ALCP | Alliances Caucasus Programme

REGIONAL MARKET ALLIANCES IN THE SOUTH CAUCASUS

PROSPECTS FOR THE EXPORT OF GEORGIAN HONEY

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MERCY CORPS

Alliances Caucasus Programme (ALCP) is a DCED Audited market development programme working in accordance with the M4P Approach (Making Markets Work for the Poor) which is deeply committed to ensuring Women's Economic Empowerment in everything it does. The programme works with key market system actors in the private and public sectors to effect real change in the regional livestock market system in the Beef, Sheep, Honey and Dairy sectors in the South Caucasus – Georgia, Azerbaijan, Armenia.

The programme is a **Swiss Agency for Development and Cooperation** Project implemented by **Mercy Corps Georgia**, working to improve the livelihoods of poor men and women who are dependent on livestock.

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LIST OF ABBREVIATIONS

ABBA	Ajarian Beekeeping Business Association
ALCP	Alliances Caucasus Programme
BIP	Border Inspection Post
CBI	The Center for the Promotion of Import for Developing Countries
CSR	Corporate Social Responsibility
CVED	Common Veterinary Entry Document
DCFTA	Deep and Comprehensive Free Trade Area
EC	European Commission
ENPARD	The European Neighborhood Programme for Agriculture and Rural Development
EFTA	European Free Trade Agreement
FAO	Food and Agriculture Organization of the United Nation
FDA	Food and Drug Administration
FOB	Free on Board
GAC	Georgian Accreditation Center
GC-MS	Gas Chromatography Mass Spectrometry
GEL	Georgian Lari (currency)
GMO	Genetically Modified Organisms
GoG	Government of Georgia
GSI	Gender Sensitized Intervention
HFCS	High Fructose Corn Syrup
HoReCa	Hotel/Restaurant/Cafe
HMF	Hydroxymethylfulfural
ISO	International Organization for Standardization
LC-MS	Liquid Chromatography Mass Spectrometry
LDC	Least Developed Countries
LEPL	Legal Entity of Public Law
LLC	Limited Liability Company
LMA	Laboratory of the Ministry of Agriculture
LTD	Limited Liability Company
MoAA	Ministry of Agriculture of Ajara
MRL's	Maximum Residue Limits
MinFAL	Ministry of Food, Agriculture and Livestock of Turkey
NFA	National Food Agency
PPP	Purchase Power Parity
RMP	Residual Monitoring Plan
RC's	Result Chains
SC	Systemic Change
TRACES	Trade Control and Expert System
UK	United Kingdom
USSR	Union of Soviet Socialist Republics
USD	United State Dollar
US	United State
WG	Western Georgia
WTO	World Trade Organization

EXECUTIVE SUMMARY

Since ancient times, beekeeping has been one of the main economic activities of the Georgian population. At present, according to official statistics, Georgian beekeepers annually produce approximately 3-4 thousand tonnes of honey. Most Georgian beekeepers are small scale farmers owning 50 beehives on average and harvesting honey mainly twice a year. They use relatives and friends to sell honey in the larger towns and cities of Georgia. Some of them selling honey to Turkish smugglers, who offer a high price for chestnut honey in particular. The illegal honey trade with Turkey is an important market for many beekeepers of Western Georgia. The average market price has increased in Georgia for the last five years and one of the reasons is the influence of Turkish intermediaries. However, despite increasing prices, low access to stable markets is a main challenge for Georgian beekeepers.

There are several private honey processing companies in Georgia. Their main market and selling points are national supermarket chains and their own outlets and their main constraints are linked to late payment, large receivables and unstable demand. Most of them own their own apiaries and source from a low number of small beekeepers due to distrust as to the quality of their honey. Despite the fact that recently Georgia has approved and put in force two main resolutions which set qualitative and safety requirements to honey sold on the market, the sector remains one of the less regulated.

Absence of an effective registration and monitoring system in the sector creates distrust between honey market players and consumers in which affordable user friendly laboratory services can play a vital role. At present, there are 10 accredited laboratories in Georgia, however their testing scope is limited to tests on quality parameters excluding antibiotics. The main reason for this narrow scope is the current low demand and the high prime cost for such tests, which renders it expensive and unprofitable[1]. At present, the Laboratory of the Ministry of Agriculture of Georgia is the only laboratory testing honey for antibiotics mainly via the screening method,[2] which is important in the honey aggregation process. However, test results based on the screening method might not be considered sufficient for the importer and where this is the case, the exporter needs to send honey samples to a foreign laboratory[3]. In 2018 the Laboratory should come on line with accredited reference testing for the six main substances required in the Residue Monitoring Plan, currently it can carry out reference testing on two. See P16 and 17 for more details.

The world honey trade reached a value of 2.2 Billion USD in 2016. The majority of the production of honey takes place in developing countries, whilst developed countries are the largest consumers. The top importers of honey in 2015 were the United States, Germany, the United Kingdom, France and Japan. The origin and the color of honey are important price determinants. China supplies the lowest-priced honey, Argentina takes a middle position and honey from Mexico, New Zealand and Australia receives the highest prices in international trade. Almost all countries and unions of the world set requirements for honey and follow an international standard known as the Codex Standard for Honey (CODEX STAN 12-19811), but

[1] One private laboratories has the equipment and would need capacity building to implement the testing methods to carry out such testing and others would need capacity building and investment in equipment.

[2] In general, reference methods such as HPLC (High Performance Liquid Chromatography) and ELISA (Enzyme-Linked Immunosorbent Assay) are standard methods in conducting tests on antibiotics with high precision. However, new technology innovative companies such as Randox has started to offer improved and quick methods called as screening methods, which are not yet fully recognized industry wide as reference methods.

[3] Intertek based in Germany is the most commonly used internationally accredited laboratory by honey exporters from different countries around the world.

set different import requirements. Some countries exclude several parameters in their national regulations and some set additional ones.

In the European Union (EU) and Japan, consumer's behavior and attitudes towards organic products have significantly changed over the last few years which has influenced the market. These consumers are ready to pay premium prices for the certified organic products. The EU (mainly Germany and UK) is the world's largest market in terms of organic honey consumption and continues to grow. Currently, Mexico, Guatemala, Argentina, Uruguay and Chile are the dominant suppliers of organic honey to the EU. In line with growing demand for organic honey, the role of certification becomes crucial. In addition to the certified honey market, the special honey (premium and high value honeys[4]) market is increasing. High value niche honeys tend to have specific consumers and are generally sold through specialist shops or personal contacts or via online shops and platforms. But it requires great effort and preliminary activities cultivate a place in this niche market. Turkey is one of the leading actors in these markets. It is noteworthy that some of these types of special honey are produced in the Northern Turkey, in the regions close to the Georgian border[5].

In recent years Georgia has progressed in advancing opportunities for Georgian honey export, such as developing and enforcing regulations, implementing a Residue Monitoring Plan, listing the country in the EU third country list, accreditation of the main laboratory and supporting agricultural beekeeping cooperatives, but there are several key constraints still remaining in the sector. These constraints can be categorized under three main areas as below:

Lack of Information on	- Volume of honey harvested in Georgia according to types of honey - Knowledge and understanding of testing requirements and availability - Potential markets (importer countries) by types of honey - Preferences and Requirements of potential markets - Export procedures and required documentations and responsible bodies
Lack of Marketing and Promotion	- Low awareness of Georgia as a honey producer on international market - Lack of promotional activities by the government and the private sector - Lack of content/materials for marketing purposes
Lack of confidence in honey quality	- Lack of user-friendly affordable laboratory services - Low awareness of availability and costs of quick lab tests - Lack of apiary monitoring on usage of prohibited drugs

These constraints create a lack of confidence in honey as a product with high export potential, which has a knock on effect on motivations to export honey. These misconceptions tend to unduly influence the initial phase of the export process such as negotiation on volumes, timing, quality and prices, and the export process has never reached its final phase of regular shipments to a constant buyer.

This research paper lays out the vision of facilitation of the ALCP in the honey sector based on current market understanding, intelligence and entry points. Facilitating the creation of a honey producers database and product catalog, access to information on import country requirements, export documentation, and user-friendly affordable FS&H, BDS and Lab services along with marketing and promotion will be the main activities directed towards building increased confidence towards honey as a high value export product.

[4] Such as Manuka Honey from New Zealand and Australia, Bashkir honey from Russia and Elvish honey from Turkey, etc. The full list is given in Annex 6.

[5] These are Anzer honey from Anzer plateau, Rhododendron honey mainly known as Mad Honey, Karakovan honey similar to Jara honey and Elvish honey extracted directly from the walls of 1,800-meter-deep cave in Artvin. Key information on each type is given in Table 16. Info Box: Turkish Special Honeys.

Increased awareness, knowledge and capacity of honey producers and exporters, a diversified image of Georgia as a high value honey producer present on the international honey market map and increased sales of quality honey bought from small-scale honey producers will result in improved financial stability in the sector as a whole.

Section 1 presents the honey market system of Georgia describing recent developments in the sector, honey types harvested in the country, traditional beekeeping in the Western Georgia regions, honey testing capacities and the current status of the honey production and export.

Section 2 explores the international honey market, giving an overall picture of the world honey trade, honey importing countries, consumer preferences, recent trends and niche markets. The role of online markets and international platforms are also outlined in this section.

Section 3 summarizes key constraints for the export of Georgian honey and sets the vision of facilitation of the ALCP.

SECTION 1. HONEY MARKET SYSTEM OF GEORGIA

1.1 INTRODUCTION: BRIEF HISTORY OF BEEKEEPING IN GEORGIA

Beekeeping is a traditional agricultural activity that is carried out in almost every region of Georgia. Since ancient times, it has been one of the main economic activities of the population. According to historical records of the Middle Ages (D. Andguladze, 1968), a large amount of Georgian honey and wax were exported to Europe, which confirms that beekeeping was developed in Georgia. Another proof of this are records of Georgian historian and geographer Prince Vakhusti Bagrationi (18th century). In the 19th century, due to several inventions (frame hives, artificial honeycomb, and honey extractors) beekeeping in Georgia began gradually moving towards modern practice and in the 20th century took a modern form. From the second half of the 20th century, soviet beekeeping took the course of creation and development of bee breeding in the southern zone of the USSR, including Georgia. In 1976, seven breeding centers were created in Georgia (Tsnori, Kvareli, Dusheti, Kharagauli, Samtredia, Mukhuri and Sokhumi) as well as beekeeping associations. From these centers only Mukhuri produced queen bees for breeding.

The end of the 20th century was a particularly hard time for the Georgian beekeeping industry with the collapse of the USSR bee breeding centers and later the closure of the beekeeping research institute. Since then beekeeping continued in the private sector and small holder production, which could not ensure the development of the industry due to various constraints and an unstable operating environment. Georgia lost its foreign market.

Despite a growing number of bee hives, productivity has not substantially increased mainly because of: reductions of honey flora and cultivation of non-honey plants (cereal) on domestic farms, limited demand for honey due to decreased PPP[6] of the population and until 2017 export restrictions due to an inability to provide the necessary checks and certification (see *The Characteristics of Beekeeping in Ajara Region*, 2015).

Since signing the EU-Georgia Association Agreement[7], Georgia is committed to promote agricultural and rural development in the country with the help of donors, one of which is the European Union. In 2013, the EU launched the European Neighborhood Programme for Agriculture and Rural Development (ENPARD)[8] with the main goal of rural poverty reduction and development through a major drive on farmer cooperatives. Programme assistance was provided to the government and also to NGOs working directly with communities on the ground. The total budget for ENPARD in Georgia for 2013-2019 is €102 million.

To date, over 250 cooperatives have received direct funding and technical assistance with over EUR 4 million through ENPARD 1 implementing partner organizations (Oxfam, Mercy Corps, People in Need, CARE International, UNDP Georgia)[9]. Out of 250 cooperatives, 52 are beekeeping cooperatives (with the capacity of 60.4 tonnes of honey production per year) see Annex 1 for the national distribution and production capacities of honey cooperatives. Under ENPARD, beekeeping cooperatives received beehives,

[6] Purchase Power Parity

[7] The EU and Georgia signed an Association Agreement on 27 June 2014. It entered into force on 1 July 2016. The agreement introduced a preferential trade regime – the Deep and Comprehensive Free Trade Area (DCFTA). This regime increases market access between the EU and Georgia based on having better-matched regulations.

