	40	97.6	100.0	
Missing	System	1	2.4		
Total		41	100.0		

Table 5.14: Government Services

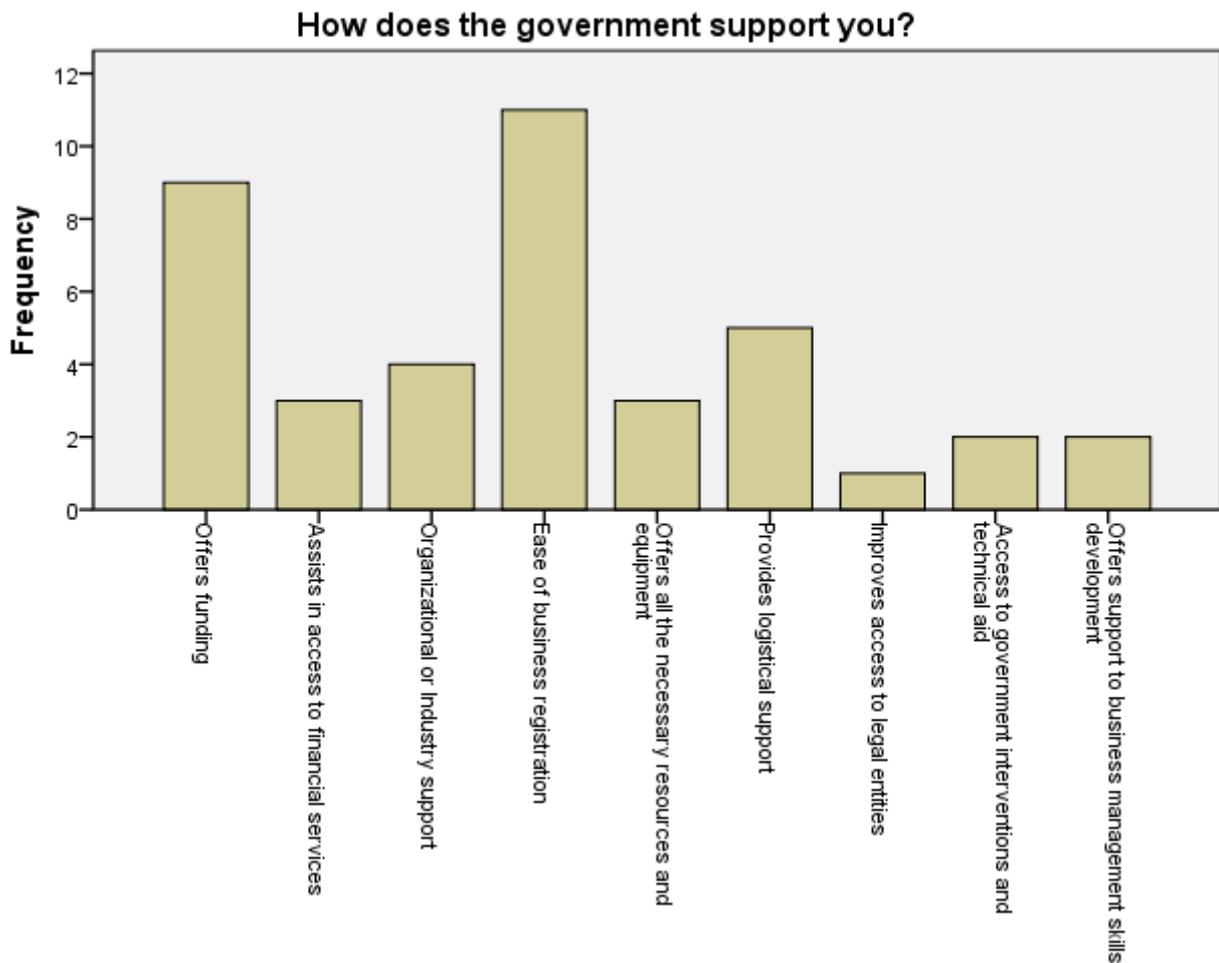


Figure 5.14: Government Services

Table 5.14 shows that a majority of respondents 11(26.8%) indicated ease of business registration, as the major government service they were offered by the Swaziland government. Government was seen to be lacking in interventions and technical aid as well as business management skills development as 2 (4.9%) respondents said they were offered those services by government. Only 1 (2.4%) respondent indicated that government offered improved access to legal entities.

