UGANDA APICULTURE EXPORT STRATEGY

By

UEPB AND THE SECTOR COUNTERPART TEAM

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Foreword

Widening Uganda's export base has since the early 1990s been a central policy objective of the Uganda Government economic programs. As a result, Uganda Export Promotion Board (UEPB) has keenly sought to develop strategies that would enable different Ugandan products enter the country's export basket. For this reason, the Board has incessantly sought support from both government and her key export development partners to aid our efforts directed at developing and promoting as many sectors as possible for the export market.

It is against this background that in 2003, UEPB sought support from the Joint Integrated Technical Assistance program (JITAP) to support our efforts at making several sectors export ready. The Commercial insects sector especially bees was seen as one of the potential areas in which many Ugandans all over the country are involved and yet the products hardly featured on the export market. Our call for support from JITAP was met with open approval when in 2004; the program accepted and signed through the International Trade Centre (ITC) MOUs committing resources to develop a strategy to guide the sector for export. I am therefore pleased to forward this Strategy document to all Apiary Sector stakeholders with the hope that together we will implement its provisions and recommendations.

The strategy document is a torchlight towards the future of the sector. It clearly highlights what needs to be done at every level to enable the country exploit sector potential for export and consequently improve the lives of the participating communities.

The Strategy has been developed by the sector stakeholders themselves and for this reason; I want to extend boundless appreciation for their time, intellect and efforts. At the same time, I wish to call upon them that the same public-private sector partnership spirit used to develop it should be invoked and used to implement it. We sadly know of sector strategies that were developed and gathered dust on the shelves simply because resources could not be raised to implement them. This should not happen again and with your support and involvement, it surely won't happen. So let's get going.

Lastly, I would like to express my deep appreciation to ITC for its support towards the formulation of this strategy, the Sector Core Team that worked with dedication to develop this document and the various sector stakeholders who provided assistance and inputs to the strategy development process. I would also like to extend sincere appreciation to the Commonwealth Secretariat for its support through the services of the Senior Trade Promotion Advisor who was attached to UEPB and who immensely contributed to the formulation of this export strategy.

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Florence Kata
Executive Director

Acknowledgements

We would like to register our appreciation and gratitude to all the stakeholders who were involved in the exercise that led to the completion of this document.

The expertise that enabled us complete this task was drawn from UEPB's Market Research & Product Development Division (MPDD); Ministry of Agriculture Animal Industry & Fisheries (MAAIF); The Uganda National Apiculture Development Organisation (TUNADO); United Nations Industrial Development Organisation (UNIDO); Uganda National Bureau of Standards (UNBS); Chemiphar Laboratories and all the private sector players, especially from the Apiculture Sector.

Without financial support extended from JITAP through ITC, this process could not have been possible. We thank them for their support.

List of Acronyms

AAPS	Area based Apiculture Production Sites
AES:	Apiculture Export Strategy
AGOA:	African Growth and Opportunity Act
BVM:	Bee Venom Therapy
CBO:	Community Based Organisation
COMESA:	Common Market for Eastern and Southern Africa
EBA:	Everything But Arms
EU:	European Union
GDP:	Gross Domestic Product
ITC:	International Trade Centre
JITAP:	Joint Integrated Technical Assistance Programme
MAAIF:	Ministry of Agriculture Animal Industry and Fisheries
MoUs:	Memorandum of Understanding
MT:	Metric Tones
MTCS:	Medium Term Competitiveness Strategy
NAADS:	National Agriculture Advisory Services
NAP:	National Apiculture Policy
NGO:	Non-governmental Organisation
NRMP:	National Residue Monitoring Plan
p.a:	Per annum
PEAP:	Poverty Eradication Action Plan
PEST:	Political, Economic, Social and Technological
PMA:	Plan for the Modernisation of Agriculture
SCT:	Sector Counterpart Team
SEP:	Strategic Export Programme
SSSG:	Sector Stakeholder Strategy Group
SWOT:	Strength, Weaknesses, Opportunities and Threats
TUNADO:	The Uganda Apiculture Development Organisation
UBOS:	Uganda Bureau of Statistics
UEPB:	Uganda Export Promotion Board
UNDP:	United Nations Develop Programme
UNIDO:	United Nations Industrial Development Organisation
USA:	United States of America
UWESO:	Uganda Women's Efforts to Save Orphans

Executive Summary

This strategy seeks to develop and promote the export of apiculture products from Uganda. It highlights the needs and interests of all the stakeholders with the primary aim of promoting trade in apiculture products, giving priority to the export markets especially the EU, one of Uganda's leading export markets.

Honey, the major apiculture product is produced in nearly all countries of the world. Total world production in 2003 was estimated at 1,200,000 MT per annum, valued at US$ 452 million. However, only about 400,000 MT of the honey is traded in the export market annually, implying a dominance of domestic markets within the producing countries (about 67%). The major importers of honey are EU (150,000 MT p.a), USA (100,000 MT p.a), and Japan (50,000 MT p.a). USA alone consumes about 45% of the globally traded honey. The top exporters are China (100,000 MT p.a), Argentina (70,000 MT p.a), Mexico (40,000 MT p.a) Australia, India, Canada and New Zealand (P. Martin, 2004). Exports from Developing countries represent 60% of world exports (ITC Interactive Trade Map). The trend in world's supply has continued to rise, but the earnings have declined by about US$ 20 million.

Honey from African countries has generally been traded locally and exports into the major countries are low. Cooperative organisations and Non-governmental Organisations have spearheaded small and medium investments in apiculture and encouraged trade in the products locally. The top Exporting countries in Africa are Zambia, Tanzania and South Africa.

Price variations depend less on production, but more on supply and demand. The price for beeswax per MT is estimated at US$ 4,600 while that of honey is estimated at US$ 2,900 per MT. In Africa production is sharply a number of countries including Uganda, Kenya, Zimbabwe, Swaziland, Ethiopia and the Democratic Republic of Congo, where beekeeping is proving to be a lucrative and sustainable small business activity, mainly due to the low start-up costs.

The almost organic production systems in most African countries present a good opportunity due to the rapidly increasing market for organic products. Uganda has, since 2004, with the formulation of the National Residue Monitoring Plan, joined Zambia, Tanzania, South Africa, Kenya on the list of countries that can export to the EU market. The EU market is highly competitive. Demand and the price are highly dependent on the country of origin, level of processing and nectar sources.

Bee farming in Uganda is an important seasonal activity that has predominantly remained rudimentary and unexploited, yet it has tremendous potential for widening Uganda's export base. Besides, beekeeping plays an important role in the pollination of hundreds of insect-pollinated crops. In many societies, honey is regarded as an important ingredient in diet and is also used as medicine (chemotherapy).

Through relevant government ministries, private sector, and Office of the Prime Minister, the process of refocusing on and reorganising the industry is now ongoing. Consequently, an umbrella body, The Uganda National Apiculture Development Organisation (TUNADO) has been formed and is recognised by the National Apiculture Policy (NAP). TUNADO is empowered to coordinate and act as a central link between the private sector and government agencies working on the sector.

Apis mellifera, is the commonest bee species in Uganda. Three common production methods namely; honey hunting, use of traditional log hive; and use of the "Top-bar hives" and Langstroths. Production targets mainly the local market and there are no export records of honey or other hive products despite the huge potential for Uganda to export over 500,000 metric tones of honey per year.

Honey and other hive products are demanded for their many useful properties and applications in a wide range of industries. This on the other hand depends on the level of technology development and therefore Europe, USA, Japan and a number of Asian countries have got the largest use of these products. Honey, wax, royal jelly, pollen, propolis and bee venom are used in the food, pharmaceutical and cosmetic industries and for other chemotherapeutic applications.

Constraints affecting the sector in Uganda are found at all levels of the value chain. They range from poor production methods, poor quality and standards to lack of adequate organisation for marketing purposes

New developments have taken place in the recent past and they include; establishment of National Residue Monitoring plan; recognition of Department of Livestock Health and Entomology (MAAIF) as the Competent authority; development of the Apiculture Policy; development and revision of honey standards; formulation of the Standard Operating Procedures; establishment of The Uganda National Apiculture Development Organization (TUNADO) and setting up of two national analytical laboratories i.e. Chemiphar that has international accreditation for honey and the Uganda National Bureau of Standards.