[8] www.enpard.ge

[9] Source: www.enpard.ge

beekeeping inventory, honey processing equipment, transport for transhumance, wax production lines, and queen bee breeding equipment varying from cooperative to cooperative.

The State Programme to Support Beekeeping Agricultural Co-operatives was launched in 2015 and implemented by the Agricultural Cooperatives Development Agency (ACDA)[10] under the Ministry of Agriculture of Georgia (MoA) until January 2017. The main goal of the programme was to improve the technical base of agricultural beekeeping cooperatives and increase the quality and quantity of honey and other beekeeping products. Within the framework of the Program, each participant received bee hives, honey extractor, honey storage tanks, honeycomb uncapping electric knife, tank for uncapped honeycomb and DC Power converter from 220 V to 12V. To date, the programme co-financed 253 beekeeping agricultural cooperatives with the capacity of 266.6 tonnes of honey production/per year (See Annex 1).

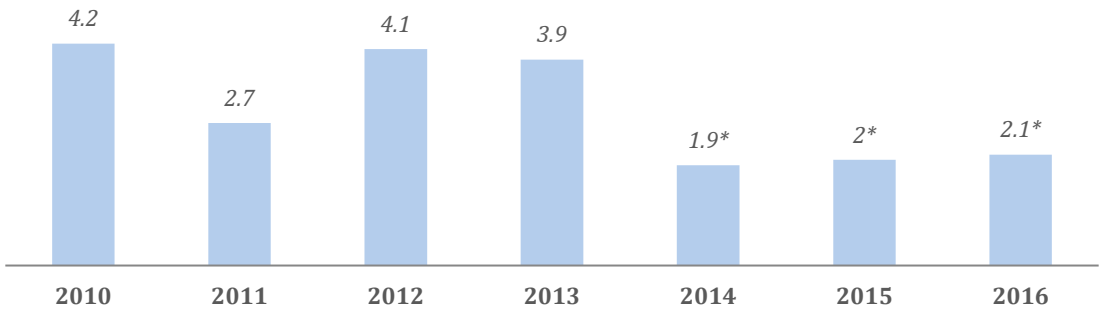
Since 2014, the Alliances Caucasus Programme (ALCP)[11] has worked in honey sector development by; facilitating supporting functions in inputs and trainings with *Impervet Ltd* (a national level beekeeping input supplier), governance, advocacy and an annual Honey Festival with *ABBA* (Ajarian Beekeepers Business Association), quality information dissemination with *Mosavali* (short video lessons for producers) and with the *National Food Agency* facilitating meetings with beekeepers to disseminate information regarding national requirements. In the core market it has facilitated local honey processor *Matchakhela Ltd* which collects honey from beekeepers and sells it to supermarket chains. The Honey Festival facilitated through ABBA to raise awareness and improve the image of local honey among locals and tourists has been very successful and resulted in an increased demand for labelled honey. For the promotion of the traditional beekeeping widespread in Georgia, the programme facilitated the Eco Films production Jara[12] in a consortium of donors, a 52 minute, a half-wildlife, half-human story observational documentary about mountains of one specific region of Republic of Georgia – Ajara. It tells of bees in the forest, of the beauty and ruthlessness of nature, of people and their lives within it. An article also appeared in the November edition of National Geographic on Jara Honey in Georgia based on the film.

1.2 HONEY PRODUCTION IN GEORGIA

Honey is the main beekeeping product produced by Georgian beekeepers. At present, around 3-4 thousand tonnes of honey are produced annually in Georgia. Beekeeping highly depends on weather which is why the Figure 1 shows fluctuation in production volumes between 2010 and 2013. Figure 1 also shows a decline in production from 2014, which can be explained by the changes in the calculation methodology of Geostat.

[10] http://www.acda.gov.ge/
[11] Now Alliances Caucasus Programme www.alcp.ge
[12] www.jarathemovie.com

Figure 1. Honey Production in Georgia (thousands of tonnes)



* *Geostat changed the calculation methodology*
Source: www.geostat.ge

Georgia mainly produces five types of honey in large amounts. These are acacia honey, blossom honey, alpine honey, linden honey and chestnut honey (see Table 1 for more information). Most large beekeepers (more than 100 beehives) are engaged in transhumance and harvest honey twice in late spring (highly depends on the weather in spring) and late summer. Chestnut and linden honey are mainly harvested in Western Georgia. Beside these types, there are specialist honeys in Georgia such as Jara honey (wild honey), rhododendron honey (known as mad honey containing grayanotoxin), honey from laurel, willow, solidago and others. However, their output is low (up to 3 tonnes) mainly due to low demand from the market.

Table 1. Info Box: honey types in Georgia

ACACIA HONEY _ light, transparent, aromatic honey harvested in early spring. Mainly mono-floral, however bees also harvest from the nectar of citrus and other plants blooming that time. The exact amount of the capacity of this type of honey is unknown. The output changes annually. Highly depends on weather conditions in early spring. The market price is lower than other types of honey.

BLOSSOM HONEY _ also called May honey or Meadow honey. The product is made of different plants and it has got special aroma and taste. Bees collect nectar from several plants blooming in spring and summer. The market price can vary depending on geographical location from where it is harvested.

ALPINE HONEY _ harvested from plants and flowers of sub alpine zone in the second half of summer. It is the one of the high value honeys. Exact amount of output is unknown. Mainly produced by beekeepers engaged in transhumance.

LINDEN/LIME HONEY _ the most common and largely produced honey in the Western Georgia[13]. Lighter than chestnut honey. Harvested in July-August. Mainly mono-floral however may contain chestnut, which is blooming at that time and located in the same area.

CHESTNUT HONEY _ It is a dark color honey with a bitter sweet taste. Harvested at the end of summer. Due to high demand from Turkish smugglers, this type of honey is the most expensive in Georgia. The output highly depends on weather. Mainly harvested in the forests of Western Georgia.

[13] hereinafter WG

The average market price has increased in Georgia for the last 5 years, mainly due to the sharp exchange rate fluctuations and inflation. T*able 2* shows that honey price in GEL has increase since 2014, while the price in USD and Euro has reduced. Meanwhile fluctuation in supply/demand of chestnut and acacia honey can be a reason as well. In 2015 due to bad weather conditions the harvest of chestnut honey in Georgia and Turkey was low. The demand from Turkish smugglers increased which led to an increase in price from the end of August. Acacia honey (one of the cheapest honey) harvest was low in 2015 and 2016, which also influenced the market price of another "light" honey _ blossom honey. The average price increased from 10 Gel (2014) to 15 Gel (2016).

Table 2. Average market price of Honey in Georgia (2014-2017)

	2014	2015	2016	2017[14]
GEL	12,82	15,12	15,49	14,92
EUR	5,47	5,99	5,91	5,45
USD	7,26	6,64	6,54	6,01

Source: ALCP Collected Market Prices

Jara honey. Honey harvested from the handmade wooden beehives like Jara is one of the specialty honeys of Georgia. The uniqueness of Jara is due to its production and harvesting method. The old tradition of Gejuri beekeeping i.e. of attracting a wild swarm to a hollowed out log, requires less inference by the beekeepers and thus usage of antibiotics or any chemicals against bee diseases is minimized if not wholly absent. Bees are the main actors making wax foundation and all the process occurs without a beekeeper's intervention. All these highlight the uniqueness of Jara honey.

Table 3. Info Box: Jara

History: Jara is beekeeping done in a traditional wooden beehive mostly practiced and preserved in Western Georgia. Its history started in the 19th century, when in Ajara and Guria regions the bees were systematically settled in handmade wooden beehives. It was a wooden hive made from a hollowed out log split in two and placed high in a tree to protect from predators such as bears into which a swarm of bees is captured for the production of honey. Before that farmers harvested honey in the wild including searching for wild beehives and extraction honey from them. The process usually led to the death of bee colony. The Jara hive was the first step towards domesticating bees and of controlling the harvesting process. This quickly spread along of the villages of the Meskhetian ridges & regions of Western Georgia (Guria, Samegrelo, Imereti and Svaneti) and was called primitive Meskhur-Gejuri beekeeping. The beehive acquired different names in different regions of Western Georgia; It is known as Jara in Ajara and Buki in Guria & Samegrelo regions.

Harvesting process of Jara honey: At present Jara beehives are mainly located in the fields near the houses or at the first floor of the houses, so the beekeepers monitor that bee colony do not run away. Based on the hexagon sizes in the hives wild bees in the Jara are noticeably bigger compared to those in modern beehives. Harvesting season starts in autumn, when the beekeepers take 2/3 of honey from the beehive. The remaining honey is left in the beehive for bees to have a food for over-wintering. Wooden beehives have different lengths and sizes (ranges from 70 to 140 cm). The length of the beehives is one of the factors that determine how much honey can be produced. On average, one Jara beehive can produce 11kg of honey annually at a low season and 19 kg of honey at a high season.

[14] Includes prices from January`17 till July`17

Picture 1: Jara hives in Kobuleti and Keda Municipalities

Gejuri beekeeping is best preserved in Ajara in Western Georgia. In Ajara region, around 1200[15] people are involved in beekeeping and keep on average 24 thousand of bee colonies, thus on average 600 tonnes of honey is harvested annually. Due to the high productivity of the modern beehives used in Georgia like dadan-blat or many other varieties, the number of the Gejuri beekeepers significantly decreased. However there are still around 40 beekeepers owning about 277 Jara beehives in the high mountain villages in Ajara who still follow the old traditional way of the honey harvesting[16]. Most of the Jara beehives are found in Keda (148) and Khulo (84) municipalities. Around 3 tonnes of honey is harvested in a poor year and 5 tonnes of honey in a good season in Ajara.

Additionally, 200 Buki / Geja have been counted in other regions of Georgia (Guria, Samegrelo, Svaneti), meaning that the volume of Jara honey harvested totally in WG could reach up to 10 tonnes (maximum).

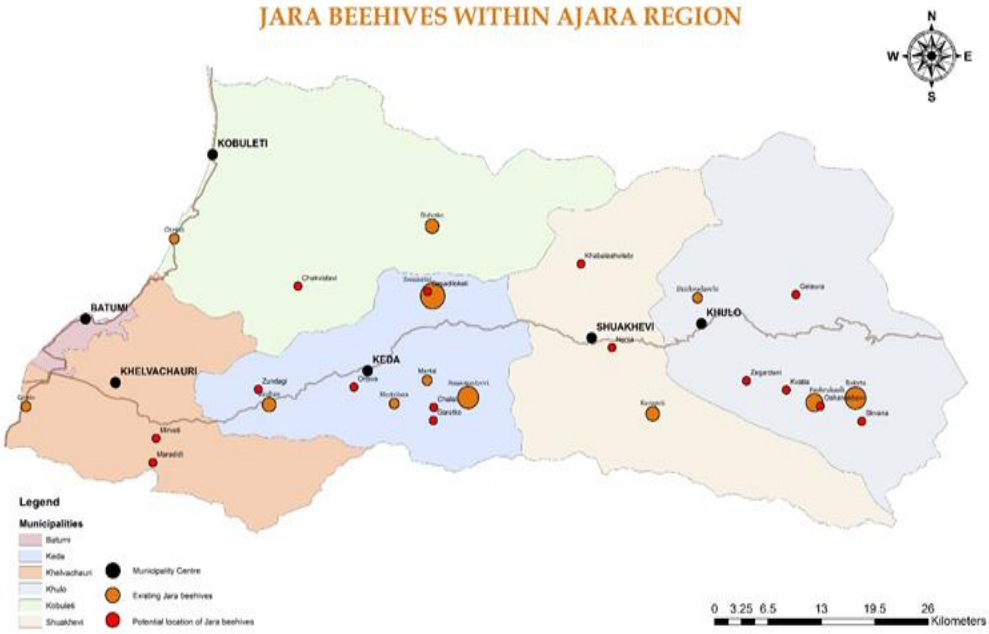
Harvesting Jara honey happens annually every autumn and therefore it is a poly-floral honey - a bouquet of subalpine flowers, Acacia, chestnut, linden and so on. The color of the honey is in between of Chestnut and linden and its dark yellowish brown. Sometimes beekeepers harvest honey on a specific season as well in order to have mono-floral honey.

Compared to other types of honey harvested in Georgia it is high-value honey, price of which fluctuates between 15 and 50 Gel/kg and its average price is 28 Gel/kg. It is important to mention, that at present, the price is affected by the intermediaries selling Jara honey in Turkey. Majority of the beekeepers lack the access to the sales market, 25 % of the Jara honey is illegally exported in Turkey. Beekeepers from high mountainous municipalities having low access to the Turkish illegal market, sell Jara honey at a lower price than average.