5.6 Consumers

Buying of end products	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Individual buyers	20	48.8	48.8	48.8
Other local competitors	2	4.9	4.9	53.7
Local companies	11	26.8	26.8	80.5
Export	2	4.9	4.9	85.4
Local manufactures	6	14.6	14.6	100.0
Total	41	100.0	100.0	

Table 15: Buyers of End Product

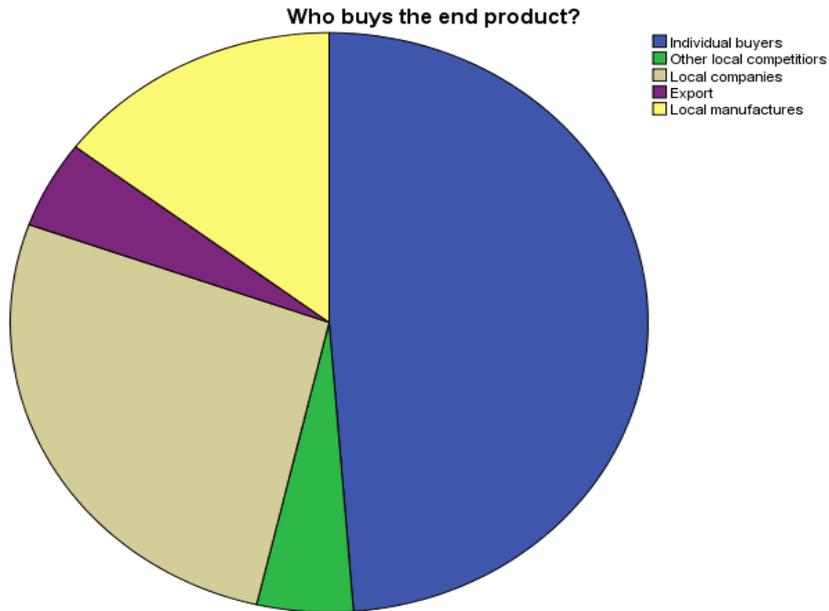


Figure 5.15: Buyers of End Product

A majority of respondents 20 (48.8%) indicated individual buyers, 11 (26.8%) indicated local companies, 6 (14.6%) indicated local manufactures, an equal number of respondents, 2 (4.9%), indicated export and local competitors.

5.7 Conclusion

The purpose of this chapter was to present data collected, for the study. General overview of the data reveals that SMME apiculturists face a number of business challenges, which result in the unsustainability of their businesses. The results are analysed or discussed in the next chapter.

CHAPTER SIX

DISCUSSION OF RESULTS

6.1 Introduction

The previous chapter was based on the results of the analysis of the questionnaire. This chapter discusses the findings of the research, the findings will be discussed in relation to the research objectives and the literature that was discussed previously.

6.2 Demographics of Beekeepers

6.2.1 Age

Results show that 29.3% of the respondents fall between the age of 31 and 40 years. The other 26.8% are above 50 years, therefore there is no statistical difference between the two age groups who are involved in beekeeping. The other respondents 24.4% are between the ages of 20-30 years. This is also an indication that both young and old are involved in beekeeping.

In a study done by Moniruzzaman and Rahman (2009) in Bangladesh, they found that 61% of the beekeepers in the study areas were between 31-59 years. People between the ages of 15-30 years were about 37% of the total. There was only one beekeeper that was above 60 years.

6.2.2 Gender

The results show that 58.5% are females and 41.5% are males. It is therefore noted that more women are also involved in beekeeping although it is usually perceived a male occupation.

6.2.3 Educational Qualifications

The results show that 31.7% of the respondents have a high school education and 26.8% have a university degree, the other 24.4% have diplomas. This shows that people who are seriously involved

in beekeeping are those with a high school education. But it is also interesting to note that even those with university degrees and diplomas are involved in beekeeping. This dispels the notion that beekeeping business is mostly for those who are illiterate, poor and unemployed. The data also suggests that formal employment, or jobs, are scarce in Swaziland as a result more qualified people are working in apiculture to survive.