Given the above opportunities, new developments and constraints, the stakeholders have set ambitious plans to make the sector highly commercially viable enterprises able to export 50% of the estimated annual production by 2009. They have planned to set up special Apiculture Area Production Sites (AAPS), each with a capacity of exporting 40,000 MT per annum. With the listing of Uganda on the EU market as an acceptable supplier of quality honey, the sector plans to aggressively take advantage of preferences offered by the EBA Initiative. Besides the EU markets, there are indications that countries like USA (which is the largest honey consumer) and Japan are interested in importing honey from Uganda and therefore promotional efforts will be done in these markets.

It is for this reason that this strategy will focus on interventions that address government policy environment; export promotion; technical infrastructure; institutional development; awareness; investment promotion and addressing several other cross-cutting issues. These together with the necessary actions and recommendations are summarised in a strategy implementation matrix covering a 5 year period. This will be achieved with the support of all stakeholders and development partners. Projects addressing different strategy issues and concerns will be developed, packaged and forwarded to development partners for support.

CHAPTER 1: BACKGROUND

1.1 Overview of the Global Apiculture Environment

Apiculture is one of the fastest growing sectors worldwide. A number of countries have made strategic moves towards the development of this industry. Recent developments show a shift from a situation where beekeeping was considered a hobby and not business enterprise. In Northern Ireland, for example, mostly old and retired men practiced beekeeping. To-date Ireland produces one of the best honey in the world.

2.1.1 World Production and Market analysis

Honey, the major product of apiculture industry worldwide is produced in nearly all countries. It is also imported into all countries. This is attributed to the qualitative nature of honey produced from different floral / nectar sources in different geographical regions.

According to ITC 2003, the total world production of honey is estimated at 1,200,000 MT per annum, valued at US$ 452 million. However, only about 400,000 MT of the honey is traded in the export market annually, implying a dominance of domestic markets within the producing countries (about 67%).

The major importers of honey are EU (150,000 MT p.a), USA (100,000 MT p.a), and Japan (50,000 MT p.a). USA market alone consumes about 45% of the globally traded honey. The top exporters are China (100,000 MT p.a), Argentina (70,000 MT p.a), Mexico (40,000 MT p.a) Australia, India, Canada, New Zealand (P. Martin, presentation 2004). Developing Market Economies's exports represent 60% of world exports (ITC Interactive Trade Map). The trend in world's supply has continued to rise, but the earnings have declined by about US$ 20 million.

In Europe, honey production has steadily risen in Germany, Hungary, Spain, Britain, Italy, Armenia, Sweden, Netherlands, Ireland, among others. Production in these countries is demand-driven and much of the honey consumed is imported. In Germany, for example, exports were 21,160 MT (in 2003) with an annual growth in quantity of 2%; The country also accounts for 8% of all total honey exports. It ranked third in honey exports in 2003 after Argentina and China. Britain has become one of the leading producers of honey (and other hive products). It produces 10% of its honey needs. 90% (about 22,000 tonnes p.a) is imported.

In Asia, China leads I both production and exports. Other outstanding honey suppliers include India, Philippines and Singapore. They all mainly export to the EU followed by USA and Japan.

In South America, Argentina leads in both production and exports, followed by Brazil, Chile and Uruguay. The continent has gained momentum in trade in apiculture by diversifying and developing high quality products such as propolis, royal jelly and pollen.

The region attracts great international attention and a lot of experience is being gained from this this region on propolis.

Canada, Mexico, USA, Australia, Newzealand are also among the top 40 countries that export into the EU markets.

African honey has generally been traded locally and exports into the major countries have been low. Cooperative organisations and Non-governmental Organisations have spearheaded small and medium investments in apiculture and encouraged local trade.

In Zambia, Africa's leading exporter of honey and beeswax into the EU, cooperative arrangements and associations have been successful in building capacity of the farmers to produce for two companies which process and export the honey[1].

In Uganda, Kenya, Tanzania, Zimbabwe, Swaziland, Ethiopia, and Democratic Republic of Congo, beekeeping is proving to be a lucrative and sustainable small business activity, mainly due to the low start-up costs. The organic production systems in most of the African countries stand to gain in terms of market share due to the rapidly increasing market for organic api-products.

With respect to competitive factors especially in the EU, demand and the price of honey is highly dependent on the country of origin, level of processing and nectar sources. Australian honey, for example, has got a good historical reputation and therefore fetches more money per unit weight compared to Asian and African honey. Consumers have interest in specially packaged honeys mainly for therapeutic reasons. Raw and combed honeys have more of the natural characteristics compared to processed honeys. The bio-flavonoids, which impart therapeutic properties in honey, are sensitive to heat treatments and other processing conditions such as stress and illumination. Consumers also exhibit preferential tendencies towards honey from specific nectar sources such as eucalyptus, grapes, etc. This factor alone causes a wide disparity in the market demands for honey. The flower sources specifications include wildflower, acacia, rape, etc. The honeys are branded accordingly e.g. polyflora / mixed blossom honey (made from many nectar sources) and unifloral honey such as acacia honey, rape honey (made from a single flower nectar source). Table 01 below illustrates the level of trade and market dynamics with respect to growth rates

[1] Zambian Times, Feb, 2005

Table 1: Trends in honey exports (2003)

Exporters	Value exported in 2003, in US$ thousand	Quantity exported in 2003 (MT)	Unit value (US$/MT)	Annual growth in value between 1999-2003, %	Annual growth in quantity between 1999-2003, %	Annual growth in value between 2002-2003, %	Share in world exports, %
World estimation	960,546	391,060	2,456	22	2	33	100
Argentina	171,581	69,350	2,474	12	-9	31	17
China	103,136	84,088	1,227	6	-4	32	10
Germany	79,380	21,160	3,751	20	2	31	8
Mexico	67,949	26,998	2,517	29	4	8	7
Hungary	52,040	15,807	3,292	37	12	42	5
Canada	47,174	15,041	3,136	30	4	-17	4
Brazil	45,545	19,273	2,363	402	487	97	4
Spain	40,346	12,214	3,303	34	20	18	4
Turkey	37,090	14,980	2,476	54	43	15	3
Chile	33,186	0		86		256	3
Romania	25,942	9,633	2,693	31	3	110	2
Uruguay	23,701	9,177	2,583	37	9	61	2
Viet Nam	21,495	10,674	2,014	84	47	-7	2
Australia	18,069	5,160	3,502	5	-14	11	1
New Zealand	15,687	3,473	4,517	31	10	73	1
Bulgaria	15,670	6,453	2,428	36	8	131	1
India	14,634	6,964	2,101	75	50	35	1
Denmark	12,334	3,283	3,757	12	-1	96	1
France	11,999	2,339	5,130	8	-5	14	1
Belgium	10,367	2,527	4,102	8	-13	1	1
Cuba	9,440	4,770	1,979	9	-4	72	0
Italy	9,248	2,536	3,647	6	-6	-5	0
Czech Republic	6,044	2,023	2,988	36	9	69	0
United States of America	5,719	3,115	1,836	-10	-13	-7	0
Ukraine	5,497	2,710	2,028	44	28	84	0
Slovakia	5,331	2,059	2,589	25	7	127	0
El Salvador	4,858	1,859	2,613	28	5	122	0
Malaysia	4,690	3,888	1,206	157	215	239	0
United Kingdom	4,393	1,045	4,204	22	7	7	0
Hong Kong (re-exports)	4,068	3,118	1,305	42	35	318	0

Iran (Islamic Republic of)	3,814	1,940	1,966	-15	-22	24	0
United States of America (re-exports)	3,736	1,917	1,949	175	177	449	0
Croatia	3,291	1,053	3,125	169	182	35	0
Guatemala	3,217	1,765	1,823	19	10	102	0
Pakistan	3,128	2,165	1,445				0
Taiwan, Province of (China)	2,865	324	8,843	-5	17	-3	0
Austria	2,757	583	4,729	9	6	27	0
Thailand	2,696	2,522	1,069				0
Portugal	2,557	883	2,896	46	28	14	0
Others							0