[15] Official database of MoAA, updated by ABBA

[16] Mini survey made by the programme shows the number of beekeepers who still follow the traditional beekeeping in Ajara.

Table 4. Map of the Jara beehives in Ajara region



Source: ALCP mini-survey

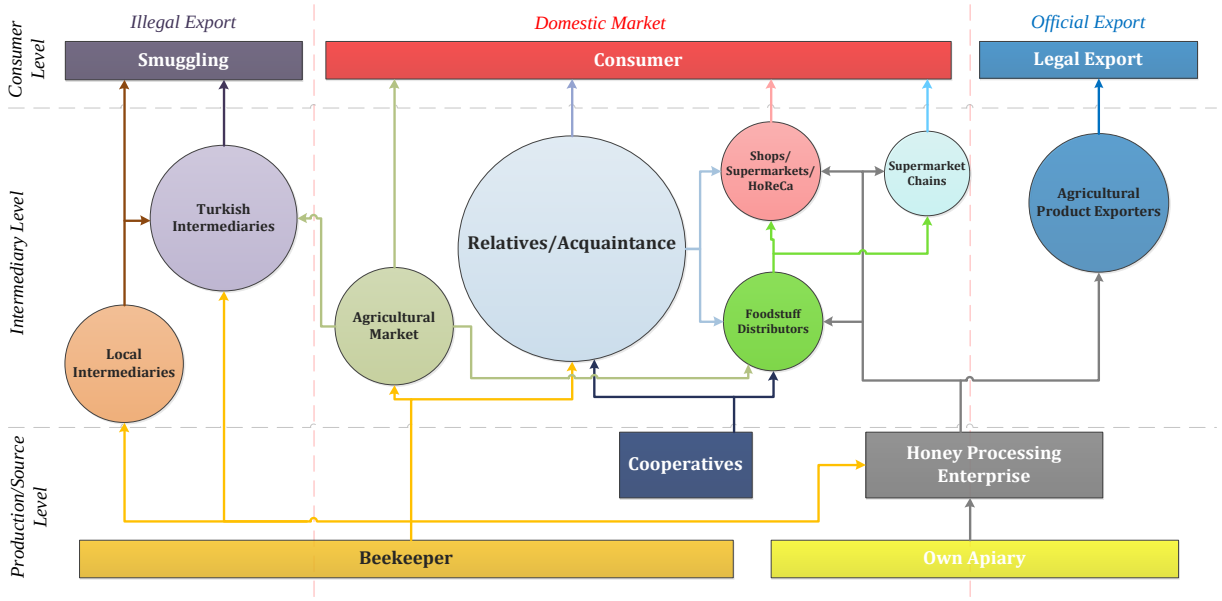
The fact that more than 50 %[17] of the Jara beehives are unused in Ajara is influenced by the following constraints:

* Varoa and American Foulbrood are common in Gejuri beekeeping.
* It is difficult to inspect Jara for diseases so that beekeepers avoid doing it.
* Inspection of the Jara requires the assistance of additional person.
* Jara is 3 times less productive than *dadan-blat* beehive.
* The majority of the beekeepers have lack of finance in order to buy wood and prepare Jara beehive.
* Due to its forms and sizes, Jara is very hard to transport to pastures.

[17] Mini survey shows that beekeepers have more unused beehives than in use.

1.2 HONEY MARKET SYSTEM

Figure 2. Honey Market Chain



Beekeepers. According to the Honey consumer survey[18], trust is one of the main factors for consumers in making decision when buying honey. 76% of honey consumers buy from or through relatives and acquaintances. Private and direct contacts in cities are vital for beekeepers to sell honey in the local market. Through relatives and acquaintance honey are sold directly to consumer or via small shops. The second mai way of selling are agricultural markets and local intermediaries. For the beekeepers of the Western Georgia, especially Ajara and Guria, Turkish smugglers are important intermediaries and buyers. Few beekeepers supply honey to private processing enterprises and it has several reasons: enterprises pay less, their number is small and almost all of them have their own apiaries[19] and sourcing resources.

Cooperatives. Few cooperatives produce honey under one brand. Similar to private beekeepers, relatives and acquaintances are important intermediaries for cooperatives. However, several of them supply shops, supermarkets and HoReCa sector via independent distributors. As a rule, the volumes are not high. More information on types, volume and average price of honey produced by these cooperatives are given in *Annex 1*. Mostly, only the 2nd level cooperatives i.e. aggregating cooperatives own honey processing technology and sell products under one brand name (Please refer to the Table in *Annex 2*). Referring to their capacity and number of beekeepers should these cooperatives unify, they can be regarded as one of the main potential aggregators of honey for export.

Private Honey Processing Companies. There are several private honey processing companies (LLC/ LTD) in Georgia. Their main market and selling points are national supermarket chains. As a rule, the output of

[18] Honey Consumer Survey, Darts Group, 2017

[19] Except Matchakhela Ltd, which is the only honey processing enterprise which does not own apiary and collect honey from beekeepers mainly from Ajara

most of them varies from 3 to 4 tonnes/year. Distribution is done directly and through distribution companies supplying supermarket chains. The main constraints they face areas the late payment, large receivables and unstable demand. Another common constraint is the lack of trust in sourcing from beekeepers. Processors complain about quality of supplied honey (adulteration, using of antibiotics, hygiene, etc.). Thus, most of them (see the Tables in *Annex 3*) own their own apiary and in the case of deficit source from 3-4 large beekeepers whom they trust. Until now, none of them have had an official export story. Only three companies[20] have sold honey to Asian countries' representatives, who export Georgian agricultural products (mainly wine) and the honey was exported as an additional product.

Four second level cooperatives[21] and ten Georgian honey producing companies[22] operating in Georgia were assessed as to whether they could be potential exporters based on several criteria, such as their honey sourcing model, honey aggregation and processing experience, availability of honey processing equipment, working capital, export experience among others. Based on this assessment, it was concluded that none of them except Agro Keda Ltd (daughter company of KTW Ltd) are ready to initiate and implement the honey export process and are the right stakeholders to be involved in the honey aggregation. Kakhetian Traditional Winemaking Ltd (www.ktw.ge) owns five factories in different regions of Georgia (Kakheti, Guria, Ajara), out of which 3 factories produce high quality wine from unique grape varieties of Eastern and Western Georgia, brandy and traditional Georgian Chacha. Two factories are focused on production of agro products (fruit jams, fruit juices, Tkemali, etc.). One of the factories is based in Keda (Agro Keda Ltd) which started to produce honey in June, 2017 and sells in the supermarket chains of Georgia. The company exports its products (except honey) to various countries (UK, Eastern EU, Kazakhstan, Russia and China among others) and wishes to include honey in the export catalog.

1.3 HONEY MARKET REGULATION

For a long period, the honey market was not regulated in Georgia. The only regulation dealing with honey was the ministry decree №301/N which mainly dealt with toxic elements in honey. An absence of market monitoring and poor control became one of the factors creating distrust towards honey producers by consumers. The situation started changing in 2012 when the National Food Agency (NFA) began implementation of the Residue Monitoring Plan (RMP), which includes taking samples from the market and sending to laboratory for the analyses. At the end of 2014 and the beginning of 2016 Georgia approved and put in force[23] two main resolutions (resolution 714 and 22) which sets qualitative and safety requirements to honey sold on the market. The resolutions are identical to EU regulation (EU directive 2001/110/EC). One of the constraints for beekeepers in the case of strengthening of honey market control by the NFA can be the compliance to safety requirements. Resolution 22 sets maximum limits of residues of some substances which unfortunately are used by Georgian beekeepers in the apiary. According to the NFA 19% of samples taken during market monitoring contained and exceeded the limits. Since 2017 Georgia has been enlisted[24] in the third list country of EU regarding honey.

[20] Meputkre Ltd sold honey to Chinese and Korean company representatives. Putkara Ltd sold honey to the representatives of China, Japan and Arabic countries. Kartuli Putkari Ltd has sold honey to Iraq representative.

[21] 2nd Level Cooperative means that cooperative unites at least 5 1st level cooperatives and has capacity (equipment) to aggregate honey and sell it under one brand. See the table in the research document *'Prospects of Georgian Honey Export'* page 41

[22] See the table in the research document *'Prospects of Georgian Honey Export'* page 41

[23] The process has gone according to liabilities taken under the Association Agreement signed with EU which aims the synchronization of national regulation to EU.

[24] See Decision (EU) 2016/2092 of 28 November 2016

Despite these facts the Georgian honey market remains one of the less regulated: the market is not regulated and monitored on the farmers` level[25]; market monitoring covers only the products of legal entities and the capacity of NFA is still limited.

Table 5. Results of tests under RMP (2013-2015)

Year	# of all samples	# of samples over limits	%
2013	42	17	40%
2014	103	30	29%
2015	104	20	19%

1.4 HONEY TESTING CAPACITIES IN GEORGIA

Laboratory testing of honey samples is a main facet of efficient market monitoring. The test report includes analysis of honey on its *quality* and *safety*. The main purpose of the first is to identify whether a honey meets with quality parameters of natural honey and is not adulterated. The second shows whether honey is safe for human consumption, e.g. does not include residues of antibiotics or pesticides over limited levels. This type of analyses requires high accuracy and thus special laboratory equipment such as liquid (LC-MS) or gas chromatography (GC-MS) with a mass spectrometer. Besides that, a laboratory should have accreditation (national or international) with accredited research methodology.

In 2014 the absence of an internationally accredited laboratory in Georgia offering a testing service on honey quality and safety, meant the NFA used foreign laboratories to test samples under the RMP. Since then, for this purpose 103-104 samples are sent annually to EU laboratories for testing. In recent times, the Government of Georgia (GoG) made several steps to improve the situation. In particular, GoG facilitated increasing the capacity the laboratory of the Ministry of Agriculture of Georgia (LMA) through purchasing proper equipment and getting international accreditation.

At present, there are ten laboratories in Georgia who can test for honey quality and one which can test for safety. Nine of them are certified by the Georgian Accreditation Center (GAC) and one laboratory - the laboratory of Ministry of Agriculture of Georgia (LMA) that has international accreditation. LEPL "Laboratory Research Center" of MoAA (Batumi) is the only laboratory, which is located outside Tbilisi. The other eight private laboratories and one state laboratory are located in Tbilisi. The main clients of the laboratories are private companies and the NFA. The average is 2-3 samples/month of honey. The price of the service is 160-300 GEL depending the laboratory and kind of analyses. The main reason for this narrow scope is low demand and high prime cost for such tests, which would make the service unprofitable. Of the accredited (in Georgia) laboratories one private laboratory has the equipment and would need capacity building to implement the testing methods to carry out such testing and others would need capacity building and investment in equipment and they would also need international accreditation.

Despite the fact that several laboratories have high-precision equipment for detection (two of them have GC-MS and 2 LC-MS), they do not provide tests on antibiotics. The reason is a low demand and high prime

[25] Apiaries are not officially registered which limits their monitoring by NFA regarding diseases and using of medicines.

cost of such tests which makes the service unprofitable. Thus the laboratories are focused on using the equipment for other things (for detailed information please see *Annex 4*).

Currently, in Georgia only the LMA is offering tests on detection of antibiotics, mainly using the screening method (Randox Evidence Investigator) for most of the tests[26]. Some importer companies may not accept screening test results and require tests to be done by using reference method (usually LC-MS).

In addition honey players are ill informed as to the availability of these services and the LMA needs to work on wider information dissemination and making the services user friendly. On asking honey players in Georgia if testing capability is present in Georgia they will probably answer 'no' and complain that lack of testing is the reason why honey cannot be exported which is now something of an 'urban myth' but actually denotes the lack of clarity and understanding and clear messaging on the subject. See *Figure 6 and Table 17 for key constraints and entry points for facilitation*. Lack of clarity for producers on testing requirements for export as well as where they can test is the main constraint to export notwithstanding the high prime cost of tests which is an additional barrier to fledgling exporters. Once the market develops and more tests are required costs can decrease. See *Table 17*. Removing entry level barriers to testing is a key intervention including information provision and affordable and user friendly testing services.