In a study done by Tadesse and Phillips (2007) in Ethiopia on post harvest handling and processing of honey, they found in their sampled household heads that 19% are illiterate. The other 8.5% have attended adult education, 23% attended grade 1-4 and 37% were in grade 5-8. Other respondents 11.5% were in grade 9-12, and 1 percent completed grade 12. The average for the whole sample was close to grade 4. In the study done by Moniruzzaman and Rahman (2009) on beekeeping in Bangladesh, they found that 100% of the beekeepers have taken it as a main occupation. Besides this beekeeping business, they also worked in agriculture, petty business, fisheries, van pulling in the off-season of honey production from the month of June to October.

6.2.4 Number of years in Beekeeping

Results show that 46.3% of respondents have six to ten years of experience in beekeeping. The other 41.5% of respondents have 0-5 five years of experience. Very few respondents, 12.2% have more than ten years of experience.

6.2.5 Beekeeping as a Source of Income

Some people engage in beekeeping business due to the fact that they are unemployed, therefore, they engage in beekeeping so that they can make a living out of it. Results show that 53.7% have indicated that beekeeping is their source of income. The other 46.3% respondents engage in beekeeping not because it is their source of income. It is therefore assumed that these respondents do beekeeping business to supplement their income and they do beekeeping as a hobby.

6.2.6 Other Sources of Income

When respondents were asked to state whether they have other sources of income, some have

indicated that they do have other sources of income. Some of them are also involved in other businesses, while others are involved in professional jobs.

6.2.7 Employment Before Beekeeping Business

The results indicate that 51.2% of beekeepers were not working elsewhere. The other 48.8% were working to gain extra income. Therefore, there is a significant difference between those who are working and those that are not working. This indicates that beekeeping is a type of business that is open to everyone irrespective of the level of education and occupation.

6.2.8 Reasons for Leaving Previous Job

Some of the reasons given were as follows: early retirement due to ill-health, retirement, lost their jobs; some felt it would give them enough money to sustain themselves. But there are those who did not leave their jobs, they just do it as a hobby; others stated that they do beekeeping to supplement their income. Very few indicated that they were not employed before starting beekeeping.

6.2.9 Type of Business

The results show that 48% of the respondents are sole traders or it is a family business. The 43.9% is a cooperative/society business, and 7.3% indicated that it is a company. The majority of beekeepers are sole traders and others operate as co-operatives.

6.3 To Determine Production Challenges

This section is based on the discussion regarding challenges faced by beekeepers. The first question was based on the first objective of the study, that is, to find out why the production levels of honey are significantly low.

The first question asked respondents to state the challenges facing them in beekeeping. In the study, 36.6% of the respondents indicated that they rent the land from relatives, while 34.1% own land.

The other (19.5%) are renting from Forestry Company. In Swaziland, rural people do not own more than 5 hectares of land (FAO/WFP Crop and Food Supply Assessment Mission to Swaziland, 2008). Therefore, the results suggest that beekeepers do not have land of their own since they are renting land from relatives or from forestry companies. It is often said that Swaziland is overpopulated, that is the reason why people have to rent the land. It is assumed that the renting of land is due to the fact that there is a shortage of land in Swaziland now. In a study done by Rodriguez, Riley, Shafron and Lindsay (2003) in Australia found that the majority of beekeepers operated from small holdings. Rodriguez et al (2003) in their research findings further found that around 62% of beekeepers reported that they had used public land for honey production in the past five years. Rodriguez et al. (2003) further indicated that nationally, an estimated 33% reported that their use of public land for honey production had not changed in the past five years. Around 19% reported their use to have decreased and 10% reported use to have increased. An estimated 92% of operators in the large businesses group used public land in the past five years. In contrast, only 53% of beekeepers in the small businesses group used public land. In addition, 36% of large businesses reported an increase in use of public land, compared with only 7% of the small businesses increasing use. In another study done by Tadesse and Phillips (2007) in Ethiopia on ensuring small scale producers in Ethiopia to achieve sustainable and fair access to honey markets, they found that most of the sampled households owned less than 2 hectares of land.

