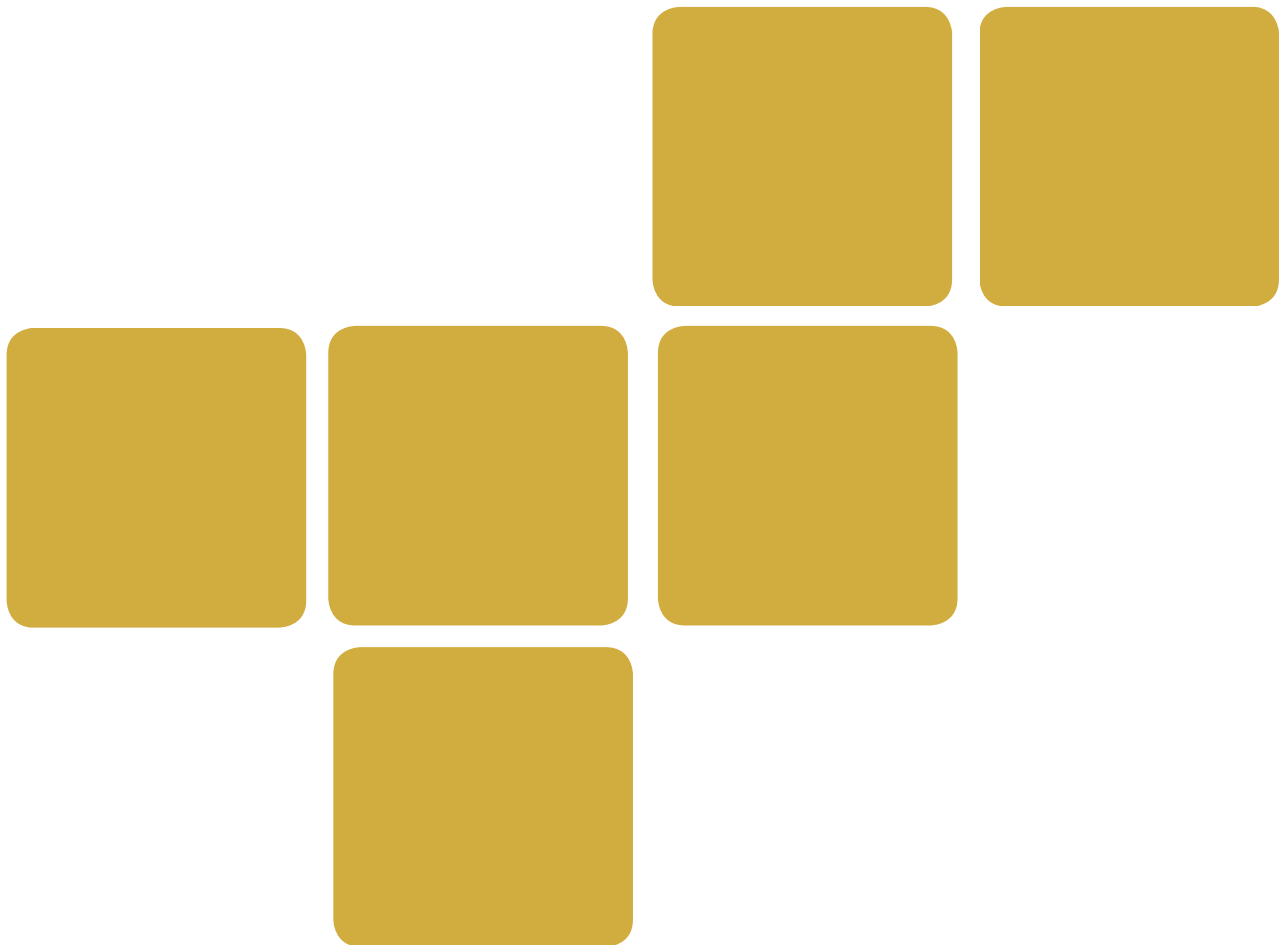


A Case Study of Zambian Honey Exports



Preface

This case study is a joint project between the National Board of Trade; the Embassy of Zambia in Stockholm; the Embassy of Sweden in Zambia; Zambia Development Agency (ZDA) and the Ministry of Commerce, Trade and Industry (MCTI) in Zambia. It is the result of a visit made by Open Trade Gate Sweden to Zambia in 2008, where honey was presented as a prioritized export product by the Zambian Government during bilateral meetings with both the MCTI and Organic Producers and Processors of Zambia (OPPAZ). During these meetings, several problems related to Zambian exports to the EU were raised, both in relation to capacity issues in Zambia and to requirements set by the EU.

The National Board of Trade set out to study the Zambian honey sector in order to highlight these problems and investigate their origins. The project has been led by Mr. Sascha Sohlman, Open Trade Gate Sweden, and was conducted together with Ms. Ellen Anker-Kofoed and Mr. Stefan Westerberg from the National Board of Trade. Editing work has been done by Mr. Martin Froberg, Open Trade Gate Sweden.

The authors would like to thank Mr. Felix Kaitisha and Mr. Charles Mulombwa from ZDA and Mr. Maybin Nsupila from MCTI, who not only contributed with their expertise but also made it the interviews of various stakeholders in different parts of Zambia possible. We would also like to thank Ambassadors Mrs. Joyce M.C. Musenge and Mrs. Marie Andersson de Frutos and their staff; Mr. Andrew Chipwende, Chief Executive Officer, Zambia Development Agency; as well as Mrs. Peggy Mlewa, Director Foreign Trade at the Ministry for Commerce, Trade and Industry, for their enthusiastic support for the study, as well as for availing resources in terms of personnel and logistical support. Thanks also to all stakeholders in Zambia and Sweden for participating in interviews on which the study heavily relies.

The National Board of Trade is the Swedish governmental agency dealing with foreign trade and trade policy. The Board provides the Government with analyses and recommendations. Within the framework of the European Union (EU), the Board works towards an effective Internal Market, an open trade policy in the EU and a strengthened multilateral trading system within the WTO. The Board also acts as ombudsman for free trade and free movement within the EU as partner of the SOLVIT network.

Open Trade Gate Sweden is a one-stop information centre assisting exporters from developing countries with information on rules and requirements for Swedish and EU imports, as well as working to identify and help exporters overcome trade barriers. It forms part of the National Board of Trade, but is directly financed by the Ministry for Foreign Affairs. All Open Trade Gate Sweden's services are free of charge for exporters from developing countries.

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1 Introduction

1.1 Purpose and method

The aim of this study is to highlight the situation of many African exporters, who often face problems related to both capacity constraints in their own countries and to requirements and consumer demand in the EU, by focusing on a specific product from a specific country, namely honey from Zambia. Although some of the problems raised in this study are specific to honey exports from Zambia, many issues are general in nature and are relevant to many other products and countries.

This study is the result of a cooperation between the National Board of Trade in Sweden, Zambian Development Agency (ZDA) and the Ministry of Commerce, Trade and Industry in Zambia. It is a combination of research made in Sweden and interviews conducted with a large number of different stakeholders in Zambia. The study analyses the Zambian honey export sector by mapping the whole distribution chain, from beekeeper to end user in the EU, investigating problems and value addition along this chain.

1.2 Background

The Zambian economy is heavily dominated by the export of copper and copper-related products. The fact that more than 90 per cent of Zambian export revenues come from copper makes Zambia extremely vulnerable to fluctuations in the copper price. The global economic crisis that began mid-2008 is a strong reminder of this vulnerability, as the decrease in the price of copper severely reduced export earnings. The strong dominance of the copper sector in the Zambian economy is also problematic in times of high copper prices, since price increases tend to lead to an appreciation of the Kwacha – negatively affecting other export sectors.

The official policy of the Zambian Government is to avoid this heavy dependence on copper export by promoting other export sectors. This diversification strategy focuses on a wide array of products, from cotton to aluminum wires. One product that has been identified by the Zambian government as an important non-traditional export product is honey. Except for raising export earnings and helping to diversify the Zambian economy, it is the belief of the Government that promoting beekeeping will pull a large number of Zambians out of poverty, as well as help protecting the environment through an enhanced biodiversity.

During the last decades, honey has been exported to various countries, such as United Kingdom, Belgium, the US, France, Botswana, Italy and South Africa. Although honey only represents a very small share of Zambia's total exports – roughly 0,02 per cent in 2008, it is a sector which is considered to have the potential to grow significantly. The EU market is one of the most important markets in the world, representing 20 to 25 per cent of the world's honey consumption, arising to 310,000 metric tons in 2007.

2 Production of honey

2.1 Beekeeping

Beekeeping has been an income-generating activity in Zambia for centuries. Thanks to the favorable nature and climate, several regions in the country have good potential for the production of natural honey and other apiary products. North Western Province is the major honey and beeswax producing area in Zambia, accounting for 90-95 per cent of domestic production and 100 per cent of honey exports.