Figure 3: Export Process Chain below shows the importance of laboratory testing during the export process. If testing is not available locally or local sampling methods are not accepted by buyers, exporters incur higher transaction costs and time expenditure by having to send the samples for testing overseas to an internationally accredited laboratory. As shown, the first laboratory testing will probably be done by the importer on samples[27]. If terms are agreed the exporter is obliged to do laboratory testing on each batch of the consignment and samples needs to be taken in attendance with NFA representatives. Samples may have to be tested in an internationally recognized laboratory. Most importers state that they require a laboratory report from world-recognized laboratories specialized in honey testing such as Intertek[28]. Whether this will hold true once export is established and a relationship developed between buyer and supplier is not currently clear. The LMA laboratory in Tbilisi is an internationally accredited laboratory but until now it has implemented HPLC[1] only on two antibiotics [29].

Whether this will be enough for buyers is yet to be seen. The average Intertek price of their service (antibiotics + quality parameters) starts from 800 USD per sample. What is currently clear is at the initial stage of the export process (at negotiation & honey sourcing levels) screening methods can be used (quick tests such as Randox, Biorex, etc.) which can lower costs. Consequently, the LMA honey testing services currently available can be used at this stage to ensure the honey offered is free of antibiotics and meets importer requirements.

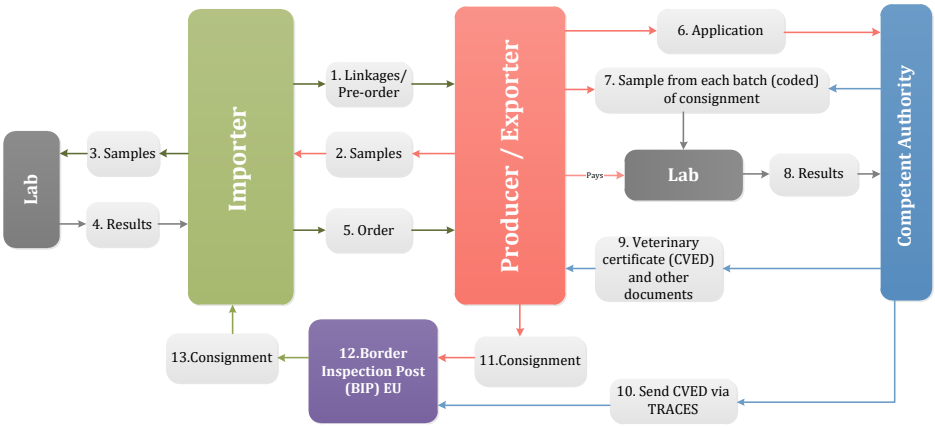
[26] See Annex 5

[27] Some importers may not do this and may go on word alone placing the quality and safety onus entirely on the exporter

[28] www.intertek.com

[29] These two antibiotics are Chloramphenicol and Tetracyclines. Four more antibiotics are in process: Nitrofuranes, Nitromidazoles, Streptomycin and Sulfonamides. The laboratory is about to finish implementing Nitrofuranes research methods and it plans to work on Nitromidazoles in 2018. These six antibiotics are widely spread antibiotics according to Residue Monitoring Plan of Georgia. The implementation takes time as it requires capacity building of its staff and is associated to additional costs and human resources.

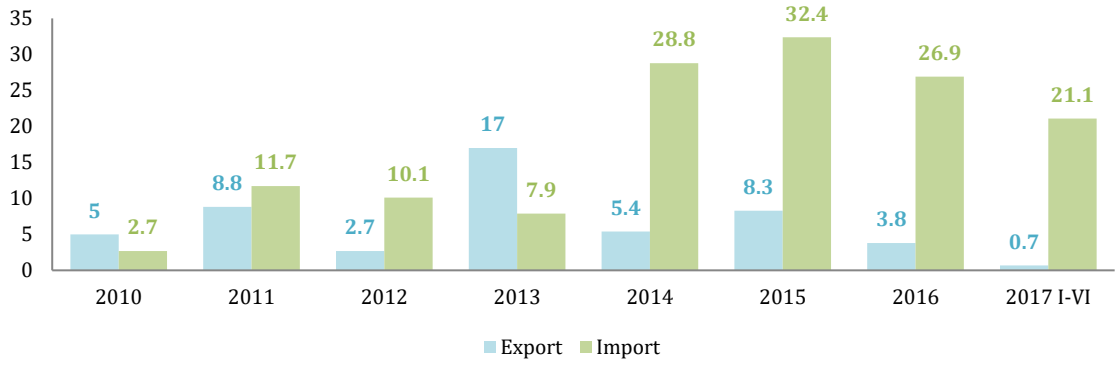
Figure 3. Export Process and Testing Chain



1.5 HONEY EXPORT

Georgian honey is believed to be one of the most promising agricultural export products but official numbers show the opposite. The trade balance for the last 10 years is negative, Georgia imported 141.6 tonnes of honey while exported 51.7 tonnes. The volume of export is chaotic and does not show a real picture. For example, the largest volume of honey was exported in 2013 (17 tonnes) and decreased by almost 70 % in 2014. This can be explained with the fact that Georgia officially does not have stable export market for its honey. Most of the export cases are linked with Arabic countries (Saudi Arabia, Libya and Iraq) and were one-off ad hoc transactions.

Figure 4. Honey Export-Import Statistics 2010-2017 (tonnes)



Source: www. geostat.ge

Illegal Export from Georgia to Turkey

In addition the data includes only official export and does not include unofficial trade predominantly to Turkey, in which volumes are higher and more regular than officially recorded ones. For the beekeepers of Western Georgia, Turkey is the largest unofficial export market. According to unverified data the volume of smuggled honey in Turkey is estimated at around 50 tonnes per year despite the fact that Turkish customs has recently strengthened control. As a rule, honey is smuggled via intermediaries in small consignments. The border is crossed via truck drivers. Unofficial tariff is at around 3 USD/kg. The price of smuggled Georgian chestnut honey in Turkey is at around 50 Gel/kg, local price in Georgia is 20-25 Gel/kg. After the honey is smuggled into Turkey, local Turkish intermediaries sell it in large cities of Turkey as local origin honey. Honey from Artvin and Rise provinces is well-know and high valued in Turkey. The price of the honey per kg starts from 90 Gel and goes up.

The Turkish government provides protective economic policy for stimulating beekeeping in the country. The official custom tariff for export of honey from Georgia is 38.5%. However, according to the free trade agreement between Georgia and Turkey, Georgia has a quota on honey, which is 200 tonnes per year. According to the procedures, a Turkish company should apply to the Ministry of Economy of Turkey for activating the quota. One company can request not more than 5 tonnes per year of the quota. Despite this fact, none of companies have not been able to get an official permit from the Turkish government (possibly also due to lobbying against legal import by powerful honey stakeholders). A key entry point to legalizing trade would be for a Georgian producer is to find a partner Turkish Company willing to officially export honey in Turkey.

1.6 Production of Other Beekeeping Products

Besides honey, honeybees and apiaries can produce other agricultural products and even services. For example, in the USA the main income for a beekeeper comes from pollination service and not from honey and other beekeeping products. Beeswax, pollen, propolis, bee venom and royal jelly are products which beekeepers can harvest alongside a honey. From all these products, beeswax is the largest product which is produced and traded by Georgian beekeepers on the market after honey. As a rule, beeswax is harvested after honey extraction in summer but is sold in early spring of the next year. The price depends on the quality[30] of beeswax and varies 15-22 Gel per kg. Beeswax also can be exchanged (barter) for wax foundation in beekeeping or veterinary shops. Georgian beekeepers also produce pollen, propolis and bee venom but in small amounts. There are several beekeepers producing royal jelly. However, limited market access and demand does not allow them to increase the production output. The products also do not have official or unofficial export markets.

[30] Quality of beeswax is identified by colour. The price is for lighter beeswax.

Table 6. Info Box: Bee Products

BEESWAX is formed by wax-producing glands of bees, located on the inner sides of sternites. It is exuded in a liquid form and then is formed like solid plates. Honey bees use the beeswax to build honeycomb cells in which their young are raised and honey and pollen are stored. Thus, beeswax is an essential element for the existence and functioning of the bee family. It is considered that the bee sacrifices between 1-3.5kg of honey to wax production. Beeswax has many and varied uses. Primarily, it is used by the bees in making their honeycomb foundation. Apart from this, beeswax is used in cosmetics and pharmaceuticals, manufacturing electronic components, covering metals and lost-wax crafting.

POLLEN is a plant's male reproductive cell which is dropped on the bee body during the nectar collection process. Bees travel from plant to plant collecting pollen, and then they mix it with nectar from the plant and bring to the beehive in a pollen basket. Bee pollen is a source of proteins, fat, minerals and vitamins. Due to the pollen characteristic of spoiling quickly bees preserve it by putting it in a comb and adding honey. Then in this mixture a fermentation process of lactic acid is carried out that destroys the reproduction of fungi is called bee bread. The content of proteins in bee bread is quite high -20-25% that enables worker bees to produce milk that is then used to feed queen bee and pupas. Pollen is very interesting and significant product that is used to improve human health (recover power after hard physical work, overcome diseases); it is also used for nutrition as an appetite stimulant for athletes, sick and weakly.

PROPOLIS / BEE GLUE is a resinous substance that bees gather from plant buds and stems. After processing it is collected in different parts of the hive and contributes to the disinfection of bee family, thanks to the different substances it contains that have multilateral effects (antiviral, antimicrobial, fungicidal). Chemical composition of propolis is broad, but the most principal substance it contains is flavonoids. It has to be stored in the dark and hypoxic areas. Propolis is mainly used for its anti-inflammatory properties. Also, it is utilized in veterinary medicine as it has a positive effect in animals' nutrition.

BEE VENOM / APITOXIN is formed by venom glands located under the abdomen and enters into enemy's body through the sting. The venom is destined to repel enemies. As the sting lodges in the victim's skin it is lost from the bee's abdomen which leads to the bee's death in minutes. Venom is complex substance that contains melittin, apamins, adolapins, enzymes, alpa-glucosidase and others. As it contains proteins too bee venom effect skin cells causing pain and swelling around the sting area. Bee venom leads to blood vessel growth and improves blood circulation in the human's body. Bee venom is used for treating various diseases such as rheumatoid arthritis, nerve pains and so on. Today scientists use the electric shock method to take bee venom from bee body.

ROYAL JELLY is complex substance, which is secreted from the hypopharyngeal gland of the worker bee. It contains proteins (more than 60% of dry substances), enzymes, sugar, decenoic acid, mineral substances and others. Royal jelly intended for queen bees and queen larvae is extremely nutritious. It has various health beneficial properties. Royal jelly is used in a natural way as well as after processing and is utilized to increase body tone, against different diseases and etc.

Queen Bee Production

Queen bees are another market. There are few beekeepers in Georgia who are specialized in the breeding of queen bees and colonies for sale. As a rule, beekeepers in Georgia breed queen bees and colonies for their own use. Nowadays there is a high demand on the domestic market for queen bees and it has grown for the last 2-3 years mainly due to the government and ENPARD[31] programmes focusing on beekeeping

[31] www.enpard.ge

development in the country. Currently, the price of the queen bee is around 9-12 USD/queen bee. The price of a bee colony during springtime is 100-110 USD (11 USD/frame).

There were no official bee breeding centers in Georgia after the collapse of Soviet Union which significantly influenced the collapse of the sector. An absence of breeding selection hampered the breeding of pure species for further commercial breeding. In 2014, the Ministry of Agriculture of Georgia re-equipping the Mukhuri bee breeding center founded in late 1950's and which closed in early 90s. The main goal of the center is to conduct selective works on pure Megrelian sub species of Georgian bee. Thirty queen bees have been bred however the renovation is unfinished as yet.

In the apiculture world, Georgia is famous as the homeland of the Caucasian Grey Bee (*Apis Mellifera Caucasia*). This species of bee is one of the most popular among the beekeepers in the world for its features. It is not surprising that the international market demand on this specie is quite high. Many countries (Russia, Turkey, US, EU) for a long time have been breeding it on their own. Nevertheless, interest to get pure breeds from Georgia is still high. Unfortunately, Georgia cannot officially export queen bees due to incompliance with international requirements[32]. In Georgia there is no apiary monitoring system, which hampers the legal export of bees due to absence of health certificate. However, in the reality a certain amount of queen bees are sold to neighbor countries via smuggling. The main customers are Turkish beekeepers.