Source: ITC calculations based on COMTRADE statistics

Table 2: Honey exports from the Developing world- 2003

Importers	Exported value 2003 in US$ thousand	Share in Developing Mkt Economies's exports, %	Export growth in value between 2002-2003, %, p.a.	Share of partner countries in world imports, %	Total import growth in value of partner countries between 1999-2003, %, p.a.
World	572,950	100	42		22
Germany	193,960	34	52	24	21
USA	142,639	25	40	22	26
Japan	50,184	9	-14	6	15
United Kingdom	29,346	5	14	6	28
Italy	19,650	3	43	4	28
Australia	18,785	3	418	2	226
Spain	15,358	3	87	2	17
Canada	14,811	3	15	1	63
Saudi Arabia	12,793	2	113	1	11
France	10,024	2	120	4	19
Malaysia	8,731	2	197	0	15
Belgium	5,486	1	26	2	11
Denmark	4,719	1	186	1	21
Switzerland	4,589	1	71	2	12
India	3,247	1	21	0	95
Hong Kong (SARC)	2,645	0	-16	0	13

Source: ITC calculations based on COMTRADE statistics

1.1.2 Market Segments

Honey and other hive products are demanded for the thousands of useful properties and applications in a wide range of industries. The applications and demand are proportional to the level of technology and therefore Europe, USA, Japan and a number of Asian countries have got the largest use of these products.

2.1.2.1 Food industry

The food industry takes the largest share of hive products in general. The products in this group include honey, royal jelly and pollen. In addition, a number of other products are derived from honey e.g. wines. Royal jelly and pollen are extremely good for human nutrition and the market demands are much higher compared to honey.

2.1.2.2 Pharmaceutical and cosmetic industry

Honey and other hive products are used extensively in the pharmaceutical industry. ***Apitherapy*** is one of the most modern and useful therapeutic approaches adopted worldwide and is free from side effects. A number of products in the pharmaceutical industry apply honey, propolis and wax (on the basis of the apitherapeutic properties) as key ingredients e.g. creams, balms, etc.

Propolis is probably the most studied hive product from the pharmacological point of view. It is used worldwide in thousands of pharmacies, medical offices, human or veterinary medicine clinics, experimental laboratories, etc. With over 3000 constituents already discovered, the complex composition of propolis makes this product widely applicable in this industry.

Bees wax, classically an inert substance, has some interesting properties which are important to the apitherapists. Cosmetologists have accepted beeswax properties that show the value of the product. The wax is anti-septic, is emollients, is anti-inflamatory, is cicatrising, it helps smoothen and make elastic structure.
Royal jelly is an extraordinary natural product used for feeding young larvae and the queen bee. However, in humans, royal jelly has effects which are related to their sexual, genital and endocrine systems. It increases the level of thyroxine, cortisone, luteinizing hormone, testosterone and progresterone hormones in the blood just to mention but a few.
Bee venom, is the principle behind Bee Venom Therapy (BVM), commonly practiced in the US and European countries. It is administered by experienced persons against cardiovascular diseases, musculoskelatal diseases, nervous system diseases, eye diseases, skin diseases, endocrine system diseases, genital apparatus diseases, immune system diseases, viral diseases, cancers, allergies, etc.

2.1.2.3 Energy Sector

Wax is demanded for the production of high-grade candles whose demands are on rampant increase locally, regionally and internationally. Candles made from bees wax are “natural” and give negligible pollution to the most immediate environment.

CHAPTER 2: THE CURRENT STATE OF UGANDA'S APICULTURE SECTOR

2.1 Production

Apiculture in Uganda is an important seasonal activity that has remained predominantly rudimentary and unexploited, yet it has tremendous potential of widening Uganda's export base.

The rearing of bees for honey has been practiced for time immemorial. Beekeepers use traditionally constructed beehives to trap swarming bees. The beehives are cited in woodland, forests, and edges of swamps and once colonised, some beekeepers collect all the beehives and put them in one place "the Apiary" for purposes of easy management, supervision and extraction of extraction of honey. The colonised beehives are usually harvested twice a year (March – June and August – October) extract comb honey using rudimentary methods, which in most cases disrupts the bee colony.

Apis mellifera species is the commonest reared in Uganda. Three common methods of production are used in Uganda; namely

- Honey hunting where honey is collected from feral (wild) colonies in trees, caves, etc. This method has drastically diminished in the wake of the new / improved technologies.
- Traditional log hive method where traditional log hives made out of bamboo and logs are used and harvests are done at random using rudimentary methods. The majority of the original traditional beekeepers in Uganda still use log hives. These hives require replacement every 2 years.
- Traditional improved hives, called the "Top-bar hives". These were developed as man struggled to domesticate bees commercially. The top-bar hives were developed first then the Frame hives. Most of the hive technologies have been imported, adapted and now fully applied in Uganda.

Modern equipment (not very common) includes frame hives and boxes. Modern frame hives can permit colony management for high yield and colony propagation. With good management, these hives can last for up to 5 years before they are replaced.

In Uganda, country-wide survey (UEPB / MAAIF March 2005) indicates that only 3 products i.e. honey, beeswax and propolis are produced. Propolis are a little known product; pollen and venom are completely unknown and never reported nor traded in.

Uganda's honey is unique and may be classified according to diverse ecological zones. Variation in the type of honey produced in each ecological area occurs in terms of chemical composition, colour, flavour and viscosity

Table 03 : Uganda Apiculture Products - Conservative Production Estimates

Product	Annual Production Estimate (Kgs)
Honey	580,166
Wax	24,597
Royal jelly	n.a.
Propolis	839
Pollen	n.a.

Source of data: Country sector Assessment survey –March 2005

2.2 Processing and packaging

At a small scale, the beekeepers have the capacity to separate honey from the combs and make bees wax, but it is difficult to extract other products. There are a few entrepreneurs with large honey processing plant. Even these have limited capacity to extract all the hive products as the technologies involved are more complex and lacking.

Inadequate extension services and lack of skills training for beekeepers affect processing and packaging.

In regard to 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 jericans and other plastic containers. Some industries have improved glass containers but these are found only with the few well organised processing plants like Reko Industries Ltd. For easy handling / transportation, and grading, honey should be packaged in air-tight-lidded plastic buckets. Polyethylene bags (for wax) are available, but are little known among the beekeepers in the countryside. Packaging materials for large-scale honey and other hive products for export are not readily available. Those available are only affordable to large processors.

2.3 Marketing

Historically, the apiculture industry in Uganda has produced only for the domestic markets. The local market demand is undocumented but there is evidence that a big local market exists to an extent that a lot of honey is imported from the neighbouring countries.

There is scanty statistical data to show that Uganda has exported honey or any other hive products to any part of the world. FAOSTAT indicates 30 MT of honey worth US$ 66,000 exported in 1995.

However, there is a potential for Uganda to export over 500,000 metric tones of honey per year (**Prof. Helmut Horn, 1999).**

A niche market for special ***flavoured and organic honey*** is on the increase and Uganda could take advantage of this opportunity. The limited use of inorganic chemicals and inorganic pesticides coupled with the rich natural flora in different ecosystems makes Uganda honey of high grade compared to other honeys and other hive products produced in many other parts of the world. This, therefore, gives Uganda's honey an entry point into the EU and other markets.