It is estimated that some 20,000 Zambian beekeepers and an additional 6,000 honey hunters earn part of their income from apiculture. Since apiculture has very low investment requirements compared to most other export activities, and since a large share of these beekeepers have a daily income of less than one American dollar (USD) per day, the promotion of increased honey production and exports is strongly linked to poverty reduction in Zambia. Not only does the production of honey account for 25 per cent of the average household income in North Western Province, but it also contributes to food security in the area. Compared to other occupations in agriculture or forestry beekeeping is less labour intensive. This in combination with the fact that beekeeping is a seasonal activity, rural Zambians can also engage in other income-generating activities such as farming.

Beekeeping also plays a crucial role for Zambian agriculture and forestry, since the pollination of bees is necessary for the development and survival of both agricultural crops and trees.

Beekeeping is also related to gender issues. So far, beekeeping has been a predominantly male occupation. This can be explained by several factors. Firstly, beekeeping is generally considered to be a man's occupation, and male beekeepers sometimes object to women becoming beekeepers. Secondly, due to the fact that beekeeping with the traditional bark hive requires physical strength and since climbing is often required for the collection of honey, beekeeping is not considered suitable for women. Thirdly, the fact that beekeepers often leave their homes for long periods of time during harvest and since tending to the beehives is best done early in the morning or at night, thereby competing with domestic chores, makes it difficult for women to engage in beekeeping. One solution that is currently being tried in Zambia is to introduce hives that can be managed closer from home and which require less physical activity, such as the top bar hive. Organic Producers and Processors of Zambia (OPPAZ) is currently leading a UN program for women and beekeeping.

2.1.1 Production capacity

According to official statistics, 600 metric tons of honey was produced in Zambia in 2008. This is a low number given that the production capacity in the North Western Province alone is estimated to 30,000 tons per year. It is the official goal of the Zambian Government that the production is increased significantly. Reductions in the workforce due to HIV/Aids, caterpillar invasions and other environmental factors, poor road infrastructure as well as practical issues related to the production of honey and other beekeeping products were identified by the stakeholders as the main reasons for the low production. Some stakeholders stated that there is a need to change the mindset of the beekeepers, who are mainly subsistence producers, in order to commercialize their production.

2.1.2 Equipment

Through the generations, beekeepers in Zambia have developed strong traditions in terms of beekeeping techniques and equipment. Many Zambian beekeepers have little or no protective clothing. This implies that more smoke has to be used when harvesting the honey from the hive, often leading to a smoke-tainted taste which is very difficult to sell outside local markets. Most of the honey that is produced is kept in traditional bark hives or log hives. These hives have several inferior properties compared to more modern equipment such as the top bar hive and the frame hive. Firstly, the capacity is lower – a bark hive can produce up to 25 kg of honey, whereas the top bar hive can produce up to 45 kg of honey. Secondly, the bark hive has a life span of 3–4 years, whereas the top bar hive lasts for a lifetime if properly maintained. Thirdly, the bark hive is not as mobile as, for example, the top bar hive, which easily can be moved to different locations in order to follow flowering and thereby maximizing the production.

Another issue that was raised with regards to the bark hive was that the construction of such a hive requires that a tree is debarked, leading to its death. The issue of deforestation caused by the honey sector is an important discussion in Zambia. The beekeepers are directly affected themselves by the deforestation, as the trees that are used for this purpose is often the same trees that the bees feed on in order to produce honey.

Lacking equipment in terms of adequate presses and separation tables also leads to low yields from the harvested combs and low quality as light and dark honey is mixed into one.

2.2 Processing

The produced honey is purchased by companies which process the raw comb honey into natural honey and other apiary products. Each processing company purchase honey from a large number of producers. The largest processor/buyer of honey in Zambia today buys honey from 6,000 different beekeepers. The beekeepers are often organized in collectives or groups. Some processing companies educate their producers in beekeeping and harvesting techniques, as well as provide them with buckets for the collection of honey.

2.2.1 Product segmentation

Beekeeping can be processed into several different products. Except for table honey and industrial honey (often used by bakeries and food processors as a natural sweetener), propolis (used as natural medicine), beeswax (used for candles, floor polish etc.) and honey beer can be extracted from comb honey. The level of diversification in Zambian apiculture is very low, and except for a small production of beeswax, the sector mainly produces honey beer and honey. It is estimated that 80 per cent of the comb honey harvested is used to make honey beer for the local markets.

In general, EU consumers prefer light colored honey varieties with a mild taste. Honey produced in many developing countries is however often dark and has a strong taste. Partly due to lacking production materials and traditional harvesting techniques mentioned above, most of the honey that is produced in Zambia is dark or semi-dark honey. The colour of the honey depends on both the flowers on which the bees feed and on the harvesting technique. One problem that was raised by stakeholders was that old combs, which tend to produce darker honey of lower quality, are mixed with new ones, thereby affecting the quality negatively.

Creamed honey, which is popular in Sweden and other North European countries, was mentioned as a possible product. However, the process of producing such honey is generally seen as complicated, since the honey must be homogenized and added with whipped honey.

3 Exporting honey to the EU

The National Board of Trade met several processors such as actors on the local and domestic market as well as current and former exporters. Historically, there has been two exporters of honey on the Zambian market, but today all Zambian exports are done by one exporting company. However, several companies mentioned that they are planning to export honey to the EU in the future.

3.1 Tariffs

The customs duty in the EU is 17.3 per cent for natural honey. This duty can be reduced through the Generalized System of Preferences (GSP), provided that it can be proven that the honey originates from Zambia. Since Zambia belongs to the group of least developed countries (LDCs), it benefits from the Everything but Arms initiative. This implies that the duty is abolished all together, as long as the Zambian exporter can provide the EU importer with a certificate of origin, issued by the Zambian Revenue Authority. In order to obtain such a certificate, a product must fulfill the rules of origin for that specific product. The rules of origin in the GSP state that the honey must be “wholly obtained” in the country of origin.

According to the only current exporter, Forest Fruits Limited, gaining access to preferential treatment for honey exports is not a problem in Zambia.

3.2 Non-Tariff Barriers

In order to gain access to the EU market, there are certain requirements that have to be fulfilled before the product is approved for imports to an EU member state. These requirements, which are governed by regulations and directives and implemented into the national law of each member state, cover quality, packaging, traceability and health.

3.2.1 Health requirements

As a product of animal origin, natural honey is subject to more stringent rules for EU imports than products of non-animal origin. Products of animal origin can only be imported to the EU from a third country approved and listed by the European Commission (EC). Inspectors from the Food and Veterinary Office (FVO) evaluate the country of origin as to whether it complies with EU food safety and quality requirements and the veterinary and plant health legislation.

- Zambia is an approved country for honey exports to the EU.
- The honey has to come from an approved establishment registered by a competent authority in Zambia and approved by the European Commission.
- All shipments of honey must be accompanied by a health certificate issued by the responsible authority in Zambia. The health certificate states country and establishment of origin.
- All imports of honey must pass a health control at the border inspection post. Both documents and the physical product fall subject to inspection. All shipments of foodstuff to the EU must be notified 24 hours before reaching the border inspection post.

The WTO Sanitary and Phytosanitary (SPS) Agreement recognizes measures a government can execute in order to protect domestic animal and plant health and food safety. Introducing an SPS policy may be legitimate when it is considered necessary to protect human, animal and plant life and health. Member countries of the WTO are allowed to set their own standards, provided that the regulations are scientifically justifiable. The measure is considered inappropriate (or illegal) if it discriminates between countries with similar conditions and standards.

Complying with SPS standards is not compulsory for Zambian honey producers. It is however a necessary prerequisite to fulfill EU SPS regulation in order to access the European market. Beekeepers in most of Sub-Saharan Africa enjoy the competitive advantage of not having to use antibiotics or other medicines for their bees, as their bee populations are free from introduced diseases and predators. This facilitates access to the EU market, as there is no risk of residues in the honey. Products from some non-African exporting countries have previously been subject to import bans of this sort.

Zambian honey standards (COMESA/FDHS 002:2004) are based on regulations set out by the European Commission. The rules regarding residues of pesticides and veterinary drugs comply with those established by the Codex Alimentarius Commission. The hygiene standards also follow the general principles of Food Hygiene recommended by the same authority (CAC/RCP 1-1969) and other relevant Codex texts such as the Codes of Hygienic Practice and Codes of Practice.

Even if there are no previous records of such risks in the Zambian honey sector, the control mechanism must however be improved. Zambia's Ministry of Agriculture and Cooperatives, as well as the Zambian Bureau of standards, have expressed concerns that available technical, human and financial resources are inadequate to enable sufficient monitoring and management of sanitary and phytosanitary risks, as demanded by trading partners such as the EU. If the Zambian honey sector expands, it may become relevant to import used production equipment, which then imposes a risk of introducing pests or diseases thus far non-existing in Zambia. Strict veterinary equipment control would then become crucial.

At present, SPS measures affecting Zambian honey exports are being executed by South African border control. Zambian exports are alleged to carry the pest American Foul Brood (AFB) and are hence subject to irradiation at the South African border. The measure results in a loss of the organic status and hence the entitlement for the honey to be sold at a premium price. The allegation is strictly denied by Zambian authorities and assessment teams examining the possible existence of the pest confirm the absence of AFB. It has recently been stated that South Africa had a domestic outbreak of AFB themselves.