Turkey is believed to be one of the biggest producers of honey (110,000 tonnes/year) in the world. According to the Turkish Association of Beekeepers, there are around 57,000 registered beekeepers and 6.6 million registered hives in Turkey. In 2011, the production of honey in the country decreased by 35-40 percent. In 2015 the government launched a programme to support the sector. The programme included various subsidizes, reduction of interest rates for loans, insurance, setting high custom tariffs for import (38.5%) and other actions to protect beekeepers and increase the number of bee colonies in the country. The private sector is also actively involved in the process. For example, with financial facilitation and support five breeding centers were opened in Turkey. Each of them breeds different species. The Caucasian Grey Bee is bred in Matchakhela gorge (Turkish side). The center breeds 3,000- 5,000 queen bees per year. The main consumers are Turkish beekeepers. The specie is very popular among them. The price is at around 24 USD per queen bee.

The programme seems has affected the local market of Georgia as the demand on the queen bees from Turkish beekeepers has increased. It is worth mentioning that only fertilized queen bees (with several worker bees) are smuggled in Turkey as it can easily be transported via pockets. It is done by both local and Turkish beekeepers. There are no special requirements from the buyers. This fact has influenced the local market as the breeders are now more oriented on boosting the quantity of production rather than quality, which can seriously harm the image of Georgia in the future as it is now with Georgian honey in Turkey[33].

[32] For example, EU developed a third country list for import of queen bees according to requirements (Regulation (EU) No 206/2010). Georgia is not included in the list.

[33] The large number of articles in Turkish media emphasizing that Georgian honey is falsified, low quality and even poisoning.

SECTION 2. INTERNATIONAL HONEY MARKET

2.1 INTRODUCTION: GENERAL OVERVIEW OF THE WORLD HONEY MARKET

The world trade of honey reached 2.2 Billion USD in 2016. The majority of the production of honey takes place in developing countries, whilst developed countries are the largest consumers. The leading producer of honey is China and produces more than 600,000 tonnes of honey annually. The second and third largest producers are Turkey and United States of America. Turkey produces 105,000 tonnes (turkstat.gov.tr) and more than 80,000 tonnes[34] of honey is produced in the USA. Other relatively large producers of honey in the developing world include Iran, India, Brazil, Mexico, Tanzania and Angola. In terms of developed countries Canada, Germany and Spain are large producers.

In terms of imports, the developed world is the main player in the global honey industry. The EU is by far the largest market, after the US as the largest consumer of natural honey. The EU production of honey was estimated to be 268,000 tonnes in 2015 and it is the largest global consumer of honey, being responsible for more than 20% of the total global consumption. However, it is not self-sufficient and is dependent on honey imports from other countries, as domestic production only covers around 60% of consumption, around 40% of Europe's consumption needs are met through honey imports. European imports of honey increased considerably between 2011 and 2015, amounting to more than 339,000 tonnes in 2015 (*www.cbi.eu*).

2.2 TOP HONEY EXPORT MARKETS

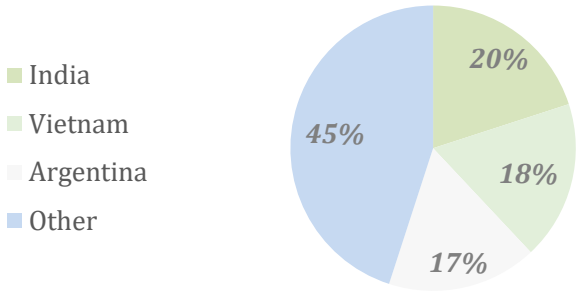
The top importers of honey in 2015 were the United States (568Million USD), Germany (339Million USD), the United Kingdom (130Million USD), France (123Million USD) and Japan (117Million USD).

1 - USA

Consumption of honey in USA reaches 226.7 thousand tonnes of honey annually, while the annual domestic production of honey is 74.4 thousand tonnes. The gap is filled by imported honey. Most of the honey is sold in retail market channel and in food industries. In 2015, USA imported more than 150 000 tonnes of honey to the estimated market value of 568 million USD. Honey import share per countries (in %) is represented below:

[34] https://www.mapsofworld.com/world-top-ten/honey-producing-countries.html

Figure 5. Honey import in USA per country in 2015 (%)



Source: http://www.fao.org

The USA is the largest buyer of Indian Honey. In 2015, 20% of imported honey in the USA was produced in India. 3.7% came from Ukraine and 2.9% from Turkey. Out of the top 10 suppliers of honey to the US market, Canada is the only developed country on the list.

2- Germany

In 2015, Germany imported more than 85 thousand tonnes of honey, at a value of 339 million USD. The main exporters to Germany are Mexico (20%), Ukraine (8.1%) and Chile (7.6%). 1.6% of honey is imported from Turkey.

3- United Kingdom

The United Kingdom was the third largest honey importer in 2015. In 2015, more than 40 thousand tonnes of honey was imported at a total value of 130 Million USD. UK is the largest buyer of Chinese honey (31%), 25% from New Zealand and 11% from Mexico.

4- France

France was the fourth biggest honey importer in the world. The country mainly imports honey produced in EU. In 2015, more than 80% of honey imported by France was origin of EU (23% of honey imported here was origin of Spain, 12% of Germany and 8.7% of Italy and etc.), 14% came from China. However, majority of the volume of honey imported from Spain originated Argentina. In 2015, the total value of honey imported by France reached 123 million USD.

5- Japan

In Asia, the biggest volume of honey is imported by Japan. In 2015, around 40 thousand tonnes of honey was imported at 117 million USD. The biggest volume of honey was imported from China representing 48% of volume of honey imported by Japan, 13% of honey was origin of New Zealand, 12% of Argentina and 11% of Canada.

In the top 10 importers of honey are Belgium, Spain, Poland, Italy and Saudi Arabia.

Honey imports from developing countries increased significantly between 2011 and 2015, amounting to 199,000 tonnes (466 million Euros) and representing 59% of total honey imports directed to Europe. *In the next five years, honey imports are expected to increase further in order to compensate for the continuous decline of the European production.*

2.3 HONEY PRICES ON THE INTERNATIONAL MARKETS

The origin and the color of honey are important price determinants. The quality and origin of the honey is a major factor in price setting. China supplies the lowest-priced honey, Argentina takes a middle position and honey from Mexico, New Zealand and Australia receives the highest prices in international trade. Light honey receives a higher price due to the fact that the general preference is for clear honey with a mild taste. In recent years the mono-floral types, such as Acacia, have become more popular. Furthermore, honey infused with various flavors, such as ginger, vanilla and cinnamon is becoming increasingly popular (and is consequently of higher price) (*CBI Market Information Database, 2015*).

According to Eurostat Comext, untill 2015 the honey prices on the international market saw a continuous rise, reaching 4 Euros per kilo, while in 2016 the prices slightly decreased (Excluding the price of honey from New Zealand). China has the cheapest price for the honey at 1.6 Euros per kg, following Ukraine with 2.4 Euros per kg. Honey prices on US market are almost the same as in EU.

Table 7. EU Average Unit Value for Imported Honey (€/Kg) by Origin

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Jan-Jun 2016
China	0,93	1,00	1,12	1,24	1,26	1,34	1,44	1,37	1,40	1,64	1,59
Ukraine	1,00	1,11	1,87	1,70	2,02	1,96	1,83	1,82	1,93	2,16	1,98
Thailand	1,15	1,84	1,52	1,56	1,75	1,76	1,82	1,74	1,78	2,25	2,12
Extra EU	1,31	1,37	1,69	1,93	2,05	2,08	2,08	2,04	2,14	2,52	2,21
Argentina	1,20	1,26	1,69	2,00	2,24	2,24	2,23	2,35	2,75	3,24	2,40
Uruguay	1,20	1,22	1,73	1,97	2,15	2,15	2,26	2,50	2,64	3,15	2,43
Cuba	1,22	1,22	1,30	1,92	2,08	2,25	2,32	2,29	2,38	2,83	2,53
Moldova	1,00	1,13	1,51			2,43	2,27	2,46	2,82	3,04	2,62
Chile	1,29	1,36	1,77	2,19	2,57	2,70	2,59	2,62	2,97	3,72	2,78
El Salvador	1,46	1,37	1,91	2,27	2,55	2,44	2,33	2,42	2,67	3,53	2,81
Guatemala	1,36	1,53	1,85	2,06	2,54	2,35	2,42	2,43	2,67	3,55	2,99
Mexico	1,51	1,38	1,67	2,14	2,35	2,47	2,44	2,53	2,72	3,25	3,15
Brazil	1,31	1,37	1,91	2,02	2,21	2,34	2,51	2,44	2,86	3,42	3,16
Serbia		1,90	1,99	2,25	3,02	3,35	3,43	3,33	3,37	4,17	3,88
Turkey	2,46	4,24	5,53	3,85	2,79	4,74	4,90	3,51	3,86	3,98	3,96
New Zealand	4,39	5,06	5,13	4,49	6,77	7,55	8,83	9,21	14,29	16,14	22,47

Source: Eurostat Comext

Regarding the Bulk price of honey, between 2010 and 2015 the bulk honey prices on the international market saw a continuous rise, with prices for Mexican and Argentinean honey reaching USD 3,400/tonne FOB[35] and sometimes even up to USD 4,000/tonne. Since the end of 2015, international honey prices have been dropping considerably to levels below USD 2,500/tonne FOB for Mexican and Argentinean honey (*CBI Market Information Database, 2016)*. The wholesale honey price in USA also shows stable growth tendency.

[35] FOB – "free on board" a term in International commercial law meaning that the seller pays for transportation of the goods to the port of shipment, plus loading costs.

Table 8. Wholesale honey prices (per kilo) by month in USA

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2015	$5.00	$4.78	$4.97	$4.84	$4.84	$4.96	$4.94	$5.09	$4.95	$5.09	$5.13	$5.14
2016	$5.04	$5.15	$5.04	$5.20	$4.97	$5.19	$5.09	$5.01	$5.10	$5.31	$5.27	$5.39
2017	$5.25	$5.32	$5.38	$5.27	$5.13	$5.46	$5.39					

Source: national honey board

2.4 EXPORT REQUIREMENTS

Almost all countries and economic unions of the world set requirements for food products. International standards as a rule are developed and maintained by Codex Alimentarius Commission, a body that was established in early November 1961 by the Food and Agriculture Organization of the United Nations (FAO). Countries always try to adopt the standard in their national regulations and requirements. Honey is not an exception. Almost all countries use Codex Standard for Honey (CODEX STAN 12-19811) for defining quality standard, they also use other standards regarding veterinary drugs and pesticide residues in the product. The latest version of the Codex Standard for Honey was adopted by the 24th Session of the Codex Alimentarius Commission in 2001. Despite the fact that there is an international standard and all countries try to adopt them, importing requirements are different. Some countries exclude several parameters in their national regulations and some set additional ones. Besides, several countries set customs barriers to protect their market or their beekeeping sector. This section describes the requirements of markets which are the largest consumers of honey in the world.

EU

The EU is one of the largest importers of honey in the world and one with the strictest requirements. For the EU, honey is an animal origin product, thus it sets third country list for non-EU countries. A non-EU country should implement and approve a RMP to become listed. The process is regulated via the Council Directive 96/23/EC of 29 April 1996. This is a complex document and it regulates monitoring substances and residues in all animal products not only honey. It contains requirements for third countries on the monitoring of animal products: countries legislation, checking system, laboratories, etc. These are assessed by special commission of the EU. After the country is listed, the honey can be exported to EU.

Before an EU buyer company (importer) places an order, it needs to verify that the product (honey) complies with its quality demands and EU requirements. Thus, at the beginning, importers require samples from the producer/exporter. The samples are checked in a laboratory[36] and if clear, makes an order. After that the producer/exporter applies for export veterinary certificate (Common Veterinary Entry Document or CVED) to competent authority in his/her country.

Representatives of the competent authority organization seal all barrels of a batch and take samples which are sent to laboratory by the producer/exporter for analyses. If all is clear the authority issues a CVED and sends notification with all electronic documents to Border Inspection Post (BIP) of EU through the TRACES (Trade Control and Expert System) on which the company must be registered. When the

[36] Importers/ Exporters, as a rule, use internationally acknowledged laboratories specialized in honey research, especially, to check honey quality. Honey specialized laboratories can use additional parameters or more deep analyses for quality check which are not included in common regulation.

producer/exporter receives CVED and other necessary documents (transport documents) the consignment is shipped to EU. The consignment should enter via BIP. Inspectors check the documents and TRACES. In some cases, they can recheck the honey to see if it corresponds with the analytical report of the laboratory. After that the consignment can enter the EU.