The second question that was asked in relation to this objective was based on the challenges regarding access to bees and equipment. The results have shown that 36.6% of the respondents stated that they purchase the colony. The other 17.1% of respondents indicated that the other challenge they have is that of absconding colonies, while 12.2% of respondents indicated a lack of proper disease management. Others, 9.8%, indicated inadequate equipment used in beekeeping and the other 9.8% indicated animal disturbance of their aviaries. The results show that beekeepers are faced by a number of challenges regarding access to bees and equipment. In a situation analysis of beekeeping industry that was done in Botswana, it was found that one of the most prevalent problems faced by bee farmers in Botswana is that of absconding colonies (Situational Analysis of Beekeeping Industry, n.d.). In this study, several causes were also identified, those were: invasion by ants and hive beetles, animal disturbance, effects of drought, lack of proper bee management, bee pirate invasion, and human disturbance. It is argued that most of these, however, can be minimized by strengthening management practices (Situation Analysis of Beekeeping Industry, n.d.). In another study that was done by Abebe and Puskur (2010) on Beekeeping sub-sector challenges and

constraints in Atsbi Wemberta District of eastern zone, Tigray Region, Ethiopia, they found that utilization of improved beekeeping practices were influenced by different constraints. The work done by Abebe and Puskur (2010) revealed that; drought, honeybee pests and disease, shortage of beekeeping materials, death of colony, lack of adequate extension support, marketing problem, shortage of bee forage, lack of beekeeping skill and reduction of honeybee colonies; were found to be the major constraints in the beekeeping development of the district, in their order of importance.

6.4 To Establish Marketing Challenges

The first question was based on pricing challenges facing beekeepers. The aim of this objective was to find out who determines the pricing of their products that they produce through beekeeping. The results shows that 34.1% of the respondents indicated that prices are set by the government, other respondents 31.7% stated that prices are set by the buyers, while the other 31.7% indicated that the prices are set by the farmers. The results shows that beekeepers are not price-setters, the government, buyers as well as established farmers determine the prices. Due to the fact that there is one major buyer in Swaziland, eSwatini Kitchens, government regulates the price as a measure of curbing exploitation (Technoserve, 2008). In a study done by Tadesse and Phillips (2007) in Ethiopia, they found that the market for honey is not well developed. This is due to a limited number of buyers relative to the number of producers and poor market infrastructure and information. They argued that because the buyers were few, prices of honey were largely determined by them. Their findings are contrary to the findings of the present study.

Tadesse and Phillips (2007) further argue that price variation might be the result of spatial and temporal differences. It actually depends on the quality of the honey, the colour of honey and consumers' preference and choice. The price of honey, in general, is very high in towns and during the off-seasons. It is also very low in remote rural areas and during harvest seasons. During the harvesting season, the price decreases greatly when supply is high in October to December and in April to May. It increases during the off-seasons. Light coloured honey fetches the best prices.

The second question was based on packaging and distribution, respondents were asked to state their challenges in relation to access to packaging, branding of product, access to transport, access to infrastructure (storage facilities) and ease of communication. Some (24.4%) of the respondents

indicated access to infrastructure (storage facilities) as a main challenge. A further 24.4% of respondents indicated access to transport as a challenge, while 19.5% indicated branding of product and 19.5% of the respondents indicated ease of communication as a challenge when it comes to issues of distribution and packaging. The results indicate that access to storage facilities and packaging are large challenges. In the developing countries, lack of proper infrastructure remains a huge challenge, that is why beekeepers find it difficult to meet the international standards in terms of packaging and distribution of beekeeping products. In a study done by Tadesse and Phillips (2007) in Ethiopia on post harvest handling and processing of honey, they found that the majority of the sampled farmers (79%), used plastic containers and pots which are made from clay to store honey for short periods. According to Tadesse and Phillips (2007) other farmers use traditional containers such as sacks, animal skin and tincans to store honey, which are technically inappropriate storage facilities as they result in serious quality losses.