3.2.2 Traceability

Competitive global trends and challenges influence product quality and safety throughout the supply chain and in international food trade. As a consequence of growing concerns of food scares, consumers and other stakeholders are demanding stricter requirements for how food is grown and managed on its way to the consumer, in terms of agricultural practice, animal welfare and environmental impact. Satisfactory food quality requires a certain level of transparency throughout the supply chain, which acts like a guarantee to the consumer. Traceability refers to the availability of information of all processes and stages of the supply chain, which certifies the origin and journey of a specific product. Traceability adds value to the quality and safety

regulations by providing the communication linkage for identifying, verifying and isolating sources of non-compliance to agreed standards and customer expectations.

In case of a potential pest or disease outbreak, a traceable supply chain facilitates tracking the epidemic source. Traceability hence works as a proactive measure in order to derive, isolate and attend to any potential future risk. A perfectly traceable system can therefore be seen as a competitive advantage.

Food traceability is regulated under EU's General Food Law since 2002 and requires all food and feed businesses to implement special traceable systems.

The Zambian honey sector recognizes the importance of traceability and the need to extend traceability requirements as limited rules and systems have been developed thus far.

3.2.3 Quality requirements

All honey intended to be sold in the EU market needs to fulfill the requirements concerning the definition of honey, classifications of honey, labeling and composition criteria that are stipulated in Council Directive 2001/110/EC.

Definitions and labeling

For honey imported into the EU, following information, in the language of the importing country, must be included on the label:

- The name under which it is sold
- The gross and net weight
- The date of minimum durability – 'best before'
- Any special conditions for keeping or use
- The name and address of the manufacturer, packager or importer established in the EU
- Place of origin or provenance
- Lot marking on pre-packaged foodstuffs with the marking preceded by the letter "L"
- Drum number (if exported in bulk)

For a product to be labeled 'honey' when exporting to the EU, there are certain limits stipulated in Directive 2001/110/EC. No ingredient of honey is to be removed, unless it is unavoidable during the removal of foreign materials. Filtered honey, baker's honey, comb honey and other types of honey that has been altered or which is of inferior quality can therefore not be labeled simply as 'honey'. In addition, according to Council Directive 2001/110/EC, all honey which is blended and traded in the EU must be labeled either "blend of EC honey", "blend of EC and non-EC honey" or "blend of non-EC honey".

Some stakeholders stated that there is a problem with labeling related to the origin of the product. Honey exported to the EU in bulk, which has been the case for Zambia during the last decade, is often further blended and packaged in the recipient country. In most cases, this causes the honey's loss of origin, which makes it very difficult to brand Zambian honey and market it abroad.

Composition criteria

Directive 2001/110/EC also stipulates several composition criteria, including sugar content, moisture content, water-insoluble content, electrical conductivity, free acid content, diastase (enzyme) activity and hydroxylofurfural (HMF) content. Moisture and HMF content are of special concern for honey exporters of tropical honey, and were mentioned by the stakeholders as problematic requirements to fulfill:

- The maximum allowed HMF content for honey is 40 mg/kg. Honey from tropical climates may have a maximum HMF content of 80 mg/kg. This exception is due to the fact that high temperatures tend to lead to higher HMF contents in honey.
 - Storage capacity and transport efficiency have direct impact on the HMF content, as prolonged exposure to high temperatures lead to high levels of HMF.
- The maximum allowed moisture content is 20 per cent.
 - The fact that many beekeepers harvest their honey too early, due to lack of training or inability to wait until the honey is ripe, leads to high moisture content in the honey.

3.2.4 Packaging

The import of materials and articles intended to come in contact with food is regulated by EC Regulation 1935/2004, in which it is stated that “any material or article intended to come in contact directly or indirectly with food must be sufficiently inert to preclude substances from being transferred to food in quantities large enough to endanger human health or to bring about an unacceptable change in the composition of the food or a deterioration in its organoleptic properties.”

The material used to manufacture the packaging material is important for Zambian exporters, not only for safety reasons, but also in terms of both quality and marketing and value addition. Plastic containers are more likely to leak during transport, compared to glass jars. This not only leads to losses in export volumes, but also leads to higher risks of fermentation of the honey. Moreover, honey sold in retail shops in the EU is often packed in glass containers of 250 to 500 grams with a metal screw cap. Although plastic containers are sometimes used for honey in Europe, these are often for the cheaper blends on the market. High quality honey is generally sold in glass jars.

Packaging for retail sales is seen as a big problem for processors who are looking into exporting to markets outside the regions, in particular to the EU – not in terms of fulfilling the requirements mentioned above, but in terms of capacity. The absence of a producer of glass containers in Zambia means that in order to capture a higher price by selling to the EU in glass jars, the jars have to be imported from South Africa, which leads to high production costs. Packaging the honey in Zambia instead of selling it to the EU in bulk is seen as a risky venture by several stakeholders, since bigger investments have to be made by the processor, and since the requirements for such exports are more difficult to fulfill than for bulked honey.

The bulk honey is shipped to the EU in 205 or 210 liter steel drums, which must be of good quality and coated with food safe paint, clean and moisture proof.

3.3 Voluntary participation schemes

In addition to tariffs and non-tariff barriers, there are several voluntary participation schemes, such as organic certification (regulated by EC regulation), Fair Trade certification (regulated by the Fair Trade Labelling Organization, FLO), ISO certification, HACCP and various certification initiatives taken by the food industry in the EU.

3.3.1 Organic certification

In order to place products on the European Union (EU) market with reference to organic production, they must comply with the rules laid down by Council Regulation (EC) No 834/2007 on organic production and labeling of organic products with regard to organic production, labeling and control. The regulation aims at the promotion of quality products and the integration of environmental conservation into agriculture. Only when the requirements in this regulation are met, the importer is authorized to label the products with the Community logo for organic products when selling them on the EU market.

The specific EC rules for natural organic honey generally include:

- The apiary must be placed with a 3 km radius of nectar and pollen sources consisting essentially of organically produced crops and/or spontaneous vegetation.
- Artificial feeding must carry organic certification.
- Immediate treatment of diseases.
- Mutilation such as clipping the wings of queen bees is prohibited.
- Chemical fertilizers are not allowed.
- The hives should be made of natural materials.

ECOCERT is a common European certification organization on the Zambian honey market. Being certified under the ECOCERT label enables the honey European market access. Organic certification is however relatively expensive, as external inspectors must be brought from the EU or South Africa every year. IFOAM is another international organization for organic agriculture, issuing certifications. IFOAM and Codex Alimentarius provide basic requirements/rules. The Soil Association is the leading organic organization in the United Kingdom, providing organic certification.

Zambian organic certification is issued by Organic Producers and Processors of Zambia (OPPAZ). Since honey production in general is naturally free from contamination and fertilizer use, organic certification is rarely a problem from a production point of view. All export of honey from Zambia to the European markets is currently labelled organic, as it is considered crucial for external market access. Organic certification is only considered useful for export markets, as the organic price premium on the local market is too low or non-existing. Beekeepers seek compliance every year through internal inspections, performed by OPPAZ and subsequently reported to external inspectors. Group certifications, where beekeepers certify as a regional group, are common. Zambian certification also includes some area explicit aspects, established to provide a sustainable system that is not destructive to the Zambian environment and wildlife. The probation period for transition into organic beekeeping differ from immediate to 1-3 years.

3.3.2 Fair trade

The fair trade certification scheme essentially provides a minimum producer price guarantee. The honey programme also aims to cut out middlemen by linking beekeeper-run cooperatives with direct importers.

Fair Trade standards for honey include:

- The honey must fulfil EU and Swiss quality standards
- Certification is restricted to cooperatives
- Restricted use of agrochemicals and genetically modified plants as part of sustainability encouragement
- Prohibition of forced or child labour
- Quality control by independent agent prior to shipment
- Only use of new quality barrels for bulk shipment

At present, there is no producer or exporter of honey in Zambia that is certified for Fair Trade. The fact that only cooperatives are eligible to become certified through the Fair Trade Labelling Organizations (FLO) was mentioned by one stakeholder as an obstacle for individual exporters or other companies to enter that market, even if they attain other requirements set by the FLO.

3.3.3 Standards and private specifications

The international Organisation for Standardisation (ISO), which sets international quality management standards, is comprised of a network of several national standard institutes. Certification and audits are performed by national accreditation bodies.

The Hazard Analysis and Critical Control Point (HACCP) specification refers to a proactive food safety approach addressing potential critical points along the supply chain rather than inspecting a finished product.

Above-mentioned certification standards add to the competitive advantage on export markets such as the EU, but are also considered relatively expensive, especially for a small-scale beekeeper and potential exporter. Also, since all export of honey from Zambia today is shipped to the EU in bulk, it is not subject to the principles of HACCP or ISO. If, however, Zambia starts to export honey in jars in the future, these principles will have an essential role.

3.4 Information/exposure

Many Zambian stakeholders expressed their concern about the pertinent lack of market news in terms of prices, competition, different actors and marketing opportunities. Updated market information is a significant prerequisite in order to conduct a viable business abroad.