2.4 The Policy Environment

The Poverty Eradication Action Plan (PEAP) is the central policy framework of Government through which all sectoral policies and programs are built. The goal is to eradicate poverty by 2017. The policy places emphasis on developing sectors and programs that have a high incidence on poverty and the apiculture sector should be viewed from this perspective

Visible policy developments that can be taken advantage of to develop the sector include the following:

- The Department of Livestock Health and Entomology in which the Apiculture sub-sector falls, has assigned responsibility to the entomology section, under Production Departments at the district level to coordinate and implement the activities related to the revival of the Apiculture sector.
- The National Agricultural Advisory Services (NAADS) has been put in place to act as a decentralised extension service delivery mechanism. The apiculture sector is one of the priority areas.
- The national Residue Monitoring Plan has been put in place under the Ministry of Agriculture and as a result, official notification has been given by the EU confirming Uganda's short-listing on to the list of countries that can export honey to the EU. The first NRMP was finalised in November 2004 with the full participation of both the private and public sectors
- The Department of Livestock Health and Entomology has been designated as the Competent authority for Honey
- The Government through the Ministry of Agriculture, Animal Industry and Fisheries has developed the Apiculture Policy and formerly distributed copies to the various line Ministries for comments and inputs before it can be formerly forwarded to Parliament .As a stopgap measure, the Minister of Agriculture has signed a Statutory Instrument that will be used as part of the legal framework required by the EU Commission until such a time when the Policy is approved by Parliament.
- The Uganda National Bureau of Standards has revised and developed the Uganda Honey Standard
- Two national analytical laboratories, namely; Chemiphar and the Uganda National Bureau of Standards are in place with Chemiphar being accredited for Honey.

2.5 Summary of sector constraints

2.5.1 Production

- Lack of information on the levels and scale of apicultural products; statistics of beehives in Uganda, equipment used, annual production figures, number of beekeepers and other stakeholders involved, etc.
- Lack of funds to enable beekeepers access affordable and appropriate beekeeping equipment.
- Inadequate knowledge and expertise on the part of the beekeepers on key issues of management of apiaries and honey harvesting.
- Destruction of forest reserves in an effort by equipment manufacturers to construct modern beehives.
- The modern beekeeping equipment that permits proper colony management for high yield and propagation of the colony is expensive and difficult to obtain in Uganda.
- Limited research for development and diversification of high productions other than honey.

2.5.2 Processing and packaging

- No appropriate honey collecting centres with appropriate processing and packaging equipment to maintain the quality of products required in the international markets.
- Inadequate extension services and training materials / guidelines for beekeepers, processors and traders.
- Prohibitive taxes imposed on the imported processing and packaging equipment / materials is a huge setback towards private sector involvement and investment in apiculture in Uganda.
- High costs coupled with absence of utilities such as portable water and electricity in some circumstances discourage beekeepers from investing in processing and packaging ventures.
- Poor transportation system (specialised vehicles) for hive products from production points through processing units to the market tends to compromise the quality of the products.

2.5.3 Marketing

- Lack of market adequate market information on different hive products, including honey.
- Limited promotional activities for hive products in both the local and export markets.
- Whereas the local market has been accessed by the traders, the complex export market dynamics have not been given high attention e.g. distribution channels, packaging requirements, etc.
- Lack of linkages and cohesion among and between producers, processors and buyers.

2.5.4 General constraints

- Limited financial support to the sector line ministry
- Lack of basic statistical information on all apiculture stakeholders and their defined roles in the sector
- Lack of technical staff specifically trained in apiculture management.

A complete swot analysis of the sector will be found in appendix I

CHAPTER 3: THE STRATEGY

This Strategy highlights specific interventions required to revamp and accelerate the development and growth of the sector. These interventions are aimed at addressing the constraints, countering the sector threats and taking advantage of the opportunities.

3.1 The Scope of the Strategy

The strategy shall primarily focus on developing and marketing the already available apiculture products (*See appendix IV*) in Uganda and later seek to widen the product base (*See appendix III*). Whereas the priority market will be the EU, the strategy shall also promote the local and regional markets as well as Japan and the USA.

Stakeholder involvement in the spirit of public- private sector partnership shall be the overriding mode and form of strategy implementation.

3.2 The Methodology

An all-inclusive participatory approach was used to develop the strategy. UEPB, in liaison with the Competent Authority (MAAIF) and Private Sector Apiculture Apex body TUNADO, identified the key result-oriented stakeholders. A 9-man Sector Counterpart Team (SCT), drawn from the key institutions was formed to formulate the Strategy using ITC Sector Strategy Development toolkit.

With a secretariat at UEPB, the SCT produced a draft outline of the strategy and then organised a wider national consultative meeting and formed the Sector Stakeholder Strategy Group (SSSG). This did a SWOT analysis of the sector and comprehensively discussed and made recommendations to be incorporated into the strategy.

The SCT put together the information in a draft strategy document and then organised a high level national workshop to review the draft. The workshop participants critiqued the document and further made comprehensive inputs into it.

After a sector assessment survey, done in the western, central and eastern regions of Uganda to establish honey production centres, groups of bee keepers, honey production and handling techniques, the final strategy document was done. Some indicative data on the supply side as well as sector stakeholders were established through this survey. The sector assessments were performed in the districts of Kabarole, Kyenjojo, Bushenyi, Mbarara, Rakai, Nakasongola and Kayunga.

3.3 Strategy Vision
The Strategy shall aim at transforming the predominantly subsistence apiculture farmers in the country into viable market oriented enterprises able to export a wide range of apiary products in order to generate substantial and sustained revenue inflows for the eventual improvement of the economic livelihoods of the participating communities.

3.4 Strategy Objectives

The main strategic objectives identified for the sector are as follows:
- Advocate for and put in place a sector development enabling environment and policy
- Strengthening the private sector institutional framework involved with the development of the apiary industry
- Increasing the technical capacity of the sector to meet market place requirements
- Attracting the necessary investment in the sector
- Modernizing the production and processing systems along the entire value chain
- Promoting the products in the regional and international markets mainly by branding Uganda as a source of natural and organic speciality honeys

3.5 Recommended Strategy interventions

In order to achieve the above objectives and progress towards realising the vision of the sector as stated above, the following shall constitute key sector interventions

3.5.1 Strengthening the policy environment

There remains a critical need to expedite and complete the policy formulation process. If this is achieved, it would lead to comprehensive legislation for the sector and enable better planning and possibly improved resource allocation through the Ministry of Agriculture. Key actions shall therefore include
- Awareness activities directed towards policy makers and legislators over the importance of the apiculture sector and its impact on poverty alleviation in the country. TUNADO shall take the lead role in organising such awareness programs
- Regular briefs by the Department of Entomology in the Ministry of Agriculture to the entire Stakeholders of progress concerning policy formulation and revision processes. This shall enable stakeholders remain updated and also contribute to the process
- Advocacy towards more support and inclusion of the sector in central government programs such as NAADS, PMA, Zonal Agricultural Program for export, Strategic Exports Program etc. TUNADO again shall take the lead in origination proposals and programs towards this action

3.5.2 Sector reorganisation for improved production
As earlier noted, the sector suffers from poor farmer organization and subsistence production systems are predominant. Producer Associations have had a long history of division which gave way to lack of sectoral plans, direction and vision. Key actions to address this shall include:

- Rally all producers to join the present fairly well structured and organised apiculture national body, TUNADO. Organisation of beekeepers into viable groups under TUNADO district chapters shall constitute one of the key reorganization strategies
- Lobby for financial, legal and technical support for the national body to enable it have the strength and capacity to plan for the sector
- Comprehensively identify and profile sector stakeholders with a view to establishing their roles in the sector for better planning and resource allocation

3.5.3 Modernization of production systems

The predominance of rudimentary methods of production where market quality and quantity is unattainable will be addressed. Critical actions shall include:

- Advocate for and train farmers into the use of modern equipment for production and handling at all levels of the value chain
- Identify and forge close business relations with development finance institutions that could provide finance and credit arrangements to producers to enable them acquire equipment and technologies
- Develop and seek support for value chain support projects such as refineries, quality control units, storage facilities etc. Government Economic support programs such as the Medium Term Competitiveness Strategy (MTCS), PMA etc. shall be targeted to support these projects

3.5.4 Investment Promotion

All Stakeholders shall actively participate in activities and programs to attract investment in the sector in order to achieve value addition along the supply chain. The following actions shall specifically be undertaken.