Bradbear (2009) further stated that beekeepers sell their honey in villages and town markets in whatever containers are available. Bradbear further states that in poor places, this may be in drink bottles and that containers for marketing honey must be lightweight, of low cost and preferably see-through so that customers can see the product. He further argues that the glass is mostly used as a container for selling honey, but glass jars are heavy, breakable and cannot be stacked together when empty. Plastic containers, Bradbear argues, are much lighter and stack well. But in many countries, they are difficult to obtain. Usually, the honey is packed in glass jars with a packed weight of 450 or 500 grams. Bradbear (2009) further argues that different nations have their own norms for honey marketing. It is said that in central and eastern Europe, honey is sold in one kilogram jars and in the Caribbean, recycled rum bottles are the accepted norm for honey marketing. Small amounts are often sold in foil or plastic containers of about 25 grams, principally for the catering trade. This is also a popular way to sell honey to people who cannot afford to buy larger volumes.

The literature also indicates that inadequate extension services and lack of skills training for beekeepers affects processing and packaging. Regarding packaging, there are just a handful of processors who package hive products in internationally approved and recommended materials. The most commonly used packaging materials are plastic jerry-cans and other plastic containers. Some industries have improved glass containers but these are only used by well organised processing plants like Reko Industries Ltd. For easy handling, transportation and grading, honey should be packaged in air-tight-lidded plastic buckets. The packaging materials for large-scale honey and other

hive products for export are not readily available. It is said that those available are only affordable to large processors (Ugandan Apiculture Export Strategy, 2005).

The third question was based on the challenges relating to market access, with particular reference to competition from other SMME farmers, lack of collaboration with other SMME farmers, competition from big companies, lack of knowledge of market and lack of access to formal markets, etc. The results show that 34.1% of respondents reported competition from other SMME farmers as a challenge. Some (24.4%) of the respondents have indicated that competition from big companies is a threat, 14.6% indicated lack of collaboration with other SMME farmers, while 14.6% reported a lack of knowledge. The results show that competition from farmers, from big companies, lack of collaboration and inadequate knowledge are the biggest challenges facing individual beekeepers. In the literature, Bradbear (2009) contends that issues facing traders include no linkages between producers and buyers, poor diversity of retail packaging materials, lack of appropriate marketing information, poor linkages between producers and buyers, little coordination between beekeeping and other sectors, including the horticulture, forestry, health, and environment sectors, little or no product promotion, few social linkages with other producers and few social linkages with potential buyers.

The fourth question was based on product diversification and respondents had to indicate the products derived from beekeeping. Results shows that 51.2% of the respondents indicated honey was the sole product, 22.0% indicated honey, beeswax, and propolis as products derived from beekeeping. Some 17.1% indicated beeswax and only 7.3% sold propolis only. It should be noted that these are not the only products that are derived from honey as indicated by the respondents. There are quite a number of them, even the literature shows that there are more products that arose from beekeeping. According to Bradbear (2009), the other products derived from keeping bees are Pollen, Propolis, Royal jelly, Bee brood and Bee Venom. Beekeeping is an on-farm diversification strategy that has significance to rural livelihoods in some of the most economically and environmentally marginalised regions of the world (Seagle, 2008).

6.5. To Determine Government's Role

Another primary objective of the study was to determine government's involvement in

the improvement and support of beekeeping industry. Some of the respondents (26.8%) indicated ease of business registration, the other 22% of respondents indicated that government offers funding, while 12.2% indicated provision of logistical support by the government. The results show that government is offering the necessary support needed by beekeepers. Some respondents (9.8%)

indicated that government offered organizational and industry support yet management skills and

technical aid were cited by 4.9% of the respondents, respectively. The support that the government offers varies according to the needs of each individual beekeeper. In a Situation Analysis of Beekeeping Industry in Lesotho, it is stated that government support service to beekeeping industry in the country is through the Beekeeping Section of the Ministry of Forestry and Land Reclamation (MFLR). In Lesotho, the Beekeeping Section is manned by two people, that is, the Head of the Section and Conservation Officer. The Section offers training to prospective honey producers, they also assist in the importation of production inputs, assist in the extraction of honey as well as finding markets for honey. This is the support offered by the Section to beekeepers. The Section further assists in bee removals and elimination of destructive colonies. It also assists honey producers to source donor funds. In Swaziland, The Ministry of Agriculture & Co-operatives (MOAC) supports the development of bee farming in the country. According to the Ministry's Beekeeping Specialist, at least 3, 000 farmers were trained by the Ministry in the introduction to beekeeping. But out of this number it was found that less than 10% of them are still active in bee farming (Situation Analysis of the Beekeeping Industry, n.d.).