In order to expand internationally, adequate information on the potential export market is essential. International exposure becomes especially important to a potential exporter situated geographically distant from its target market. Some Zambian stakeholders have acknowledged the benefits of participating in international trade fairs,

such as BioFach (organic sector and fair trade) and Anuga (trade and food service sector). Trade fairs were considered an efficient method in order to gain international sector awareness and to facilitate accurate responds to current market trends.

3.5 Export capacity and support from the Government

The question of inefficient techniques and equipment was raised by several stakeholders. Beekeepers need equipment for honey cropping and processing. The equipment includes protective clothing, buckets, drums, and centrifuges. In this area, stakeholders agreed that there is great need for support from the Zambian Government and other actors if the production is to be increased.

It was also stated that modernization of the equipment would not be possible without appropriate training in handling the new equipment. Stakeholders further stated that it is essential that supporting industries, for example the packaging industry, to be developed in order to further develop and expand the Zambian honey sector.

One problem that was raised by several stakeholders was the fragile relationship between sellers (beekeepers) and buyers (mostly processors, but also traders). Partly due to the fact that Zambian beekeepers produce honey in order to survive and not as commercial actors, they sometimes sell to other buyers, in breach with prior agreements with the original buyer. Such side-selling poses a real problem for processors who sell their products further to other markets, as it becomes very difficult to ensure that the importer in another country receives a stable supply of honey in terms of both quantity and quality. For an exporting company, this problem can be particularly severe, since these companies often buy the honey on credit, implying that the beekeepers are paid 3–4 months later – sometimes after an even longer period – when payment has arrived from abroad.

Concerning export capacity, exporters underlined the importance of working capital to pre-finance the purchase of honey from the beekeepers and to transport the honey to the relevant markets. In addition, in order to ensure access to capital and export credits, stakeholders also stressed the importance of insurance against unforeseen events relating to for example unexpected exchange rate fluctuations between the Zambian Kwacha and the US dollar.

Stakeholders on all levels also mentioned that the honey sector has been characterized by poor sector organization and lack of communication. The Zambian beekeeping sector has undergone deep restructuring during the last decade. Institutionally, the mandate for the beekeeping industry is shared by a number of government departments and agencies. Regulations and responsibilities for the Zambian honey sector are divided by a number of categories, ranging from beekeeping as a commercial activity, bees as live animals, honey as a food item and honey for exports. The most notable authority regulating the keeping of bees is the Veterinary department. Honey is moreover a food item and is therefore subject to all food related regulations, involving a number of agencies from the Zambia Bureau of Standards to the Ministry of Health as well as Ministry for Livestock. When exporting organic honey, a number of new actors enter the scene which for example grant organic certification status (OPPAZ) and export permits. The heterogeneity in the mandate for the beekeeping industry is a problematic issue for stakeholders on all levels, as it becomes difficult to know how to channel any intervention aimed at strengthening the sector. In 2003, the Zambia Honey Council was formed to organize the honey sector through the establishment and strengthening of beekeeper groups.

The lack of a coherent, holistic Zambian honey policy was mentioned by many stakeholders as a problematic issue. Although a draft policy exists, no official policy has been presented so far.

Another issue that was brought up was insufficient statistics over Zambian honey production. Honey and its proportionally low share of the country's GDP leads, according to one stakeholder to insufficient funds being directed into the sector. It was suggested by another stakeholder that capital goods used in the production of honey should be tax-free, as is the case with Zambian agriculture.

3.6 Transportation

Being a landlocked country, Zambia faces serious constraints in terms of transportation. In order to export to markets, the goods have to be transported by truck to a port from where they can be shipped. Most of the transports of goods from Zambia to Europe are shipped from Durban in South Africa or Dar es Salaam in Tanzania, in both cases the distance from hive to port is about 3,000 km. The long distance and poor roads and bridges on the way to these ports make exports to the EU a risky and costly venture. In order to avoid problems along the way, two Zambian stakeholders stated that it is imperative to keep track of where the consignment is at all times and to know all actors involved. One stakeholder stated that transport costs make up for 40 per cent of the total value of honey once it reaches Europe.

Another transport-related problem is that due to the climate in the region, the honey is exposed to high temperatures during transport, leading to higher levels of HMF content (see previous section).

3.7 Alternative markets

Given the issues discussed earlier in this chapter, it is an important question whether exports to the EU market is the best option for Zambian honey processors. In general, the advantages of selling on the local or regional markets include lower distribution and marketing costs, less stringent requirements and less paper work, smaller risks related to the transport, as well as the possibility to sell in smaller volumes. The potential advantages of exporting to the EU include larger markets, potentially high prices and foreign exchange earnings.

The answer to this question of course depends on the prices on respective markets, which in turn depend on supply and demand. In the last two years, production of honey in Zambia has fallen, leading to reduction in the supply. At the same time, demand on the local and regional markets has increased – a combination which has led to price increases on these markets. The price of honey has also increased in Europe, partly due to an increase of US imports from Latin America. However, given the high honey prices in Zambia and neighboring countries at the moment, several stakeholders did not find it worthwhile to start exporting to the EU. The processors planning to expand would rather look into local or regional markets.

Regardless of the current price, several stakeholders stated that as an exporter, it is also important to sell to the local market in order to curb the effects of currency fluctuations (see section on Zambia's export of honey).

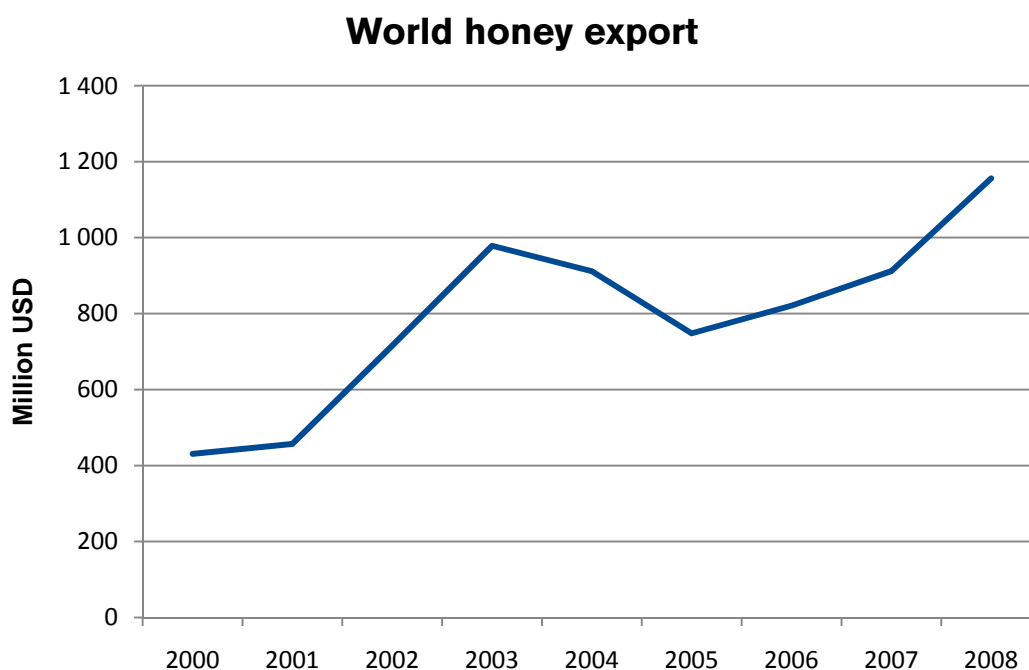
4 EU imports of honey

4.1 General picture of trade patterns

Continuing with the international trade in honey, it can first be concluded that world exports of honey have increased significantly during the last years. Between 2000 and 2008, world honey exports increased by 168 per cent, from approximately 431 million USD in 2000 to 1,156 million USD in 2008.

The five leading honey exporting countries according to their world export shares in 2008 were Argentina (15%), China (10%), Germany (9%), Hungary (7%) and Mexico (6%). Concerning imports, the five leading importers were Germany (21%), United States (20%), United Kingdom (9%), France (8%) and Japan (7%).

It can further be noted that EU alone accounted for approximately 29 per cent of all exports and 59 per cent of all imports of honey in the world in 2008 measured in US dollar current prices.