- Lobby for and apply for inclusion of the sector under the planned Export Processing Zones under Uganda Investment Authority
- Stimulate contract farming close to Area- based Apiculture Production sites (AAPS) that could be established in the different honey producing regions of Uganda. These could be established along the model of Bee Natural (U) Ltd in West Nile where effective production and marketing systems have been set up in the districts of Arua, Nebbi, Adjumani and Moyo. This model can be replicated in Mbale (East), Mbarara (West), Nakasongola (Central) and Nalukolongo (Kampala)
- Develop joint venture value addition proposals and market them overseas through Uganda’s commercial attaches to attract overseas investment capital in the sector

3.5.5 Establish and maintain quality assurance programs

Uganda has just been listed on the EU market among countries that are eligible to export honey to this market. This decision was reached after a lengthy process of verifying if the country had put in place systems that guarantee the quality and safety of the product for the end users. It is therefore in the strategic interest of the sector to ensure that quality and safety assurances are built so that the established market is sustained. Critical actions in this area shall include:

- Strict implementation of the Residue Monitoring Plan. Strengthening the competent Authority to enforce the provisions of the plan will be a priority lobby area
- The competent authority with TUNADO shall establish, and seek support for a national bee advisory one-stop centre. Such a centre will among others seek to enforce uniform standards and best practices within the industry to guarantee quality products
- Uganda National Bureau of Standards and the honey accredited laboratory (Chemiphar) shall jointly develop and regularly update the honey standards. Producers shall as much as possible be encouraged to ensure that their product carries the UNBS quality mark
- Regular training in quality and safety issues shall be undertaken regularly with the sector
- Producers shall be encouraged and development partners lobbied to help producers comply with market standards and safety certification processes
- Deployment of skilled inspectors to ensure quality and safety of the products in the industry at all critical points along the value chain

3.5.6 Export promotion

Not enough evidence exists to show the promotion of Uganda's apiary products either by the public sector or by the private sector itself. This state of inaction was mainly caused by the failure to get Uganda listed on the main target market the EU. Laboratory tests in the EU had taken very long to give conclusive reports on the composition and quality of Uganda's honey. This, together with inadequate sector organization made promotion less cost effective and unfeasible. The EU listing has now been achieved, only as recently as 2004 when several government institutions namely UEPB, NAADS, UNIDO and the private sector umbrella body (TUNADO) teamed and worked to secure the listing. It is therefore time to aggressively promote products in the main target market and others. The following key actions will be undertaken

- Identifying and profiling of all hive products with reference to companies and associations that produce them. This will allow promotion based on a clear understanding of what the sector and its key players especially companies are able to adequately offer to the target markets. Promotional materials such as product profiles and procures will be produced.

- Identifying and leading potential exporters in trade fairs and exhibitions organised in target markets. Such promotional activities shall as much as possible target importing manufacturers and end users other than agents. Immediate market entry activities into key target markets will be planned as early as 2005

- Increasing Market research to facilitate exporters with market information to enable companies build good export plans based on knowledge of prices and their trends, possible importers, market entry and access requirements, etc. This research will focus on the lead importers of honey products namely the EU, USA and Japan.

- Good export development projects will be developed and marketed for support among different development partners, financing institutions etc. to secure the necessary export finance for the sector.

- The sector shall be encouraged to adopt organic production systems where feasible so as to tap into niche and speciality honey markets. The natural bee products from Uganda shall be promoted as speciality honeys and this should make a strong impact just as the organic fruits and vegetables from Uganda currently do. The proposed use of DDT in malaria control programme shall therefore as much as possible be discouraged in favour of safer alternatives

- Exporter training programs shall be undertaken to allow for acquisition of key export market skills. Sector stakeholders shall be integrated into the already ongoing regular training activities at UEPB that focus on a whole range of export management procedures from pricing, negotiation to understanding the international trade language and practices

- Critical action on distribution channels will be done as many exporters are regularly faced with problems of deciding which channels to chose (agents, importers, or industrial users) This will be one of the key areas of market research and market development.

- Product development to meet end user values shall be done and will mainly involve research into forms value addition, packaging for proper product presentation, quality control etc.

- Web- based marketing will be encouraged in the sector. A sector website will be built as soon as possible and sector market support information loaded and disseminated through it. This site will be linked to other strategic websites that promote Uganda's exports

CHAPTER 4: STRATEGY IMPLEMENTATION

4.1 Private - Public Sector Partnership

The implementation of the proposals highlighted above shall as much as possible draw from the strength of public –private sector partnership. In Uganda, the private sector is regarded as the engine of economic growth as many business activities are fully left to the private sector. Experience over time has however shown that many sectors in the private domain are infant and cannot be left entirely alone. This is true of the apiary sector and for that matter implementation of this strategy shall be shared responsibility between the public and private institutions. The matrix below which has been built on the basis of the core competences of each role player shows which institution will do what in the implementation of the strategy.

4.2 Project implementation approach

The SCT in developing the strategy was well aware that it might not be easy or possible to raise resources to implement the strategy recommendations all at the same time. It is therefore recommended that in close consultation with stakeholders, specific project proposals be built by the identified lead agencies and marketed to government and development partners for resource support and implementation

4.3 Action Plan and Strategy Matrix

The effective implementation of the strategy will depend on elaboration of detailed action plans by the lead implementation agencies and the availability of resources. Table 4 below presents the strategy matrix highlighting the lead agencies for particular intervention areas, time line and an indication of a budget estimate where possible.

Table 4: Strategy Matrix

INTERVENTION AREA	STRATEGIC OBJECTIVE	SUMMARY OF KEY ACTIONS	LEAD MPLEMENTING INSTITUTION	TIMELINE	BUDGET ESTIMATE (US$)
Government policy environment	An enabling policy environment for the sector	• Policy formulation and legislation by Parliament • Regular briefs / awareness campaigns on NAP • Advocate for support under government Programme	**MAAIF**	2005-2007	160,000
Sector reorganisation for improved production	Build private sector capacity for export trade	• Rally producers towards TUNADO membership • Lobby financial, legal and technical support for TUNADO • Profiling sector stakeholders	**TUNADO**	2005-2009	140,000
Modernisation of production systems	Boosting quantitative and qualitative production for the export market	• Farmer training programme on modern production systems • Forge strategic alliances that support financing of acquisition of production equipment • Develop & seek support for value chain projects	**TUNADO**	2005-2009	150,000 50,000 150,000
Export promotion	Stimulate and sustain	• Profile products • Market research and & trade missions, establish trade contacts in EU, USA and Japanese market places		2005-2009	25,000 60,000 60,000

	export of hive products from Uganda	• Develop & host apiculture website for 5 years • Support for exporters – export financing, trade fairs, distribution channels, etc • Exporters' training programme for market skill development • Support & promotion of organic production for exports	**UEPB**		25,000 100,000 145,000
Investment promotion	Re-orient and stimulate more gainful investments in the sector	• Seek opportunities under Export Processing Zones • Stimulate contract farming under proposed AAPS	**UIA**	2005 - 2009	100,000 100,000
Quality Assurance programme	Promote quality production and assurance of Uganda's apiculture products	• Implementation of NRMP • Establish & support bee advisory one-stop centre • Finalisation & updating the honey standards • Training in quality & safety issues • Rallying support for certification of exporters to market requirements • Deployment of skilled inspectors at critical quality points	**MAAIF**	2005-2009	80,000 60,000 20,000 40,000 150,000 50,000
TOTAL					**1,665,000+**

Note: Budget figures are based on conservative estimates, simply indicating the range.

APENDICES

Appendix I: Sector SWOT Analysis

Strengths

- ♦ Abundant natural resources for apiculture: adequate populations of healthy, disease- and (parasitic-], mite-free honeybees. Good crop and wild plant resources of forage for bees, water and natural materials for beekeeping.
- ♦ Good human resources: traditional beekeeping skills, with a good blend of modern training and extension skills, especially under NAADS programme.
- ♦ Social resources: sector support by some international, national and local institutions, NGO's is good e.g. UWESO, UNDP, etc.
- ♦ The industry generates valuable outputs for Uganda; the most economically important (but difficult to quantify) of these is the pollination of crops. The products of beekeeping, honey and beeswax are valuable at village level as well as on the national and international markets.
- ♦ The industry is a significant source of income for rural people with few financial resources. Even the poorest people and living in remote places can achieve significant individual production levels.
- ♦ Honey and beeswax create livelihoods for several other sectors within Uganda especially traders working in informal and formal markets.