In a situation analysis of the beekeeping industry that was done in South Africa, it is stated that most beekeeping training is done by white commercial beekeepers associations, sometimes they do it in partnership with tertiary education institutions. The training and development of black beekeepers is mainly done by the ARC through its Beekeeping Development Program which was initiated in 2003. This programme was aimed at targeting at least 5000 beneficiaries, and the aim was to address historical inequities within the South African beekeeping industry and also increase its size by 50%. According to the study that was done by the Agriculture Research Council (ARC), 97% of smallholder beekeepers were trained and had gone through mentored beekeeper development programme. The training of smallholder beekeepers is very critical to the commercialization agenda. It should be noted that these beekeeping training targeting smallholder producers are mainly government funded. There is very little technical support coming from the provincial Departments of

Agriculture (Situation Analysis of the Beekeeping Industry in South Africa, n.d.).

6.6 To Determine Consumers and Other End-users

The objective was to find out who buys the end product. The majority of respondents

(48.8%) indicated individual buyers, whilst 26.8% of respondents indicated local companies, while 14.6% of other respondents indicated local manufacturers, 4.9% indicated export and the other 4.9% indicated other local competitors. It is a concern to note that only 4.9% export their products. Therefore, it is assumed that beekeepers are focusing on serving the local market rather than exporting. In a study done in Ethiopia by Girma, Tegegne, Ballo and Alemayehu (2008) on the challenges and opportunities for market-oriented apiculture development in Ethiopia, they found that beekeepers have established a long tradition of selling honey-comb to passer-by consumers on the main Addis-Djibouti highway. As a result, 97% of the honey is sold to traders at the village level.

On roadside marketing, Bradbear (2009:132) argues that selling honey at a roadside stall or market can bring the advantages of long opening hours and plenty of passing trade, without the overhead costs of a shop. According to Bradbear (2009), roadsides are dusty places and the containers and lids usually benefit from a quick polish every day. It is further stated that since customers will be travelling in vehicles, they may possibly buy larger containers of honey.

6.7 Conclusion

This chapter was based on data analysis and discussion of results. From the findings of the study it has been revealed that there are challenges facing beekeepers in the Hhohho region, Swaziland. The SPSS programme was used to capture and present data in frequency tables, pie charts, graphs and statistical percentages.

CHAPTER SEVEN

CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

The previous chapter discussed results on “business challenges faced by apiculture SMMEs in Northern Hhohho, Swaziland. The study focuses on finding out if formulation of good business strategies can enhance productivity and therefore ensuring sustainability of SMME apiaries. The objectives were to establish marketing challenges and ascertain why production does not meet demand. This chapter will present conclusions and recommendations based on the analysis of results and the objectives of the study.

7.2 General Structure of Study

- **Chapter 1**

This chapter was an introductory chapter that gave the overall summary of the study. The background of the study, problem statement was given, motivation, objectives of the study, research questions, limitations of the study as well as summaries of all the subsequent chapters. The problem statement for the present study was determined to be “Can formulation of good business strategies enhance productivity, improve profitability thus ensuring sustainability, which will inadvertently lead to improved livelihoods for SMME apiaries in northern Swaziland”?

- **Chapter 2**

This chapter was based on the literature review on entrepreneurship, development of entrepreneurship, entrepreneurship and job creation, , historical perspectives of entrepreneurship, cases of success stories in entrepreneurship in Malaysia and India, value creation, and Cooperatives and SMMEs. The challenges facing beekeepers in Swaziland have also been discussed.