Source: UN Comtrade Database

4.2 Zambia's exports of honey

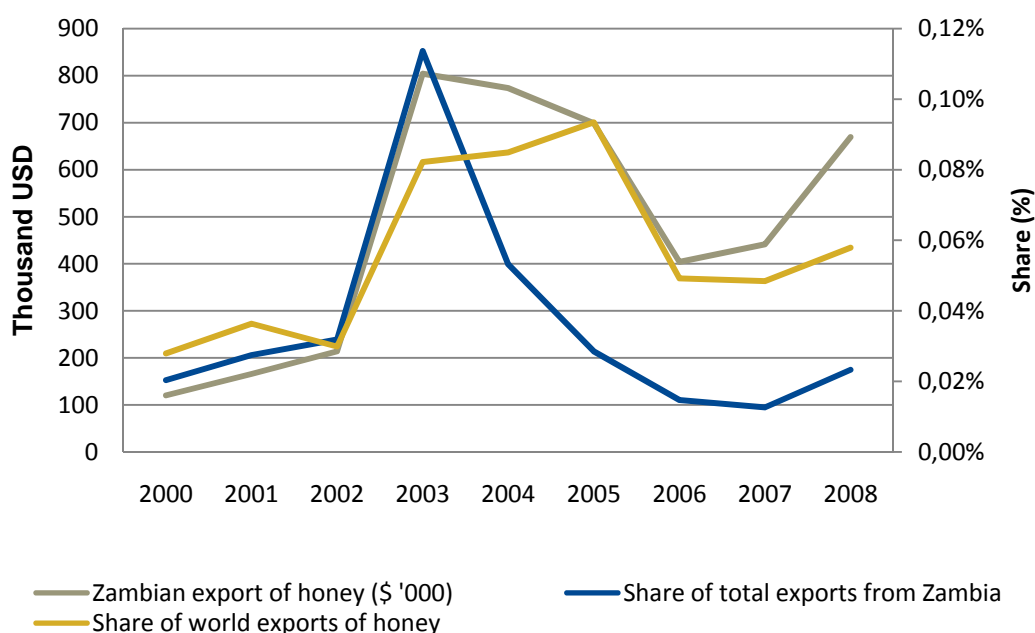
Even though Zambia began exporting honey in the early 1990s, this report focuses on the period between 2000 and 2008.

Similar to the global trend, Zambia has increased its export of honey during the last eight years. In 2000 Zambia exported honey for about 120,000 USD, which can be compared to roughly 670,000 USD in 2008.

It should however be noted that honey exports from Zambia only constitute a marginal share of total exports of honey in the world. Zambia's world market share in honey exports was approximately 0.06 per cent in 2008.

It can further be concluded that the Zambian honey exports only accounted for 0.02 per cent of Zambia's total exports of goods in 2008. The majority of Zambia's exports can be found in other sectors. Exports of mining products have increased significantly during the last years and now account for approximately 78 per cent of Zambia's total export of goods. The increase in exports of mining products is directly linked to the world market price of copper which has boomed during the last years.

Zambia's honey export

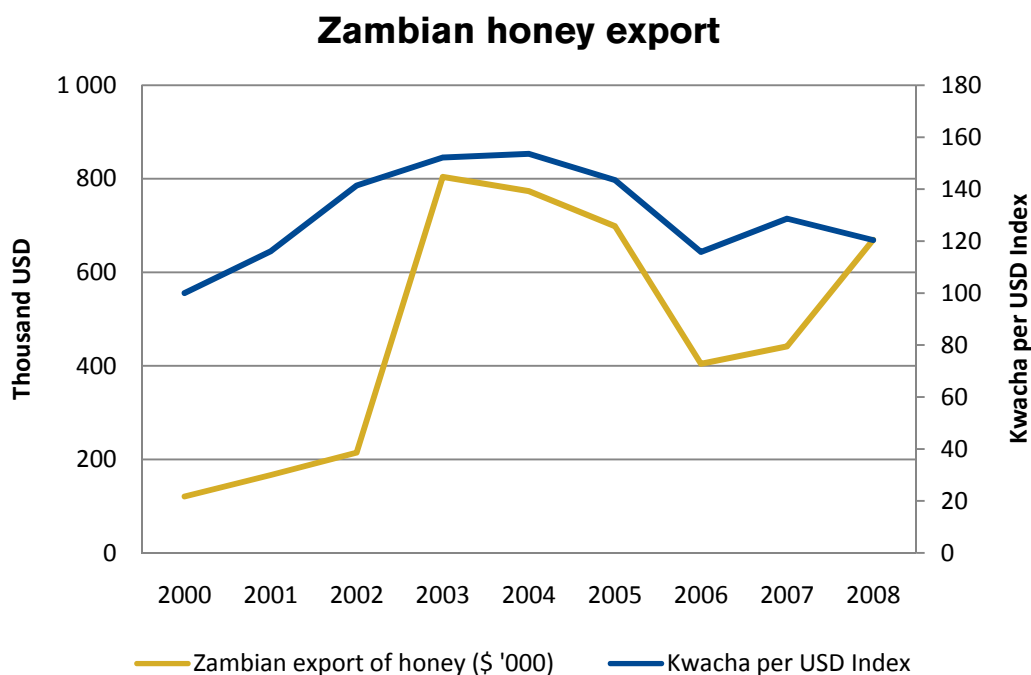


Source: UN Comtrade Database

An interesting feature of the Zambian exports of honey is that it has a strong negative correlation to the exchange rate, which in turn is highly dependent on the world market price of copper set in US dollars. As the Kwacha appreciated by 20 per cent in 2006 due to the copper boom, honey exports from Zambia decreased by approximately 40 per cent during the same year. The appreciation did not only decrease the Zambian exports of honey but also reduce the profitability for honey exporters, as the costs in the honey business are mostly set in Kwacha and do not correlate with the price in US dollars.

Henceforth, the increase in the price of copper in recent years has had a substantial impact on Zambia. While the increase in copper prices and copper exports has raised growth in Zambia, it may also have generated less beneficial effects to the rest of the society, relating to the so called Dutch Disease.¹

¹ "The Dutch Disease" refers to the macro economic problems that arose in the Netherlands after the country had discovered natural gas in the North Sea in the late 1950s. A strongly energy-dominated export led to a gradual increase in the value of the Dutch currency Gulden as the world market price



Source: UN Comtrade Database and IMF Financial Statistics

Note: Kwacha per USD is set to index numbers, 2000=100.

4.2.1 Regional decomposition

Destination markets of Zambian exports of honey in 2008 can be seen in the figure below. Roughly 60 per cent of the honey was exported to Belgium. Other large markets were United Kingdom (17%), United States (10%) and Norway (7%).

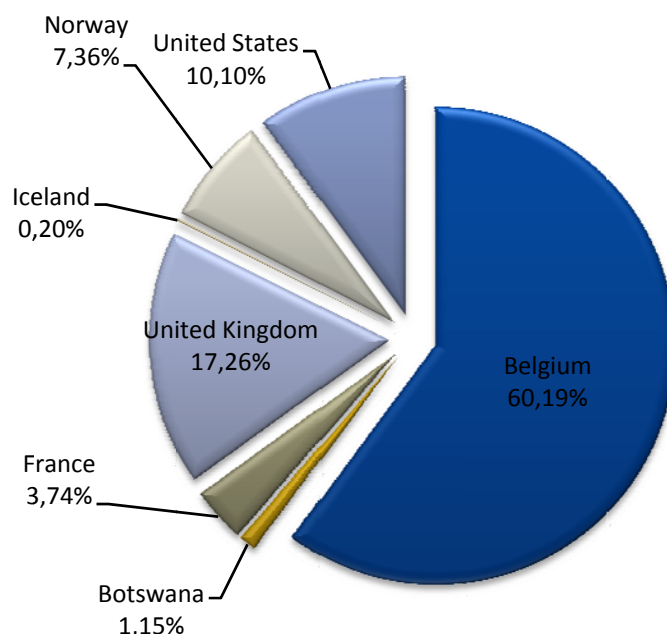
During the observed period between 2000 and 2008, it can be concluded that some countries drop out as export markets for certain years, while other countries remain constant importers. For more information, see appendix.

United Kingdom is and has been one of the most important export markets for Zambian honey. Note however that United Kingdom's share of Zambia's honey exports decreased significantly between 2007 and 2008 from a share of 72 to 17 per cent. This could be linked to the fact that North West Bee Products (NWB) stopped its exports in 2008 due to various reasons. NWBP has, during previous years, shipped almost all its honey to the UK market.

Germany has historically also been an important export market, which can be seen in the following graphs. Interestingly, EU as a whole has always been an important export market. More than two thirds of the Zambian honey has been exported to the EU market during the period between 2000 and 2008, excluding 2001. This makes sense as EU accounts for approximately 20 to 25 per cent of the global consumption of honey. Another interesting trend is that United States has emerged as a big market for Zambian honey in 2008 compared to previous years.

for natural gas increased. This had a negative impact on other export sectors, where the competitiveness was decreased.