Weaknesses

- ♦ There is no national beekeepers' NGO working only for the good of it member Organisations supporting beekeepers - government and NGOs are too often involved in buying and selling of honey and this creates conflicts of interest.
- ♦ Lack of appropriate training and extension materials, even under the new arrangements.
- ♦ Lack of appropriately-training and extension personnel
- ♦ Lack of physical resources: access to containers, roads, transport and communication
- ♦ Poor market access for producers
- ♦ Low product prices for producers
- ♦ Lack of access for traders to products of sufficient quality and quantity
- ♦ Lack of access or non-availability of credit
- ♦ Poor diversity of retail packaging materials
- ♦ Weak linkages between producers and buyers
- ♦ No product promotion especially for commercial producers
- ♦ Weak coordination between beekeeping and other sectors: horticulture, forestry, health, and environment sectors.
- ♦ No legislation in place to support and protect the industry.
- ♦ Beekeeping skills, training and extension resources provided by international organizations have often been inappropriate based on European or North American technology.
- ♦ The Government of Uganda MAAIF offers little support to beekeepers.

Opportunities

- **Poverty alleviation**: with appropriate training, people can create livelihoods from beekeeping towards helping themselves out of poverty.
- **Honey market development**: there is scope for increasing product quality and diversity.
- Market establishment markets for honey, beeswax and propolis are being established.
- Established NGO's and projects could be assisted towards making their interventions much more effective.
- There is opportunity for establishing coordination between beekeepers collecting centres and potential purchasers.
- Other sectors can also benefit from the establishment of honey and beeswax collecting centres.

Threats

- Loss of habitat for bees
- Loss of bees from pesticide use
- Loss of international markets for honey and beeswax due to residues of pesticides or antibiotics that may end up in apiculture products.
- Increasing international trade restrictions making it difficult for Ugandan bee products to enter the world markets.
- Disillusionment among donors concerning the effectiveness of beekeeping interventions.
- Interference from political cycles that have tended to encourage farmers to produce hive products without addressing quality and market problems.

Appendix II: Key stakeholders profiles

Name of person or company or organisation	Address, telephone and email	Role in the apiculture industry
1. Uganda Export Promotion Board	Conrad Plaza Floor 5 Plot 22 Entebbe Road P.O 5045, Kampala Tel: 041 230150 / 230233 E-mail:uepc@starcom.co.ug Web: ugandaexportsonline.com	• Facilitates exporters of honey and other hive products – promotional activities e.g. trade fairs, exhibitions, conferences, certification, etc; • Market research • Product profiling of apicultural exports • Seeks for technical support for private sector players – exporters
2. The Uganda National Apiculture Development Organisation	Pan Africa House 4th Floor P.O. Box 5318 Tel. 041-343160 tunadobee@spacenet.co.ug Web: www.tunado.org	• Act as the Apex Body for all beekeepers in Uganda. • To coordinate and act as a service provider in the private sector
3. Department of Livestock Health and Entomology	Ministry of Agriculture, Animal Industry and Fisheries Entebbe Tel. 077-693257	• The competent Authority • Formulation & Implementing NRMP
4. Uganda National Bureau of Standards	Plot M217, Nakawa Industrial Area P.O. Box 6329, Kampala Web: www.unbs.org Tel. 041-222367/505995	• Regulatory body for National Honey standards and quality control
5. International Bee Research Association (IBRA)	Hill house, Gerrards Cross Buckinghamshire SL9 0NR United kingdom Tel: (0753) 885 011	• Provides comprehensive information and analytical and advisory services on scientific and practical aspects of apiculture • Facilitates liaison and exchange of information between scientists, beekeepers, government agencies and commercial enterprises
6. Uganda National Farmers Federation	Plot 27 Nakasero Road P.O. Box 6213, Kampala Tel. 014-340249	• A National Farmers Organisation providing support to all farmers in Uganda
7. Chemiphar Laboratories (U) Ltd	Chemiphar Lab (U) Ltd. Kampala, Tel. 077-409158	• Analytical laboratory

8.	The Private Sector Foundation Uganda	Plot 43, Nakasero Hill Road P.O. Box 7683 Kampala Tel. 041-230956/342163/230985	• Private sector advocacy and support
9.	Bee Natural Products (U) Ltd	Bee Natural Products P.O. Box 5318, Kampala Tel. 041-253844/234676	• Honey producers, packers and exporters of apiary products and natural foods
10.	Kabarole Beekeepers' Association (Mr. Adolph Bagonza)	Fort Portal-Kabarole District Tel. 077-373716	• District Association (honey producers and packers)
11.	Kasese District Beekeepers Association (Mr. Yokoniya Masereka)	P.O. Box 246 Kasese	• District Association (honey producers)
12.	Bunyangabo Beekeepers Community (Mr. Eliaza)	Tel. 077-385492	• Bunyangabo Sub-county Association (honey producers and packers)
13.	Kayunga District Beekeepers Association (Mr. Egensa Jackson)	P.O. Box 18000 Kayunga Tel. 077-820427	• District Farmers Association (honey producers)
14.	Sironko Bee Farmers Association (Mr. Biritiyo Gimuyi)	P.O. Box 34 Sironko Tel. C/o Mr. Manafa (077-375962)	• District Association (honey producers)
15.	Busia District Farmers Association (Madam Hope Akongo)	P.O. Box 124 Busia	• District Association (honey producers)
16.	Kitgum Women Beekeepers Association (Mrs. Margaret Rose Ogaba)	Tel. 077-575033	• Women Beekeepers (honey producers)
17.	Kitgum Apiculture Development Organisation (Mr. Ocira Sam)	C/o Mrs. Ogaba (077-575033)	• District Farmers Association (honey producers)
18.	Gulu District Farmers Association (Mr. Okello Michael)	P.O. Box 956 Gulu Tel. 071-532016	• District Farmers Association (honey producers)
19.	Bushenyi District Farmers Association (Mr. Katongole Bells)	P.O. Box 1 Bushenyi Tel. 42043/42372	• District Farmers Association (honey producers)
20.	Tororo District Bee Farmers Association (Rev. Oketcho Stanslous)	P.O. Box 151 Tororo Tel. 077-690427	• District Farmers Association (honey producers)
21.	Nakasongola District Beekeepers Association (Mr. Bukenya Wilson)	P.O. Box 1 Nakasongola Tel. 041-610227/Ext. 38	• District Farmers Association (honey producers)

22. Mbale United Beekeepers Association (Mr. Khaukha Edmund M.)		• District Farmers Association (honey producers)
23. Emmanuel Rose Group Christian Association (Mr. Emmanuel Opio-Okol)	P.O. Box 185 Lira	• District Farmers Association (honey producers)
24. Nebbi District Honey Beekeepers Association (Mr. Ochoun Emirious Uthuma)	P.O. Box 118 Nebbe Tel. 077-976532	• District Farmers Association (honey producers)

Name of person or company or organisation	Address, telephone and email	Role in the apiculture industry
25. Alice Kangave	Entomology Section Ministry of Agriculture, Animal Industry and Fisheries, Entebbe Tel. 071-273059	- In charge of the honey sub-sector.
26. Amin Shivji	Amfri Farms Ltd. P. O. BOX 29078, Kampala Tel.041-286690/1 E-mail: amfri@infom.co.ug	- Organic Farming and Fair Trade
27. Baker Waiswa	Field Director UWESO UK Trust Tel. 039-748391	- Support to Ngoma UWESO Beekeepers.
28. Charles Kanyike	Nakasongola Recovery Entr. Tel. 077-340468	- District Entomologist
29. David Mulengo	Nature Uganda Tel. 041-540719	- Nature Conservation
30. Dr. Anne Akol	Department of Zoology Faculty of Science Makerere University Kampala Tel. 077-367727	- Training and advisory services
31. Dr. Peter Ngategize	Medium Term Competitiveness Strategy, Ministry of Finance Planning and Economic Development – Kampala Tel. 041-349806	- Support to private sector initiative
32. Dr. Sarah Namirembe	Head of Department, Forestry and Nature Conservation, Makerere University Tel. 077-441945	- Training and environmental conservation.