USA

In contrast to the EU, the USA does not officially set country list who can import honey to the USA. Despite the fact that the country was participating in development of new Codex Standard of Honey in 2001, the country does not have a special law for honey. The only document officially defining honey quality is the United States Standards for Grades of Extracted Honey (last amendment May 1985). Officially for honey import The Food and Drug Administration (FDA) requires export veterinary certification from the competent authority organization of the export country. As the gap between honey consumption and production is huge (at around 150,000 tonnes), large honey producer companies are highly dependent on t import, thus raising interest towards countries with high quality standards of honey, bee disease control, effective traceability system and etc. Poor quality control of the market and flooding with cheap and adulterated Chinese honey has led to increasing demand for high quality honey. Thus, along with officially required documents such as veterinary certification, the U.S. import companies can require additional documents such as laboratory analyses reports and special certificates. For example, the largest honey import companies such as Sunland, Odem, CM Goetche, Lamex and others require a *True Source certificate*[37]. Georgia's nearest countries that supply USA with honey are: Turkey, Ukraine and Moldova.

Japan

The Japanese self-sufficiency ratio regarding honey is 7%. The largest volume of honey is imported from China. The reason why Chinese honey keeps top share in Japan is that it has similar floral origin to Japanese light-colored（5～25mm) honey, like Acacia, Milkvetch, and Rapeseed and also, the Chinese honey price is more competitive. Thus Chinese honey has kept top share in Japan for the past 40 years.

Natural honey is considered a health food and is therefore subject to the Food Sanitation Law when imported and sold on the Japanese market. According to Japanese Customs, a duty of 25.5% is applicable for natural honey imported from a World Trade Organization (WTO) member, while honey from Least Developed Counties (LDC) enters Japan without being levied with a tariff. But it is important to mention that in the case of importing natural honey to Japan, a certificate indicating that the honey is natural is required. If a certificate is not attached during transport it will be deemed as artificial honey and a 50% tax will be levied. The quality requirements for honey in Japan are similar to the codex standard for honey. The only difference is that Japan sets additional quality parameters such as tests on dextrin and C13 (SCIRA). The same picture is with antibiotic and pesticide residues, Japan limits residues on the same antibiotics and pesticides as the EU with slightly different Maximum Residue Limit's.

Any person wishing to import goods must declare them to the Director-General of Customs and obtain an import permit after necessary examination of the goods concerned. The formalities start with the lodging of an import declaration and end with issuance of an import permit after the necessary examination and payment of Customs duty and excise tax.

[37] For more information please visit the website.

Turkey

Turkey is the second largest producer of honey in the world. Honey from Turkey is considered by many to be the sweetest and the purest in the world. Honey from Turkey is meant to be exported (5,000 tonnes/year) but the country also is a major consumer of honey as well. On an annual basis the country produces at around 115, 000 tonnes of honey. According to the survey, the consumption of honey per person in Turkey (1.2 kg) is higher than in EU (0.8kg). Besides that, due to the growth of population in Turkey, the total consumption of honey is growing as well. It is expected that in 2018 the country will have gap in production and consumption at around 7,000 tonnes. At the same time, the Turkish honey market is one the most protected market in the world. Turkey has no official import ban on honey however the Turkish Ministry of Economy set a high custom tariff (Table 9) on imports, thus making it difficult for Turkish businesses to import honey.

Table 9. Honey Import Custom Tariff of Turkey

EU and EFTA Countries	Georgia	Bosnia and Herzegovina	South Korea	Other Countries
38.5%	38.5%	0%	38.5%	38.5%

Protectionist Turkish policies have included raising the market price for honey in Turkey which has created more incentives for Turkish beekeepers to increase their production. It has also however resulted in some negative consequences such as adulteration and smuggling (selling smuggled honey labelled).

2.5 NICHE MARKETS: CERTIFIED HONEY

In the European Union (EU) and Japan, consumer's behavior and attitudes towards organic products have significantly changed over the last few years that has influenced the honey market as well. These consumers are ready to pay premium prices for the certified organic products. The EU is the world's largest market in terms of organic honey consumption and continues to grow: in 2015, total honey consumption was 268,000 tonnes, out of which 6,500 tonnes (2.4%) was organic honey. Germany and the UK are the lead importers. Leading honey producing countries have recognized these new trends and are actively striving for making place on the market niche. Currently, Mexico, Guatemala, Argentina, Uruguay and Chile[38] are the dominant suppliers of organic honey to the EU.

In line with growing demand for organic honey, the role of certification becomes crucial. Organic certificates are issued by third party certifying agencies, generally private sector firms or organizations that have accreditation from the country of origin and the country of destination. In Georgia, there is only one accredited (according to ISO-17065) company Caucascert Ltd[39] that has offered certification of organic products since 2005, which is recognized in Georgia, as well as in EU and Switzerland. The company provides an import certificate for importing Georgian organic products into the European Union, which is required for customs clearance of bio-products.

[38] Source: "Trade Information Brief: Honey". See the link.
[39] Official website of the company

Table 10. Requirements for Organic Certification

Organic/chemical-free production of honey is particularly challenging at this time because of the difficulty in controlling parasitic mites on honeybees. ***Organic regulations include***[40] :	
	Siting of apiaries – they must be on certified organic land and must not be treated with herbicides, pesticides, etc.
	Hive construction – must be of natural, untreated materials.
	The conversion period for changing from 'conventional' to organic beekeeping is 12 months, during which time the beeswax must be changed to organic.
	Origin of bees – 10 percent of the colonies in an apiary can be replaced/increased using nonorganic queens or swarms, if organic beeswax (i.e. from hives managed organically) is used. In this case, the twelve-month conversion period does not apply.
	Foundation and comb – must be made of organic beeswax, except when an apiary is first converted and organic beeswax is not available.
	Foraging – for a radius of three km (EU regulation) or four miles (UK Soil Association standards) around an apiary, nectar and pollen sources must be essentially either organic or wild/uncultivated. This area must not be subject to significant sources of pollution from roads, industry or urban centers.
	Any feeding of bees must be with organic honey or organic sugar and this may take place only after the last honey harvest, or 15 days before the first nectar flow.
	Disease control: homeopathic and herbal treatments and natural acids (lactic, acetic, formic, oxalic) may be used without restriction. Other medication requires veterinary prescription, the beeswax must be replaced and there must be a withdrawal period of one year.
	Clipping of queens' wings is prohibited.
	Extraction and bottling – no requirements beyond the normal measures to ensure separation and product integrity.

Besides organic certification, large honey importers can require certificates which verify origin, the traceability of a product and a fair economic relationship between partners in supply chain. Certificates such as *Fair Trade* or *True Source* are often required, especially for the products exported from developing countries.

Fairtrade Certificate

Fairtrade is the trade between companies in developed countries and producers in developing countries in which a fair price is paid to the producers. Fairtrade products are sold in over 130 countries. One fair- trade product is honey. According to a monitoring and impact report done in 2015, beekeepers were able to sell

[40] Source: FAO see the link

3,000 tonnes of honey in 2013-2014. Therefore, beekeepers received around €354,400 in Fairtrade premium payments. The Fairtrade premium means that beekeepers are paid over and above the Fairtrade price, which is an additional sum of money which goes into a communal fund for workers and farmers in order to improve their social, economic or environmental conditions. The biggest Fairtrade honey suppliers are Latin American countries. Fairtrade gives certification to the honey cooperation or companies that can be distinguished according to cultivation method (organic or conventional) and quality (A and B). The latter depends on the honey's water and Hydroxymethylfulfural (HMF) content. The lower they are the higher the honey's quality is considered to be.

Table 11. Fairtrade Honey Prices

Product (specific product standard)	Product variety	Fairtrade minimum price (USD/kg)	Fairtrade premium (USD/kg)
Honey ***Organic***	**A** Quality	2.95	0.20
	B Quality	2.66	0.20
Honey ***Conventional***	**A** Quality	2.55	0.20
	B Quality	2.30	0.20

Source: Fairtrade

Fairtrade certification is a third-party certification process that sets standards for the products' production and how much a farmer/farming cooperative earns per kg of sold. Certification ensures price stability and contributes to economic development of cooperatives. Fairtrade has its own label acknowledging consumers' criteria were met before the product even makes it to the shelf.

Table 12. Info box: Fairtrade System for Beekeepers

In the Fairtrade system, beekeepers in countries such as Chile, Nicaragua and Mexico can sell their honey at a Minimum Price if the price they were going to receive was lower than the fixed price. Price formation for honey outside of the Fairtrade system is often unpredictable and not transparent. The Minimum Price secures the sustainability of beekeeper's business and enhances the opportunities for business development, because it makes medium-term planning possible. There are different Fairtrade Minimum Prices depending on the honey's quality and cultivation method (organic or conventional).

The Fairtrade system includes a Fairtrade Premium that certified traders pay beekeepers on top of the sales price. This Premium money is received collectively by the cooperative where beekeepers are united. The beekeepers decide collectively where this money should be invested to foster their businesses and to improve lives in their communities. Fairtrade cooperatives typically invest in capacity building and better equipment for cooperative members, community infrastructure, and measures to lower their members' environmental impact.

Fairtrade beekeepers also benefit from more favorable trading conditions with their clients. The Fairtrade system helps them to sell their honey directly to food brands, rather than have to rely on intermediaries, who usually offer very low prices. Beekeepers also benefit from long-term sourcing commitments of Fairtrade certified traders and pre-financing, which they may ask for, to stabilize their income before the honey harvesting season.

True Source Certification

True Source Certified is a voluntary system of origin traceability for those participants in an international supply chain who wish to demonstrate through an independent 3rd Party Audit Firm (An independent audit firm which has been contracted by True Source Honey LLC to manage the certification and auditing of True Source Certified) that their sourcing practices for honey are in full compliance with requirements of the True Source Certified Standard. True Source Certified has been developed under a unique framework that encourages honest, open participation and accountability to a wider community coupled with 3rd party oversight to validate individual performance and claims. Under this model, participants are able to maintain the integrity of the program and hold each other accountable to honest sourcing practices. While many audits are purely individual in nature – involving only the audit firm and the client, certification adds to that an element of industry-wide participation. True Source Honey LLC was founded in 2010 by companies within the honey industry that share a mutual desire to stop the practice of honey trade law circumvention and address the problems that this created in the industry ranging from two-tiered markets, inadequate quality assurance practices and risk to the pure and wholesome image of honey. These companies are competitive on all fronts but recognize that fair competition in the honey market will be advanced with a new system of country of origin traceability.

True Source Honey, LLC and thus True Source Certified are governed by eleven members Board of Directors with international representatives, which include Beekeepers, Exporters, Importers and Packers. Board members serve fixed terms that allow for rotation in the membership of the governing body. Future board members are selected from the pool of certified and participating members (Beekeepers, Processor/Exporters, Importers and Packers) and elected by a majority vote of the governing body. The governing body is intended to function as a multidisciplinary.

Table 10. Current Approved Countries

Low Risk	*High Risk* [41]	
Argentina	Australia	Thailand
Brazil	Austria	Turkey
Canada	China	Ukraine
Chile	Czech Republic	United Kingdom
Guatemala	France	Vietnam
Mexico	India	Poland
New Zealand	Moldova	Russia
United States		
Uruguay		

[41] High Risk Countries: 3rd party audit firm supervises container loading + sampling/lab testing (pollen analysis). Additional requirements may be applicable to High Risk Countries. E.g., India (Financial Audit) and Vietnam (Certificate of Origin Form B).

2.6 NICHE MARKETS: SPECIAL HONEY MARKET

Besides the certified honey market, the specialist honey market for premium and high value niche honeys is growing. The price of such honey can reach several thousand USD, for example the price of Elvish honey (Turkey) reached to 6,800 USD per kg in 2016. These products[42] are considered as organic, medical and health giving products. Other factors influencing price formation are:

Geographical Environment. One of the crucial factors is the origin of a product. There are specific regions and spots around the world with the exceptional floral species and climate conditions. The flowers there are endemic and rare that generates different vitamins, nutrients, enzymes and antioxidants in honey.