Zambian honey exports by country 2008



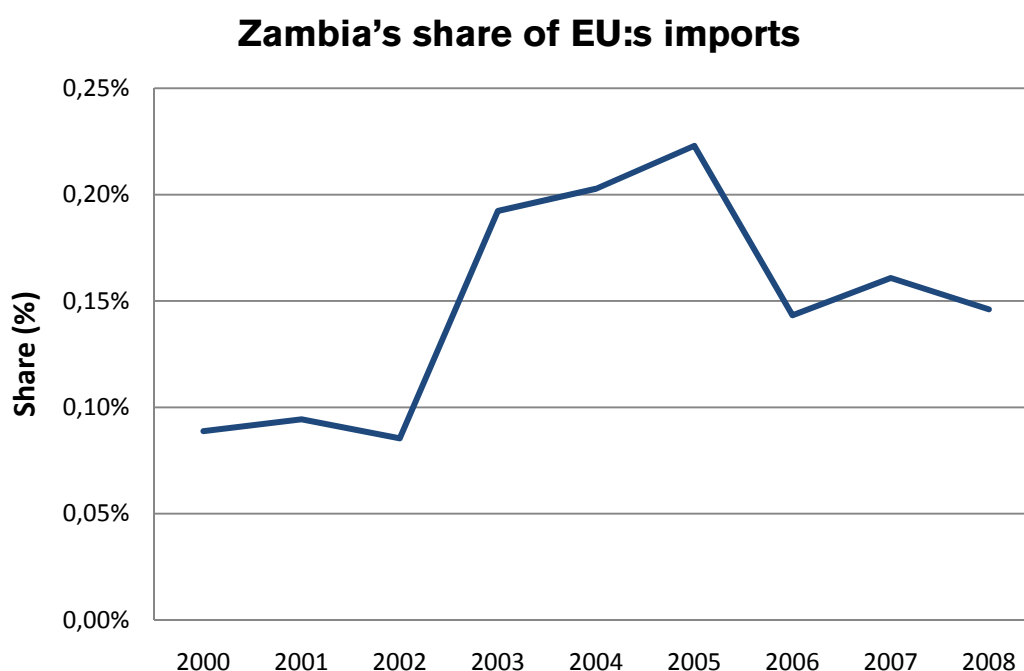
Source: UN Comtrade Database

4.2.2 Zambia's share of EU's imports

Even though the majority of Zambia's honey is exported to EU, Zambia is not a big supplier of honey for the EU in relative terms, as illustrated in the figure below. Zambia's honey export to the EU was estimated to approximately 543,000 USD (173 tons) in 2008, approximately 0.15 per cent of EU's total import of honey. It can also be noted that the decrease in the EU market share in 2006 coincides with the appreciation of the Zambian Kwacha.

The biggest suppliers of honey on the EU market in 2008 were Argentina (36 %), Mexico (16 %), China (11 %), New Zealand (7 %) and Chile (7 %). Both Argentina and Mexico have been two of the five leading suppliers of honey to the EU during the last eight years. An interesting feature in EU import pattern is that New Zealand has increased its market shares from 2 per cent in 2000 to approximately 7 per cent in 2008.

Another interesting feature is the increase of Zambian honey exports to the EU between 2003 and 2005. There are several explanations to this pattern, in which one relates to the EU import bans on honey from certain countries, including China. Due to the fact that honey from China has regularly been contaminated by prohibited substances and contaminated with chloramphenicol, Chinese honey was banned to enter the EU market in 2002. The ban on Chinese honey was lifted in 2004.



Source: UN Comtrade Database

4.2.3 The Rotterdam effect

It can be concluded from previous studies that the EU honey market is approximately 60 per cent self-sufficient. Consequently, the EU needs to import a large part of its consumed honey from extra-EU countries, including countries like Zambia.

Examining the EU trade patterns, the extra-EU imports amounted to roughly 352 million USD in 2008. It can also be concluded that the intra-EU imports was approximately the same amount, namely 375 million USD. Given that there is no significant overcapacity of honey on the EU market, rendering in intra-EU exports, it can be assumed that a large fraction of the 375 million USD intra-EU imports, is in fact re-exports.

This pattern is linked to the so-called Rotterdam effect. Concerning the honey sector, the Rotterdam effect implies that honey, originally produced in for example Zambia, is first shipped to an EU country for processing, packaging and labeling. Thereafter the honey is re-exported to another country within the EU. From interviews, stakeholders also confirm this picture as pre-packed honey is seldom exported to EU due to freight costs and processing constraints. Imports come in bulk and reach end consumers after having been processed by industrial stakeholders in EU.

The leading supplier on the EU market is Germany which exported honey for approximately 100 million USD in 2008, roughly 28 per cent of the total intra-EU trade. Spain and Hungary are also two large exporters of honey on the EU market. However, whereas Spain and Hungary are major producers and net exporters, Germany is a major net importer as well as a leading exporter. The honey which is exported from Germany consists of both locally produced honey and imported honey from other countries. In quantities, Germany imported 84,984 tons of honey and re-exported approximately 7000 tons in 2008. In values Germany imported honey for an estimated value

of 250 million USD from extra EU countries in 2008. During the same year, Germany exported honey for approximately 100 million USD to other EU member states.

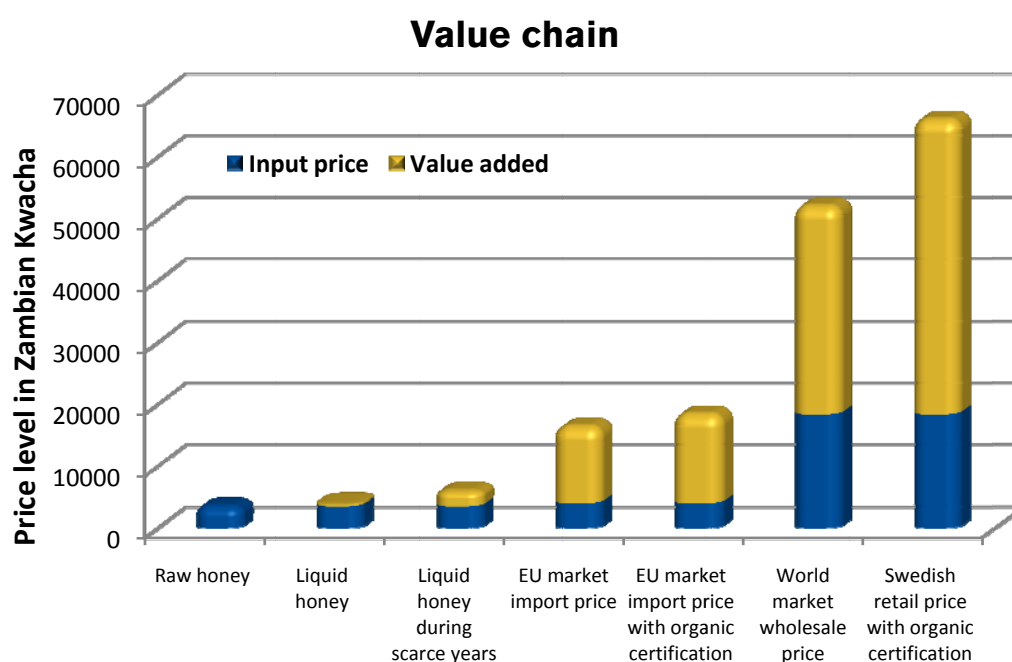
One issue related to the Rotterdam effect that was raised by stakeholders was that the information about the origin of Zambian honey disappears as the honey is not only mixed with honey from other countries but also labeled as European honey when re-exported to other EU markets. This affects the country image of Zambia and has an impact on the price premium as it is difficult to brand promote “made in Zambia” honey if the end consumer does not know the country of origin. The procedure of mixing honey from various countries is however legal and in accordance with EU legislation on Rules of origin.

5 Value chain analysis

As mentioned before, beekeepers are often organized in collectives or groups. The honey that is produced by beekeepers is sold to companies which then process the raw comb honey into natural honey, for either the domestic market or for exports.

A producer usually earns around 3,500 Zambian Kwacha (ZMK) per kg (0.75 USD) for raw honey and approximately 4,000 ZMK/kg (0.85 USD) for liquid honey. During scarce years, prices could go up to 6,000 ZMK/kg (1.28 USD). It should be noted that prices vary significantly depending on the geographical origin. Beekeepers in remote areas fetch a lower price than beekeepers in central locations. Honey business is profitable. Beekeepers who engage in selling honey have a gross margin of approximately 60 to 90 per cent.

A few selected food processing firms then sell the honey to shops and supermarkets on the local market for an estimated value of around 8000 – 10000 ZMK/kg (1.7 – 2.1 USD). Retailers sell honey for approximately 15,000 – 22,000 ZMK/kg (3.2 – 4.6 USD) depending on the quality. The value addition along the chain is remarkable, something which explains why there is a certain level of vertical integration among Zambian honey buyers. Buyers often aim to advance in the values chain ladder by taking on processing, packing and distribution in order to increase profits. This price decomposition indicates that retail prices of honey are on an average more than four times higher than producer prices.



Concerning exports, Zambian honey is shipped to foreign destinations in bulk form. The export prices fetched on the EU market have increased significantly in recent years. Increased demand and a ban on import from Brazil led to increased prices in 2006. In 2007 and 2008, prices increased further mainly as a result of Colony Collapse Disorder in the Americas and Southern Europe. Stakeholders have also noticed a 40 per cent increase in price during the last two years.

The export prices on the EU market have been fluctuated around 16,380 ZMK/kg (3.8 USD) during 2009. On top of this there is an additional premium of approximately 2,000 ZMK/kg (0.42 USD) for organic certification and another 2,000 ZMK/kg (0.42 USD) for fair trade status, given that the export price is lower than the world market price. Previous studies verify that organic honey is valued higher than conventional honey given the same quality and that the price premium ranges from 10 to 20 per cent. The profit margin for exporters is about 40 per cent and the majority of the costs originate from transports.