33.	Dr. Slim Nahdy	National Agriculture Advisory Services Kampala Tel. 041-345065/345066	- Agriculture Extension Advisory Services
34.	Dr. William Ssali	National Agriculture Research Organisation /FOSRI Tel. 077-594980	- Apiculture Research and Development
35.	Annette Nanziri	TUNADO Tel. 041-343160/075-614859	- Support to the Apiculture (Documentations and logistics)
36.	General Manager	DFCU Leasing Company Ltd. Rwenzori House, P.O. Box 2767, Kampala Tel. 041-256125/256651	- Leasing finance
37.	Mr. Amadoi Ben	Tel. 078-395517	- Regional Representative of TUNADO North-Eastern
38.	Joan Kakweizire	Presidential Advisor Poverty Eradication Programme Tel. 077-588212	- Government support to apiculture development
39.	John Kaddu	Bee Equipment Manufacture and Trainer P.O. Box 2061, Kampala Tel. 071-567395	- Regional Representative of TUNADO Central
40.	Muhammad Manafa	Eastern and North Eastern Uganda Beekeepers Association P.O. Box 792 Mbale Tel. 077-375962/077-333851	- Regional Representative of TUNADO Eastern Region
41.	Joseph Mayanja	East Africa Beekeepers Ltd. Tel. 077-501485	- Bee equipment supplies and training and extension advisory services
42.	Malachi Tumusiime	Exports for Sustained Transformation 077-400747	- Technical Advisor to TUNADO
43.	Ngoma Ngime	Presidential Advisor (Manifesto) Nakasero Tel. 077-542208/071-542208	- Support for Apiculture Development under Presidential Manifest
44.	Patrick Sekitoreko	UNBS 075-643663	- Standards/quality controls
45.	Patrick Tumwine	Uganda Resources Management Foundation Tel. 077-517767/0485-20770	- Support to the Apiculture Sector (Human Resource Management)

46.	Ramsey Owot	Uganda Honey Beekeepers Association Tel.	
47.	Robert Kajobe	Faculty of Forest Makerere University	
48.	Sam Balagadde	UNIDO/UNBS Tel. 077-406425	- Coordinator, Food Component (Uganda Integrated Programme)
49.	Sam Serunjogi Njuki	Field Bee Concern	
50.	Silver R. Kakuranga	Development Initiatives Consultants (DIC), Plot 27, Clement Hill Road Tel. 077-502353	- Capacity Building Advisory Services to Apiculture Sector
51.	Sam Ogoga	Technet Ltd. P.O. Box 540, Soroti Tel. 071-234781	- Service Provider-Apiculture development. (Katakwi)
52.	Arthur Katungwensi	RODETO P.O. Box 4831, Kampala Tel. 077-413589/077-650983	- Service provider (training South Western Uganda, Rukungiri)
53.	Daudi Mugisha	Hoima/Masindi Tel. 077-670257	- Regional Representative for North-Western (TUNADO)
54.	Ann Auru	West Nile Region Tel. 077-915259	- Regional Representative for North Western (TUNADO)
55.	Blasé Kahinda	Tel. 077-519526	- Regional Representative for South-Western (TUNADO)
56.	Okudi Milliton	Padel District Beekeepers Association C/o Mrs. Ogaba (077-575033)	- District Beekeepers (honey producers)
57.	Charles Owach	Food and Agricultural Organisation Wandegeya Kampala	

Outstanding farmers and Trainers

Name of person or company or organisation	Address, telephone and email	Role in the apiculture industry
58. Adjumani	Rev.Capt.Silvanus Ojah 077-867890	Farmer/Trainer
59. Bugiri	Magneso Solomon	Farmer
60. Bundibugyo	Muthwa Lhuma George	Farmer
61. Bushenyi	Byaruhanga Kamushana	Farmer
62. Kabale	Akankwasa Charles	Farmer
63. Kaberamaido	Mrs Osara	Farmer
64. Kampala	Bukenya Matovu 077-656992	Processor
65. Kamuli	Mugulusi 077-688370	Farmer
66. Kamwengye	Beyanga Evarist 077-901526	Farmer/Trainer
67. Kapchorwa	Nyanga Simon 077-609715	Farmer
68. Kibaale	Enock Kyambadde 077-314700	Trainer/Farmer
69. Kisoro	Ndigimaana Robert 077-855989	Processor
70. Luweero	Bulemeezi beekeepers Ass.	Farmers
71. Masaka	Sengali David 077-547185	Farmer
72. Masindi	Kubalikenda Johnson 077-405903	Processor
73. Mubende	Kabaisera Yuvensio 077-675811	Farmer
74. Mukono	Wanyama Cornerius 071-959782	Farmer
75. Palisa	Mukama Ziddy-077-952938	Farmer
76. Rakai	Haji Kayongo 077-310221	Farmer

Appendix III: Sector Counterpart Team

Mrs. Florence Kata, Executive Director, UEPB
Mr. Ben Naturinda, Ag. Director Market Research & Product Development Division, UEPB
Mrs. Maria Odido, Chairman,TUNADO
Mr. Emmanuel Onega, Vice Chairman TUNADO
Mr. Kepher K. Kateu, Quality Assurance Manager, Chemiphar Laboratories (U) Ltd
Mr. Samuel Balagadde, Coordinator UIP (Food Component), UNIDO
Mr. Bosco Okello, Assistant Trade Promotion Officer (Agric) / SCT Coordinator, UEPB
Mr. Christopher Karamagi, Chairman UHA
Mrs. Alice Kangave, Principal Entomologist, MAAIF

Appendix IV: Spectrum of Apiculture Sector, Industry and Products

Apiculture

- **Honey and Honey Products**
  - Basic Honey
    - Liquid honey
    - Creamed
    - Honey
    - Mel with comb
    - **Cut comb**
    - More than 300 varieties of colour and flavour
  - **Honey-based Cosmetic Products**
    - Candy
    - Baby food
    - Baked goods
    - Baking ingredients
    - Basted products
    - Beer, ale and mead
    - Breads
    - Cereals
    - Food, drinks
    - Soluble products
    - Meat product
    - Medicines
    - Pharmaceuticals
    - Prepared mixes
    - Sandwich meat
    - Syraps
    - Throat medicines
  - **Technical Uses of Honey**
    - Conditioner
    - Facial crème
    - Lip crème
    - Lotion
    - Shampoo
    - Soap
    - Tobacco
- **Pollenization Services**
  - **Symbiotic Crops**
    - Alfalfa
    - Almonds
    - Apples
    - Esparagas
    - Blueberries
    - Broccoli
    - Cherries
    - Citric fruits
    - Cocoa
    - Coffee
    - Cotton
    - Cranberries
    - Grapples
    - Melons
    - Onions
    - Pears
    - Potatoes
    - Pumpkins
    - Soy
    - watermelon
- **Other Apiculture Products**
  - **Pollen**
    - Food supplements
    - Digestives
    - Immunizations
    - Proteins
    - Supplement
  - **Royal Jelly**
    - Cosmetics
    - Facial cream
    - Food supplements
  - **Wax**
    - Candles
    - Cosmetics
    - Lip wax
    - Bee food
  - **Packed Bees**
    - Queens
    - Other bees
    - Mixes bees
  - **Venon**
    - Natural medicines
    - Pharmaceuticals
  - **Propolis**
    - Cosmetics
    - Food
    - Supplement
    - Toothpaste