Antibacterial and Health Benefits. The second and one of the most important aspects are the health benefits. As this type of honey is unprocessed and collected from the special flora, the content rate of the antioxidants and antibacterial properties is the highest that kills certain bacterial microorganisms in a human body; therefore, many customers are buying the honey specifically for disease treatment purposes.

Quantity. Third factor is the volume of the special honey produced. In this regard, the Elvish honey is the most limited in the world, as its harvest rarely exceeds 18 kg per year. The volume of the harvested honey directly affects the price formation.

Honey Bee Species. The fourth factor is the bee species producing the honey. The honey bees' characteristics vary in terms of temperament, disease resistance and productivity that influence the honey. For example, one of the well-known special Bashkir honey (Russia) is made by the Burzyan wild-hive bee specie.

Arduous Harvesting. The fifth factor are the challenges related to the harvesting of the honey: some types of honey, such as Nepalian hallucinogenic honey or Elvish honey from Turkey, which are found deep in a cave, makes harvesting extreme. Beekeepers often reach the place with the help of the professional climbers. The obstacles of honey harvesting can be one of the crucial factors for setting the price of the product.

These products have specialist consumers and sales outlets through specialist shops or personal contacts or via online shops and other platforms. It requires great effort and preliminary activities to develop a foothold in this niche market. In the globalized world, marketing and promotion play a decisive role in selling high quality honey. The price of special pure honey is relatively high therefore producers have to assure the customers that the price is worth-paying.

[42] Annex 6 shows the list of top 50

Table14. Info box: Difference between Industrial and Special Raw Honey

Industrial Honey	Raw Honey
Contains little to no protein	All vitamins, nutrients and enzymes intact
May contain antibiotics and other harmful medical substances	Anti-viral and anti-fungal properties
May contain low amount of pollen	Contains powerful antioxidants
May contain HFCS[43]	Helps ward off allergies
HFCS is commonly derived from GMO corn	Helps to stabilize blood pressure and balance blood sugar levels
HFCS has been linked to diabetes and obesity	Boosts immune function
Can cause hypertension and liver damage	Helps heal skin conditions
HFCS leads to plaque buildup and narrowing of blood vessels	Promotes digestive health

Online Platforms: Selling the honey online is a new market; therefore, producers are designing their own web sites, describing health benefits, honey use guidelines, stories, pictures, explanation videos and so on. Producers are also paying famous bloggers, journalists and other relative parties to publish the essential information on their honey in the international journals and blogs. The producers are frequently seen at international exhibitions; conferences and etc. All the above-mentioned factors stimulate the sales and increase awareness of the high-quality honey around the world. It is worth to mentioning that Turkey is one of the leading actors on this niche market of special and unique honey. It is noteworthy that most of these types of the special honey are produced in the Northern Turkey, in the regions close to the Georgian border.

Table 11. Info Box: Turkish Special Honey

Anzer Honey has become especially famous for its healing qualities and is unique as the honey is produced from the nectar of around 90 flowers that only grow in the mountains of the Anzer plateau near the town of İkizdere in the Rize Province. According to the medical research, Anzer honey is believed to cure a whole list of health issues like stomach pain, varicose veins, infections, paralysis, and loss of memory, loss of hair, cold and flu and used for wound treatment. Current market price is 260 USD per kg. Annual output is at around 1,000 kg.

Rhododendron / Mad Honey is the honey produced from the Rhododendron Ponticum, which contains natural neurotoxin, known as Grayanotoxin. It is believed that it gives hallucination effect and a feeling of ecstasy. The Neurotoxins are listed as a poison, so the honey produced from these plants may have negative effect when consumed. The sale of the Mad honey is completely legal; However it is hard to find any over the counter as producers are more than aware of the trouble it can cause. The price of Mad honey might be five times greater than the average honey price. Mad honey can be also found in Western Georgia. The Georgians call it Shkeri Honey.

Elvish Honey is the most expensive honey in the world, also harvested from the Black Sea Region of Turkey. This golden nectar is extracted directly from the walls of 1,800-meter-deep cave in the Saricayir valley of Artvin city and is incredibly rare produced in small volumes. The first kilogram of Elvish honey was sold for € 4,500; today Elvish honey costs at around 6 500 USD per kg.

[43] High-fructose corn syrup (HFCS) (also called glucose-fructose, isoglucose and glucose-fructose syrup) is a sweetener made from corn starch that has been processed by glucose isomerase to convert some of its glucose into fructose. This artificial product can be used as for feeding bees so for adulteration of honey.

Karakovan Honey is a honey produced in old type of hive. The honey is harvested using traditional beekeeping practice. The current output is at around 2-3 tonnes/year. This honey is mainly sold in Istanbul. The price starts from 80 USD. The Karakovan is similar to Jara hive with little differences in the construction (see Annex 7).

2.7 HONEY AND ONLINE MARKETS

Online retail is growing faster than any other retail sector. Buyer decision-making behavior has changed dramatically in the recent years. Buyers conduct extensive research online before directly contacting to a sales person. They are also making more direct purchases online via their smartphones, avoiding the traditional brick-and-mortar locations.

Online selling is beneficial for the seller as well, as it offers several advantages it:

- Expands market access at a low cost through removing all geographical limitations;
- Requires less time than farmer markets and physical retail presence;
- Targets niche market opportunities;
- Is convenient for the customers.

Honey producers have several different alternative approaches for online sales:

1. ***Consumer-to-consumer*** eCommerce platforms such as *craigslist, Amazon, eBay, Etsy. Alibaba, etc.*

Advantages: all the above-mentioned platforms are easy to set up and leverage large existing user base. They are popular platforms for selling handmade and vintage goods and some of them are free (craiglists.org). High numbers of the potential consumers are using the platforms.

Disadvantages: Such kind of platforms loose brand visibility. The fees are often based on transaction volumes/amounts, so in case of selling large volume of honey the fees are quite high. Many scammers are present on the platform, so it is risky for the buyer to select an appropriate supplier. It is important to mention that Amazon, EBay and Etsy are on the fifth in the top online shopping sites worldwide.

2. ***Cookie-Cutter*** eCommerce Platforms such as *Shopify, Yahoo, Big Commerce, etc.*

Advantages: the platforms are easy to set up. The seller can purchase own domain. The fees are generally lower compared to the other online platforms.

Disadvantage: not as configurable as a fully custom site. The seller is limited with online templates regarding page design and other features which are offered by the platform.

3. ***Own eCommerce website***

Advantages: the seller has a complete control, hosted on the domain, extends brand identity.

Disadvantages: requires more technical expertise, more eCommerce marketing and promotion of the website. Thus, it needs more investment from a producer and time.

2.8 INTERNATIONAL PLATFORMS

Marketing platforms such as: trade fairs, congresses or exhibitions play an important role in the global honey market. They serve to establish business linkages between traders, suppliers and producers. This kind of marketing instruments boost company's profile on international level, as it increases public awareness of the company. For the company's development it is a must to enter such kind of fairs and exhibitions. One of the advantages of participation in such events is in exchanging knowledge, which is vital for the business aiming to enter international honey market. In the apicultural world, the most important event is the Apimondia[44] congress including the exhibition section ApiExpo.

Apimondia is an international federation of beekeeper's association, which promotes scientific, ecological, social and economic apicultural development in all countries and involves scientific bodies and individuals in apiculture worldwide. The congress has been organized since 1897. Today the event is held once every two years and is hosted by different countries of the world. The congress offers a good opportunity to exchange experiences in various aspects and discuss the latest developments in the beekeeping world. The Congress includes an exhibition of beekeeping inputs and products from the largest producers in the world, seminars on different themes presented by authority beekeepers and scientists. It is a group of honey associations, representing bodies in the honey sector, institutes and laboratories. The organization is run by the General Assembly which currently is represented by 87 full and 35 associate members registered worldwide. The difference between full and associate members is that full members are entitled to participate in the General Assembly of Apimondia with the right to vote, expressed through their official delegates. Associate members have a single representative with one vote.

Georgia is neither a full nor an associate member of Apimondia. For the first time in Apimondia's hundred years of history, Georgia was present at this world forum in October, 2017 in Istanbul, Turkey, represented by the Ajarian Beekeeping Business Association (ABBA), exhibiting the different types of honey of its members and promoting Georgian honey and beekeeping. Apimondia served as the first opportunity to put energy into a new promotion; of Georgia as the homeland of the oldest honey ever discovered, preserver of ancient beekeeping traditions as shown in the recent Jara movie and producer of a wide variety of artisanal natural honey and bee products fueled by the un-paralleled flora of Georgia's uniquely bio diverse and unspoiled landscape. The participation at the congress was facilitated by the Swiss Agency for Development and Cooperation (SDC) project the Mercy Corps Georgia implemented Alliances Caucasus Programme (ALCP) in cooperation with the Ajarian Beekeeping Business Association (ABBA) operating under the Ajara Chamber of Commerce and Industry (ACCI).

[44] www.apimondia.com

SECTION 3. MAIN FINDINGS AND RECOMMENDATIONS

3.1 GEORGIAN HONEY ON INTERNATIONAL MARKETS

The global honey market is one of the most competitive and rapidly growing food markets in the world. The largest markets for honey are developed countries, which annually increase the volume of honey imported mainly from developing countries. The largest honey producer countries such as China, Argentina and many others offer honey for much cheaper price than Georgian producers. Besides, their honeys are better promoted and have sufficient support from government and private sectors.

However, the global honey market is patchy and is highly specialized. Quality and other parameters can play a significant role in finding markets for Georgian honey. Comparing global honey market prices with the domestic prices on Georgian market, it becomes clear that markets with preferences for middle and premium quality honey are most lucrative niche markets for the export of Georgian honey. For reaching these markets, marketing and certification ensuring that honey is extraordinary and of high quality is of high importance. Therefore, it is important to have increased access to proper supporting functions (laboratory services, certification services, BDS services, etc.) in place.

As mentioned in *Section 1.5*, Georgia does not have stable export market for its honey. The chaotic one-off transaction export and large illegal smuggling of honey are the evidence of Georgian honey sector suffering from considerable constraints in entering the stable export markets.

3.2 KEY CONSTRAINTS FOR THE EXPORT OF GEORGIAN HONEY

In recent years Georgia has made several steps forward in development of the sector, such as developing and enforcing regulations, implementing the RMP, enlisting the country in EU third country list, accreditation of the laboratory and supporting agricultural beekeeping cooperatives. These developments have advanced opportunities of Georgian honey export, however there are several key constraints (see Figure 6) still remaining at the different levels (sourcing, production and bottling, export) in the honey market system, which are the following:

Lack of Information on

- Volume of honey harvested in Georgia according to types of honey
- Knowledge and understanding of testing requirements and availability
- Potential markets (importer countries) by types of honey
- Preferences and Requirements of potential markets
- Export procedures and required documentations and responsible bodies

Lack of Marketing and Promotion

- Low awareness on Georgia as a honey producer on international market
- Lack of promotional activities by the government and the private sector
- Lack of content/materials for marketing purposes

Distrust to the quality of honey

- Lack of user-friendly affordable laboratory services
- Low awareness on availability and costs of quick lab tests
- Lack of apiary monitoring of usage of prohibited drugs

All these together creates a lack of confidence and misconceptions in honey as a product with high export potential, which results in low incentives and motivation to export honey. Misconceptions particularly undermine the initial phase of the export process such as negotiation on volumes, timing, quality and prices, and export process has never reached its final phase in regularity. Figure 7 below provides an overview of constraints affecting Georgian honey export.