- **Chapter 3**

The focus of this chapter is based on the Background and Economy of Swaziland, with

special focus on the Geography and Climate, Economy, Agricultural Sector, Background on Beekeeping in Swaziland, Beekeeping production, Marketing, An economic analysis.

- **Chapter 4**

This chapter was based on research methods used in the present study. Quantitative methods, that is questionnaires, were used to collect data. The target population for the study was the beekeepers in Northern Swaziland, Hhohho region, 41 respondents were randomly selected, as a sample for a population of 384 beekeepers. The SPSS programme was used to capture and analyse data.

- **Chapter 5**

Results were presented using descriptive statistics, such as the use of tables and pie charts. This chapter only presented the data and discussion of results was done in the subsequent chapter.

- **Chapter 6**

The discussion and analysis of results was made with reference to the main objectives of the study. The results were discussed in relation to the literature given in chapter 2 and 3 of the study.

7.3 Recommendations Specific to the Study

Based on the above, the following recommendations were made:

- Facilitating co-operation between beekeepers and plantation companies so that beekeepers can have access to forests for placing their hives, to address the issue of limited access to land suitable for beekeeping.
- Encourage local entrepreneurs to engage in the production of low cost beehives and protection clothing, so as to decrease input costs for the beekeepers, whilst promoting entrepreneurship with the locals.
- Intensive training of honey producers on various production aspects including commercial approaches to honey production, better product hygiene and improved packaging and branding of product.
- Encourage beekeepers to engage in processing of wax as another product (product

diversification) instead of viewing wax as waste material.

- Encourage co-operatives rather than sole traders so as to enjoy economies of scale.
- Facilitate acquisition of processing facilities for rural farmers to counter the monopoly enjoyed by the main processor, eSwatini Kitchens, and therefore regulate pricing.
- Establish a credible and viable formal domestic market, as well as, significantly improve access to formal export markets, through the Swaziland Investment and Promotion Authority (SIPA) platform. The government should liaise with the Republic of South Africa authorities to achieve direct importation into the country without irradiation treatment, as well as liaise with the European Union to secure Third Country access for honey exports into the European Union.
- Swaziland government, through the Ministry of Agriculture and Cooperatives, should have a clear programme and policy to support apiculture.
- Consistency to contractual agreements with producers and buyers should be effected. Government should offer legal support for rural SMME beekeepers, as they tend to be marginalised by big companies, citing disregard to obligations arising from contracts.
- Investigate all possible sources of funding, especially the Regional Development Fund and identify availability of donor funds for rural entrepreneurs' start-up.
- Training of farmers on finance and budget management
- Establish adherence to international honey quality standards

7.4 Possible Future Research

Based on the results of this study, the researcher recommended that further research should be done. This is largely due to the fact that very little research has been done on the challenges facing beekeepers in Swaziland and there is also very little literature available on Apiculture SMMEs in Swaziland. The government of Swaziland is beginning to pay serious attention to apiculture SMMEs in Swaziland since it has been recognised that it can positively contribute to job creation, poverty alleviation and the economy of the country. This study revealed that beekeeping is also done by qualified people. The limitation was that it did not ascertain the area in which these beekeepers were qualified in and why these people are not working in their areas of specialisation. Further research is recommended with regards to that to determine if job scarcity could be the reason.

This research did not look to see if beekeepers were earning enough to survive or not. It is suggested

that further research be done so as to ascertain whether beekeeping can effectively be used as means of reducing unemployment and enhancing sustainable livelihoods. Further research can also look into whether the beekeepers that depend on apiculture as their only income source are actually getting enough to sustain them or there might be a need for other income sources.

The research that has been done on SMMEs in Swaziland has been based on SMMEs that are in the other sectors of the country's economy with no attention being paid to Apiculture SMMEs in Swaziland. This highlights the importance of this research. Therefore, the challenge is on other researchers to take this opportunity of tapping into an area that has all along been neglected by academics. More research needs to be done on a larger scale which will encompass almost all, if not all, beekeepers in the four main regions of Swaziland.