Appendix V: Summary of Sector Survey/Assessment Results- 2005

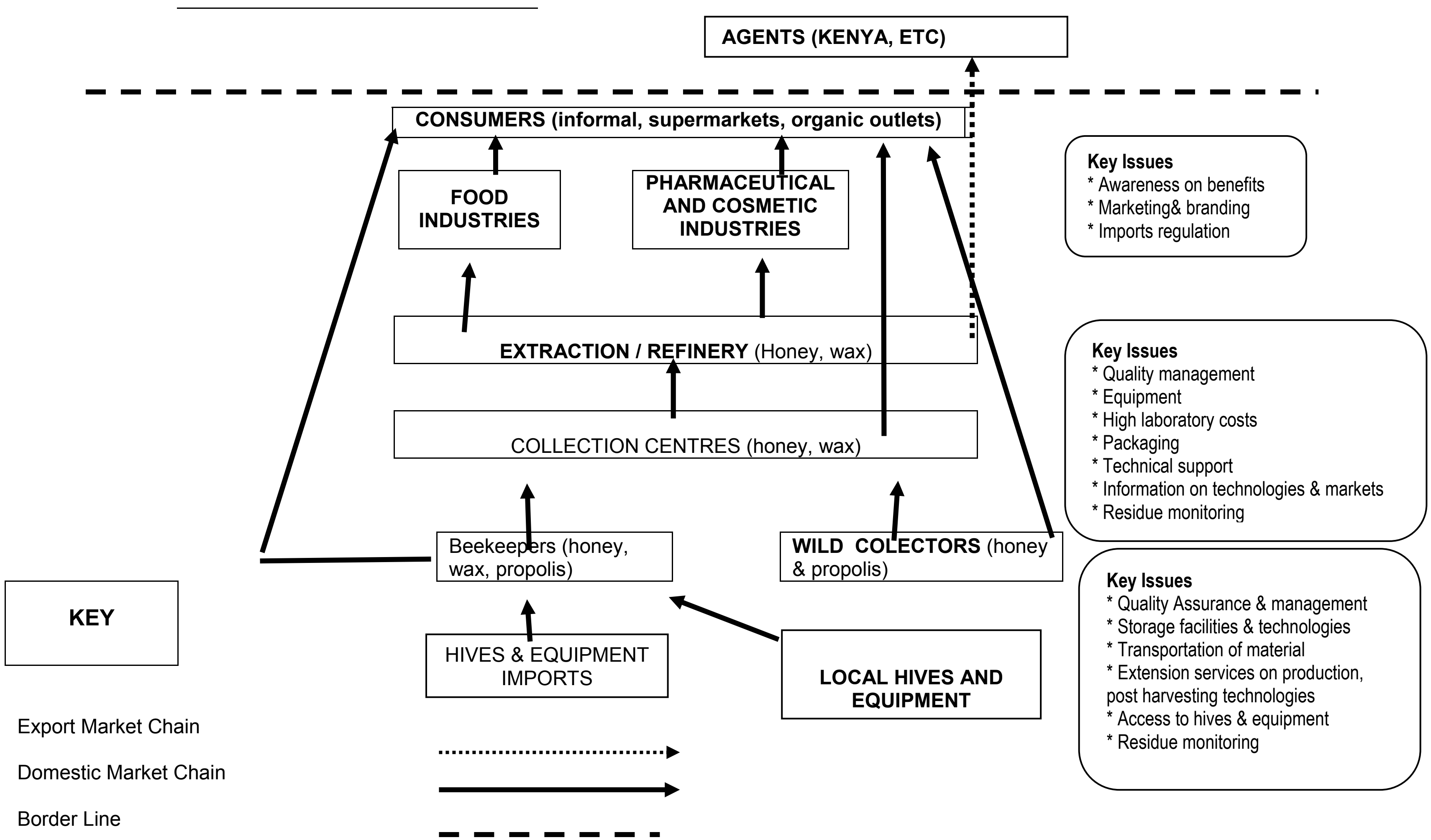
COMPANY	PRODUCTS	Quantity @ annum (kgs)	Production period	Quantity sold @ annum (kgs)	Beekeeping Equipment Quantity Produced @ annum					Quantity sold @ annum				
					KTB	Langstroth	Head veils	Catcher boxes	Beesuits	KTB	Langstroth	Head veils	Catcher boxes	Beesuits
Nyabubaale foundation for Rural Dev														
	HONEY	1500	Aug - Sept, March	1000-1500	300	200-300			50 pairs	200-300	200-300			30-50 pairs
	WAX	150	April											
	ROYAL JELLY													
	PROPOLIS	80												
	POLLEN													
	BEE VENOM													
	OTHER													
Nakasongora Beekeepers Association														
	HONEY		April		200									
	WAX													
	ROYAL JELLY													
	PROPOLIS													
	POLLEN													
	BEE VENOM													
	OTHER													
Kabarole Beekepers Association														
	HONEY	7,000	Jan - Dec	7,000	1000		100	200		1000		100	200	
	WAX	150		100										
	ROYAL JELLY													
	PROPOLIS	200		150										
	POLLEN													
	BEE VENOM													
	OTHER													
Bunyangabu Beekeeping Community														
	HONEY	4300	March - June	3500		250			80		200			80
	WAX	1000	March - June	1000										
	ROYAL JELLY													
	PROPOLIS	500	March - June	300										
	POLLEN													
	BEE VENOM													
	OTHER													

Rugombe Beekeepers Group									
	HONEY	400	March, Sept	400					
	WAX	20	March, Sept	20					
	ROYAL JELLY								
	PROPOLIS	2	March, Sept	2					
	POLLEN								
	BEE VENOM								
	OTHER								
Kaburara Beekeeping Group									
	HONEY	76	March - Sept	76					
	WAX	6	March - Sept	61					
	ROYAL JELLY								
	PROPOLIS	2	March - Sept	2					
	POLLEN								
	BEE VENOM								
	OTHER								
Kinyankende Beekeeping Group									
	HONEY	360	March - May	360					
	WAX	120							
	ROYAL JELLY								
	PROPOLIS	5	March - Sept						
	POLLEN								
	BEE VENOM								
	OTHER								
West Honeys Uganda									
	HONEY	600	Aug	600	70				
	WAX								
	ROYAL JELLY								
	PROPOLIS								
	POLLEN								
	BEE VENOM								
	OTHER								
African Bees for Rural Development (ABEFORD)									
	HONEY	3000	April - Sept	3000	500	300	600	470	100
	WAX	1500							
	ROYAL JELLY								
	PROPOLIS								
	POLLEN								
	BEE VENOM								
	OTHER								
Tinkamanyire Edward									

	HONEY	750	March, August	750	
	WAX	30	March, August	30	
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Connoisseur Honeys Cooperative Union					
	HONEY	10000	March, August	7000	
	WAX	700	March, August	700	
	ROYAL JELLY				
	PROPOLIS	50	March, August	40	
	POLLEN				
	BEE VENOM				
	OTHER				
Ruhinda Cooperative Union					
	HONEY	2400	April - sept	2400	
	WAX				
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Ruhinda Beekeepers Association					
	HONEY	1200	April - sept	1200	
	WAX	120	April - sept	120	
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Nyabushozi Beekeepers Association					
	HONEY	60	March - April		
	WAX				
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Tibegaya Adonia					
	HONEY	1500	March - April	1500	300

	WAX				
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
UWESO Rakai Beekeeping Association					
	HONEY	8000		8000	
	WAX	800		800	
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Kayonza Beekeepers Farmer Group					
	HONEY	20	March - April		20
	WAX	0.75			
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Bee Natural Company LTD					
	HONEY	200,000		200,000	
	WAX	20,000		20,000	
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
	OTHER				
Uganda Honey Beekeepers Association					
	HONEY	339,000		339,000	
	WAX				
	ROYAL JELLY				
	PROPOLIS				
	POLLEN				
	BEE VENOM				
		605,602			

Appendix VI: Honey Sector Value Chain



Appendix VII: Calendar of Important Events in the Apiculture Industry

Event	Nature		Objectives
	Annual	Other	
APIMONDIA (Organised by Bees for Development)		After every 2 years	1. To understand recent and current developments in apiculture worldwide 2. To participate in apiculture shows / exhibitions
National Residue Monitoring Plan Updating & submission to the EU Commission (Brussels, Belgium)	Before 31st March		Maintenance of third country (in this case Uganda) on the list of countries that can export honey and other hive products to the EU
International Conferences, Workshops & Exhibitions on: • Organic beekeeping • Propolis • Royal jelly • Pollen, • Apitherapy • Technology in beekeeping • Quality Assurance and Residue monitoring • Beekeeping for food security & Poverty eradication • International trade issues		As and when planned and communicated by organiser(s)	To address specific issues (specified in subject) that facilitates trade and development of apiculture sector at national, regional and international levels