As previously mentioned importers do not only import the honey into the EU but also process blend and pack the honey. The processed honey is thereafter supplied to the domestic host market or re-exported to another country. Looking at the Swedish market, import prices vary around 13,500 – 20,500 ZMK/kg (2.9 – 4.4 USD) depending on the quality. During processing the mark-up is approximately 100 per cent as the retail price to the end consumer is about 40,000 – 46,600 ZMK/kg (8.5 – 9.9 USD). The end consumer price at retail stores for organic and crystallized honey is about 66,600 ZMK/kg (14.2 USD) and 60,000 ZMK/kg (12.8 USD) respectively. This is roughly in accordance with the average world market wholesale price for organic honey which was around 52,000 ZMK/kg (11 USD) in August 2009.

6 European demand

According to a Swedish importer/packer, there is no Swedish honey import from Africa, other than possibly small amounts of direct imports. This was explained with the fact that many African countries suffer from bad infrastructure, leading to inefficient logistics and dysfunctional distribution channels. African countries often have difficulties to ensure stable quality and quantity to European importers.

The same importer/packer stated that there are two alternatives for exports of African honey to the EU:

- Launch a purely African product, preferably light colored honey. Due to the flora, honey from many African countries is often dark, which does not suit the taste of the Nordic countries, but is more popular in Southern Europe.
- Sell as ingredient in another honey – blend with European honey.

One stakeholder, representing one of the largest retail chains in Sweden that has its own brand of honey, which is imported from within the EU, stated that exports of retail-packed honey from Zambia to Sweden is very unlikely, due to strict requirements in the EU market as well as high logistical costs. Also, the consumer preferences differ between the different EU member states, implying that honey in general has to be blended in order to suit the customers taste. Instead, Zambian exporters should focus on selling bulk honey to the big European companies that export the honey after processing.

A representative for one of these companies – a major French company which imports, blends and packages honey for customers around the world – stated that none of their honey comes from Africa as there are no good producers at present. Also, there have been other issues with imported honey from North Africa, where Chinese honey has been blended with African honey in order to benefit from tariff reduction.

A representative for one of the major German importers/re-exporters stated that they do import African honey, but there are many problems. Generally, the quantities from Africa are too small. Also, there are problems of quality, as the honey is often dark and smoke-tainted. The honey is often damaged by heat.

The Zambian honey sector has, as has been mentioned above, had no recorded case of diseases which need treatment with antibiotics, such as the American Foulbrood, or with chemicals, such as varroa mite. This gives Zambian honey exporters a competitive advantage. Due to varroa mite and Colony Collapse Disorder (CCD), production of honey in the EU is expected to decrease in the future. Since the demand is expected to remain on today's levels, the imports from countries outside the EU are expected to increase, as well as the price for honey. This may offer new opportunities, in particular for African countries, since the CCD has also struck South American countries.

Zambia exports organic honey. This may be beneficial as the production of organic honey in the EU is limited by the use of veterinary medicines used when treating varroa mite. Organic honey production is also limited by the fact that most EU member states lack unpolluted areas and suffer from cold winters. The latter implies that all honey in the combs cannot be harvested in the summer, since the bees have to have a reserve to survive the cold winter months.

Whereas production is falling in Western Europe, production in Eastern Europe is increasing. Since there are no restriction for trade between EU member states, and since these countries have much better access to the EU market, they are likely to be key competitors of African honey exporters who engage in exports to the EU.

7 Concluding remarks

Beekeeping requires little investment in terms of both capital and labour, and is therefore considered a relatively viable business, contributing to Zambia's poverty reduction. There are however several risks and problems influencing the production and export capacity of Zambian honey. Environmental factors such as caterpillars, red ants, fires and colony reductions affect output irregularly and are hence impossible to predict. Other more substantial issues such as poor road infrastructure and practical limitations related to the production of honey directly affect capacity levels. Due to limited technology and equipment access, total yield and quality are further affected.

Whereas customs tariffs are not perceived to be a problem for Zambian honey exports, there are some problems related to sanitary and phytosanitary requirements. The control mechanisms in Zambia could be evaluated in order to investigate how improvements may result in more sufficient monitoring and management of sanitary risks. With regards to traceability, the Zambian honey sector recognizes the need to further develop traceability requirements.

Concerning the quality of honey, two major problems were raised by stakeholders that were encountered during the study. Firstly, the HMF content is often high due to prolonged exposure to high temperatures. Secondly, the moisture content is too high, as a result of beekeepers often harvesting the honey too early.

Furthermore, the Zambian packaging industry suffers from capacity restraints, and hence packaging is a bottleneck for operators intending to export retail-packed honey to the EU. The lack of a producer of glass jars implies that the exporter either has to import jars from South Africa or use plastic containers, which in turn result in lower margins. Furthermore, plastic containers often lack in quality.

Zambia suffers from serious transport-related problems. Because honey must be transported by truck to a port, before shipping it to the EU, the costs for Zambian honey exporters increases significantly. Another key obstacle for exporters is the reliability of the purchasing companies. Side-selling is a common problem which makes it difficult for exporters to ensure a steady supply to an EU importer. Another concern is the lack of working capital to pre-finance the purchase of honey from beekeepers.

One difficulty, and a result of all Zambian honey being exported in bulk, is that the Zambian origin is lost when honey is blended before sold on the European market. It consequently becomes difficult to brand Zambian honey and market it as Zambian on the EU market. Many Zambian stakeholders identified the insufficient access to market information, which is considered necessary when engaging in exports. Another important marketing measure mentioned by Zambian stakeholders is the exposure at international trade fairs.

Zambian beekeepers, like beekeepers in most Sub-Saharan Africa, enjoy the competitive advantage of not having to use antibiotics or other pharmaceuticals. This could facilitate access to the EU market, both for conventional and for organic honey.

Regulations and responsibilities for the Zambian honey sector are divided between several ministries and authorities. This poses a problem for stakeholders on all levels, as it becomes difficult to decide how to channel any intervention aimed at strengthening the sector. Several stakeholders requested the establishment of a common honey policy, which would not only contribute to the general understanding of the sector and its relevant policies, but also provide helpful guidelines to producers. In order to facili-

tate participation in different trade negotiations, it is important to connect producers, cooperatives and all stakeholders to relevant policy mechanisms.

The need for support, from the Government or other actors, was raised in relation to equipment and training for beekeepers. Several stakeholders with insight into Zambian production of honey, mentioned that access to education and equipment could greatly increase the production of Zambian honey.

Given the high prices on local and regional markets, most Zambian stakeholders did not find it worthwhile at the time being to engage in exports to the EU. Instead, these stakeholders recognised local or regional markets as more interesting for present expansion possibilities.

Both world honey exports and Zambian honey exports have increased significantly in recent years. Zambian honey exports do however only constitute a marginal share of total trade in honey. The EU market is the most important export market for Zambian honey, accounting for approximately 20 to 25 per cent of the global consumption of honey.

It can be concluded that Zambian honey exports is subject to the Rotterdam effect since pre-packed honey is seldom exported to EU. Honey, produced Zambia, is generally first shipped to an EU country for processing, packaging and labelling. It is subsequently re-exported to another country within the EU. The procedure is consistent with EU legislation on rules of origin, but it raises some issues for Zambian stakeholders as the information about the origin of Zambian honey disappears in the process. It does also affect the price premium for the Zambian honey producers and exporters as is it difficult to brand the honey as Zambian if the end consumer is unaware of the country of origin.

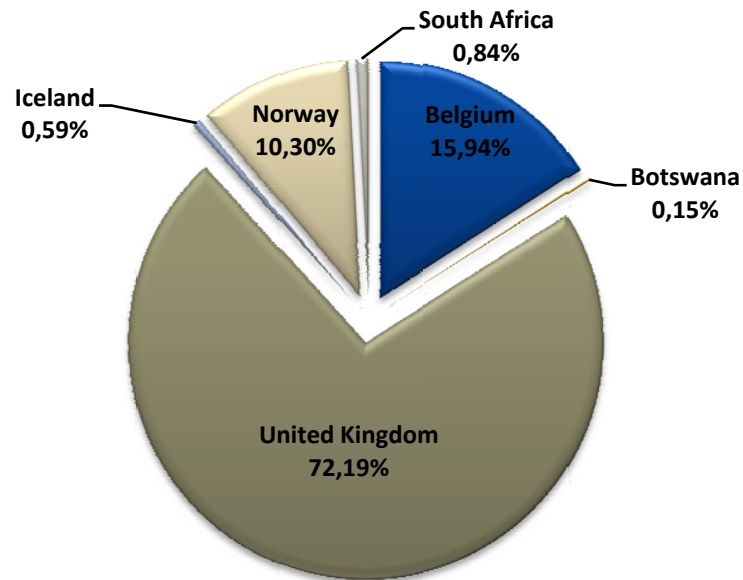
According to several European stakeholders, there are a number of problems related to exports of African honey to the EU. These problems include both quality and quantity aspects. Firstly, the honey is often perceived as too dark with a smoke-tainted taste, which is considered less attractive in the EU. Additionally, the supplies of African honey are often unreliable. Furthermore, according to European stakeholders, it is not very likely that Zambian exports of retail honey will become big business. Instead, it is more realistic to export to companies in the EU that blend Zambian honey with other types of honey to meet European demand.