7.5 Conclusion

This study set out to investigate business challenges faced by apiculture SMMEs in Northern Hhohho, Swaziland. It can be concluded that the objectives of the study were met and suitable recommendations specific to the study were made. A number of recommendations for further research that will add value to apiculture in Swaziland were made. In conclusion, it should be mentioned that there are real challenges facing Apiculture SMMEs in Swaziland. Therefore, it is important for the government and its relevant institutions or departments to provide the necessary help apiculture SMMEs need and deserve. Government needs to come up with practical, implementable and viable strategies that will synergistically address the challenges of beekeepers, in order to grow this industry.

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Questionnaires for Beekeepers

A. Biographical Details of Beekeepers

1. Age

20-30	31-40	41-50	Above 50

2. Gender

Male	Female

3. Highest Educational Qualifications

High School	Diploma	Degree	Other (specify)

4. Number of years in the beekeeping business

0-5	6-10	Above 10

B. Employment Details

5. (a) Is beekeeping your only source of income?

Yes	No

(b) If no, state your other source(s) of income:

6. (a) Were you working before starting a beekeeping business?

Yes	No

(b) If yes, why did you leave your job and start a beekeeping business?

C. Type of the business

7.

Sole trader/ family business	
Cooperatives/Society	
Company	

D. Production challenges facing beekeepers

NB: In this section you can tick more than one answer

8. What are the challenges faced by the beekeepers in terms of the following:

(a) Access to Land

Own land	
Renting from relatives	
Renting from Forestry company	
Renting from Citrus plantations	

Other (specify):

(b) Access to Bees and Equipment

Purchased colony	
Renting colony from Citrus plantations	
Abscending colonies	
Inadequate equipment used in beekeeping	
Lack of proper disease management	
Pest control	
Animal disturbance (domestic and/or wild animals)	
Grading/Quality of end product	
Access to processing/ extraction equipment	
Lack of skilled labor	

Other (specify):

E. Marketing challenges facing beekeepers

9. Pricing challenges

Price set by buyers	
Price set by farmer	
Price set by government regulators	

Other
(specify): _____

10. Packaging and Distribution

Access to packaging	
Branding of product	
Access to transport	
Access to infrastructure (storage facilities)	
Ease of communication	

Other
(specify): _____

11. Market Accessibility

Competition from other SMME farmers	
Lack of collaboration with other SMME farmers	
Competition from big companies	
Lack of knowledge of market	
Lack of access to formal markets	
lack of access to markets due to communication challenges	
Preference to informal markets	
Availability of markets	

Other _____
(specify): _____

12. Product Diversification (tick products derived from keeping bees)

honey	
beeswax	
propolis	

Other _____
(specify): _____

F. How does the government support you?

13. Government ministerial role

Offers funding	
Assists in access to financial services	
Organizational or industry support	
Ease of business registration	
Offers all the necessary resources and equipment	
Provides logistical support	
Improves access to legal entities	
Access to government interventions and technical aid	
Offers support to business management skills development	
Availability of Transport	
Availability of communication and technology infrastructure	

Other _____
(specify): _____

G. Who are the consumers or end-users?

14. Who buys the end product

Individual buyers	
Other local competitors	
Local Companies	
export	
Local manufacturers	

Other
(specify): _____

H. Any other comments, challenges or issues raised.



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YAKWAZULU-NATALI

5 October 2011

Mrs BS Masuku (209510763)
Graduate School of Business & leadership
Westville Campus

Dear Mrs Masuku

PROTOCOL REFERENCE NUMBER: HSS/1174/011M
PROJECT TITLE: Business challenges faced by apiculture SMMEs in Northern Swaziland

In response to your application dated 19 May 2011, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.
PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....
Professor Steven Collings (Chair)
HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS COMMITTEE

cc. Supervisor: Dr MA Phiri
cc. Ms W Clarke

Professor S Collings (Chair)
Humanities & Social Sc Research Ethics Committee
Westville Campus, Govan Mbeki Building

Postal Address: Private Bag X54001, Durban, 4000, South Africa

Telephone: +27 (0)31 260 3587/8350 Facsimile: +27 (0)31 260 4609 Email: ximbap@ukzn.ac.za / snymanm@ukzn.ac.za

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