Useful links:

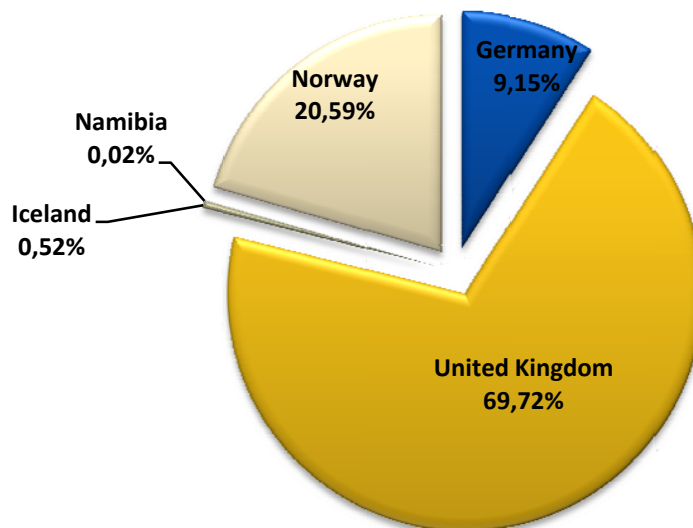
National Board of Trade	www.kommers.se
Open Trade Gate Sweden	www.opentradegate.se
Swedish Chambers of Commerce	www.cci.se/trade
Chamber Trade	www.chambertrade.com
Export Helpdesk for Developing Countries	exporthelp.europa.eu
Centre for the Promotion of Imports from Developing Countries (CBI)	www.cbi.eu
Danish Import Promotion Programme (DIPP)	www.dipp.eu
Finnpartnership	www.finnpartnership.fi
Frucom	http://www.frucom.org/index1.htm

Appendix

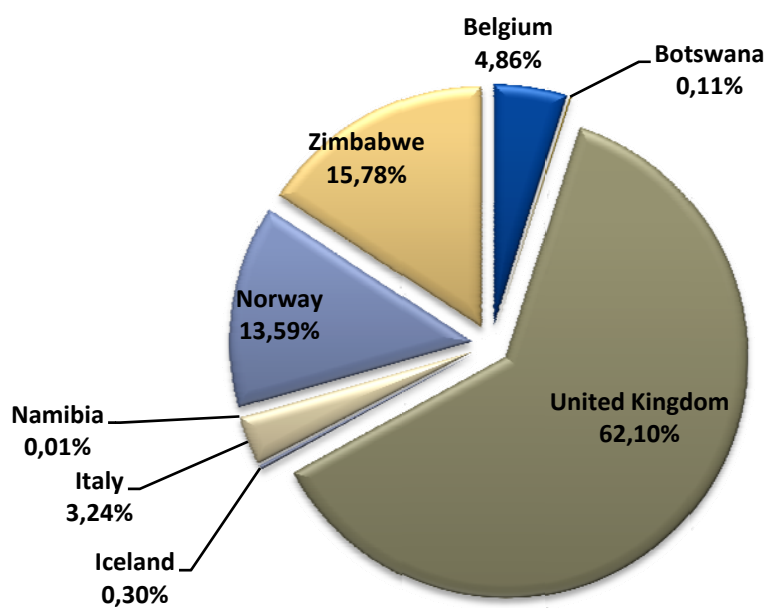
Zambian honey exports by country 2007



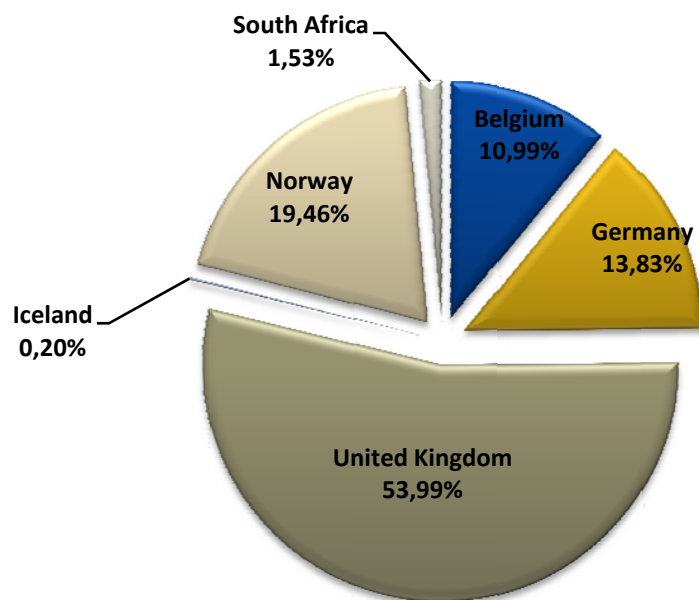
Zambian honey exports by country 2006



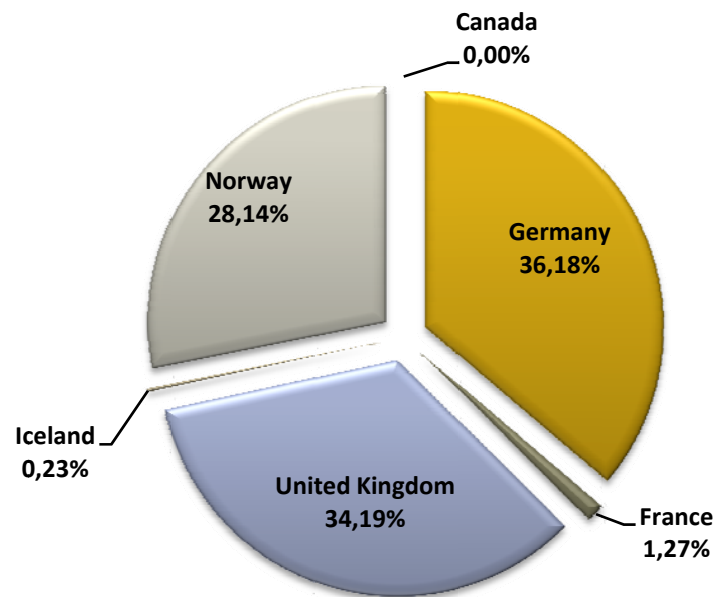
Zambian honey exports by country 2005



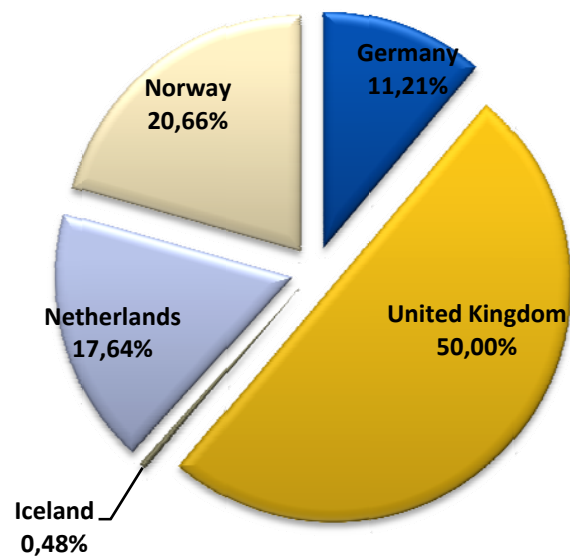
Zambian honey exports by country 2004



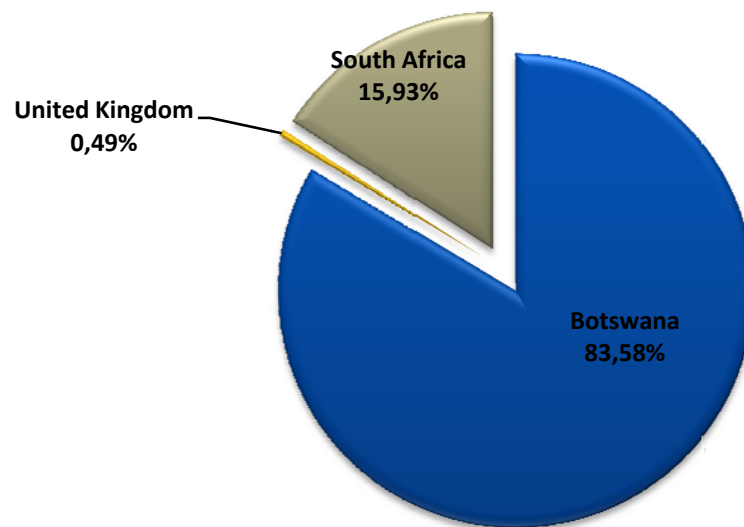
Zambian honey exports by country 2003



Zambian honey exports by country 2002



Zambian honey exports by country 2001



Zambian honey exports by country 2000