Figure 3. Doughnut of Key Constraints to export of Georgian Honey

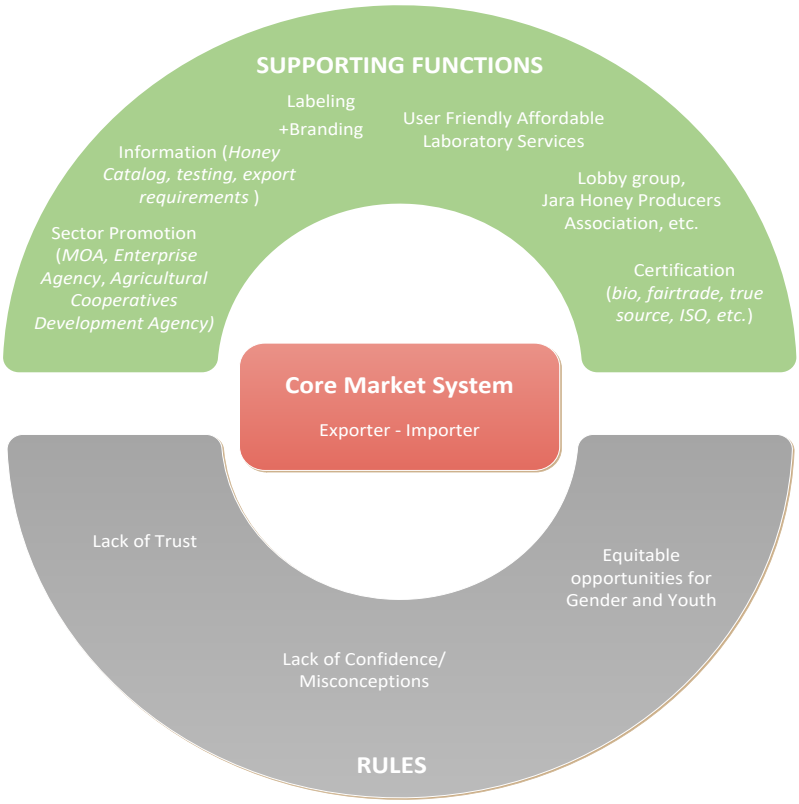
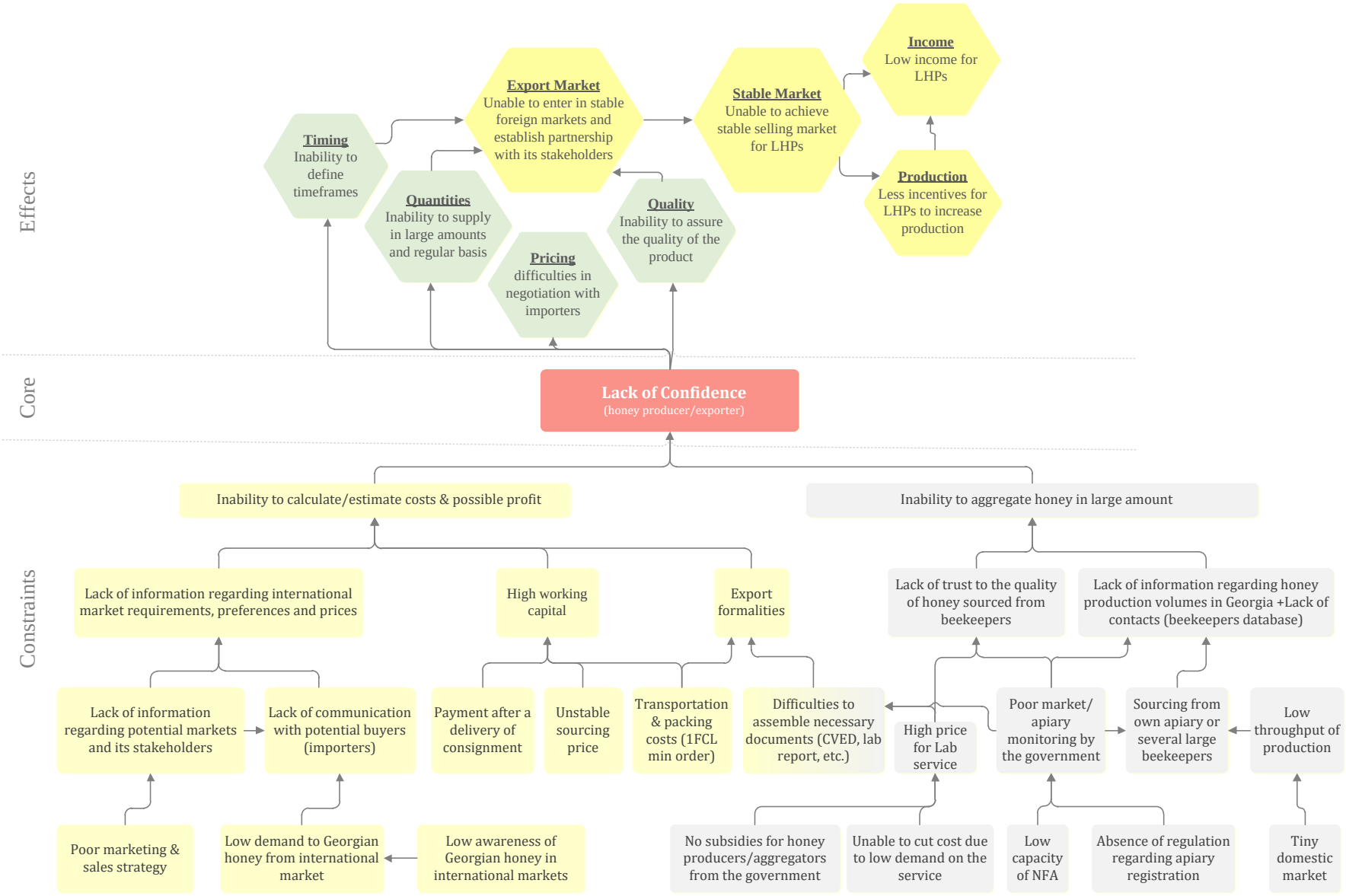


Figure 8. Problem Tree of Georgian Honey Export



3.3 VISION OF FACILITATION OF THE ALCP

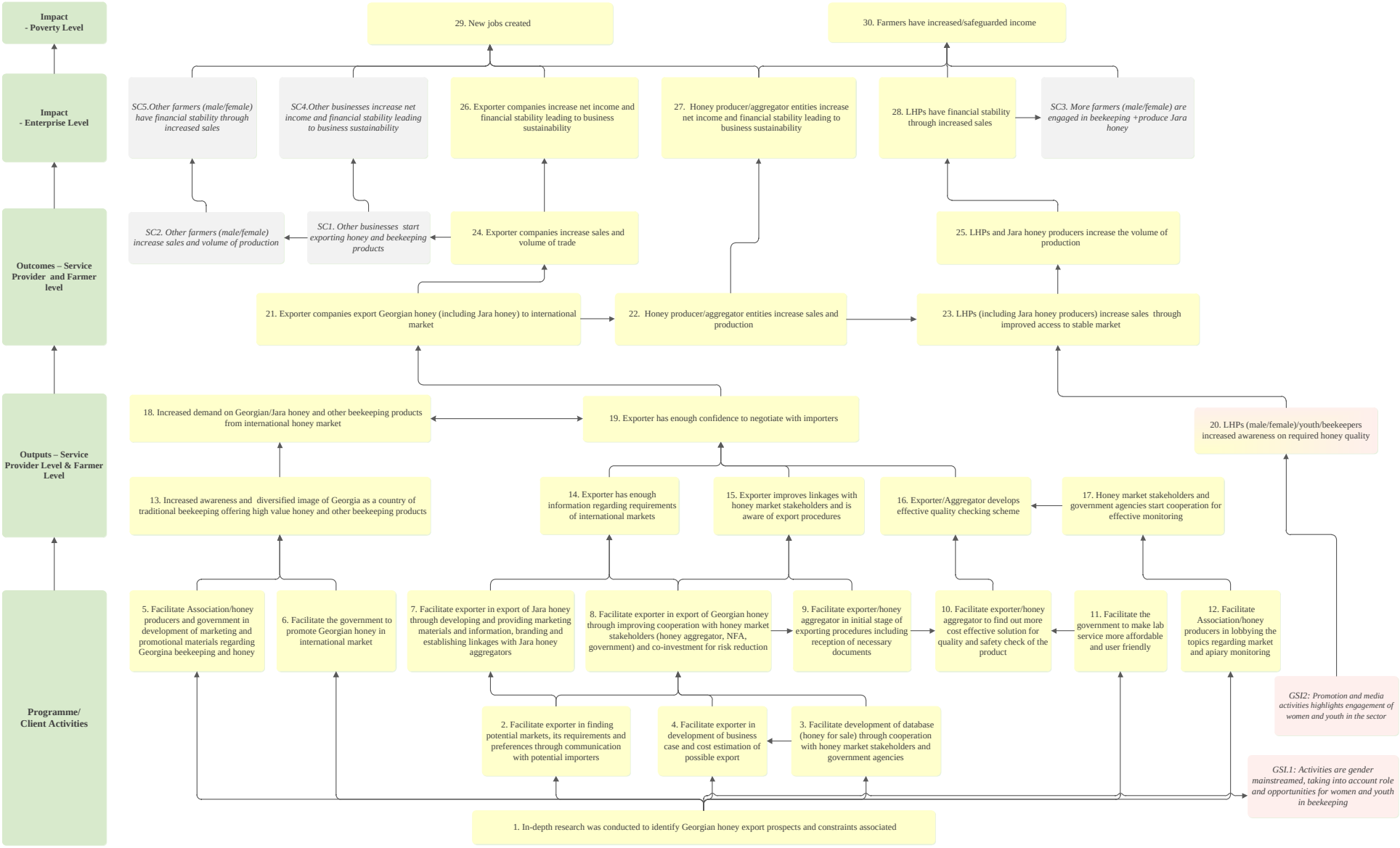
Table 16 describes the vision of the ALCP facilitation of the Georgian honey export. The table summarizes key constraints on the different levels of export chain including sourcing, production and export levels and sets possible entry points and activities to achieve main outcomes: export of Georgian honey and increased income for LHPs (livestock and honey producers). For better illustration see the sectorial results chain in the figure 8.

Table 16: Potential Opening Interventions and their Anticipated Impact

Key Constraints	Entry Point	Activity	Output	Impact
Lack of information regarding international market requirements, preferences and prices testing availability & requirements	#Exporter #Honey Producer/ Aggregator	Facilitate exporter in finding potential markets, its requirements and preferences through communication with potential importers	Exporter has enough information regarding requirements of international markets	Exporting and Honey producer/aggregator companies increase net income and financial stability through increased sales in international markets leading to business sustainability
Inability to calculate costs and possible profits	#Exporter #Honey Producer/ Aggregator	Facilitate exporter through development of business case and cost estimation of possible export		
Lack of information regarding volumes of honey for sale +Lack of contacts	#Exporter #Honey Producer/ Aggregator #Cooperatives Development Agency #Association	Facilitate development of database (honey for sale) through cooperation with honey market stakeholders and government agencies	Exporter improves linkages with honey market stakeholders and is aware of export procedures (including testing)	
Lack of confidence of exporter	#Exporter #Honey Producer/ Aggregator	Facilitate exporter in export of Georgian honey through improved cooperation with honey market stakeholders (honey aggregator, NFA, government) and co-investment for risk reduction		
Export formalities	#Exporter #Honey Producer/ Aggregator	Facilitate exporter/honey aggregator in initial stage of exporting procedures including reception of necessary documents		
Promotion of Georgian Special Honey (Jara) on international market	#Exporter #Honey Producer/ Aggregator #Association	Facilitate exporter in export of Jara honey through developing and providing marketing materials and information, branding and establishing linkages with Jara honey aggregators	Exporter has enough confidence to negotiate with importers	
Lack of trust to the quality of honey sourced from beekeepers	#Honey Producer/ Aggregator #Association	Facilitate exporter/honey aggregator to find out more cost-effective solution for quality and safety check of the product	Exporter/Aggregator develops effective quality checking scheme	

	#Government	Facilitate the government to make lab service more affordable and user friendly		LHPs have financial stability through increased sales and volume production
		Facilitate Association/honey producers in lobbying the topics regarding market and apiary monitoring	Honey market stakeholders and government agencies start cooperation for effective monitoring	
Low awareness of Georgian honey in international market	#Exporter #Honey Producer/ Aggregator #Association #Cooperatives Development Agency #Enterprise Georgia #Chamber of Commerce of Georgia	Facilitate Association/honey producers and government in development of marketing and promotional materials regarding Georgina beekeeping and honey	Increased awareness and diversified image of Georgia as a country of traditional beekeeping offering high value honey and other beekeeping products	
		Facilitate the government to promote Georgian honey in international market	Increased demand on Georgian/Jara honey and other beekeeping products from international honey market	
Low access to women & youth	#Exporter #Honey Producer/ Aggregator #Association	Activities are gender mainstreamed, taking into account role and opportunities for women and youth in beekeeping	More farmers (male/female)/youth/beekeepers increased awareness on required honey quality	

Figure 9. Sectoral Results Chain



ANNEX SECTION

ANNEX 1: OVERVIEW OF BEEKEEPING COOPERATIVES IN GEORGIA

Figure 1. *Distribution of Beekeeping Cooperatives in Georgia*

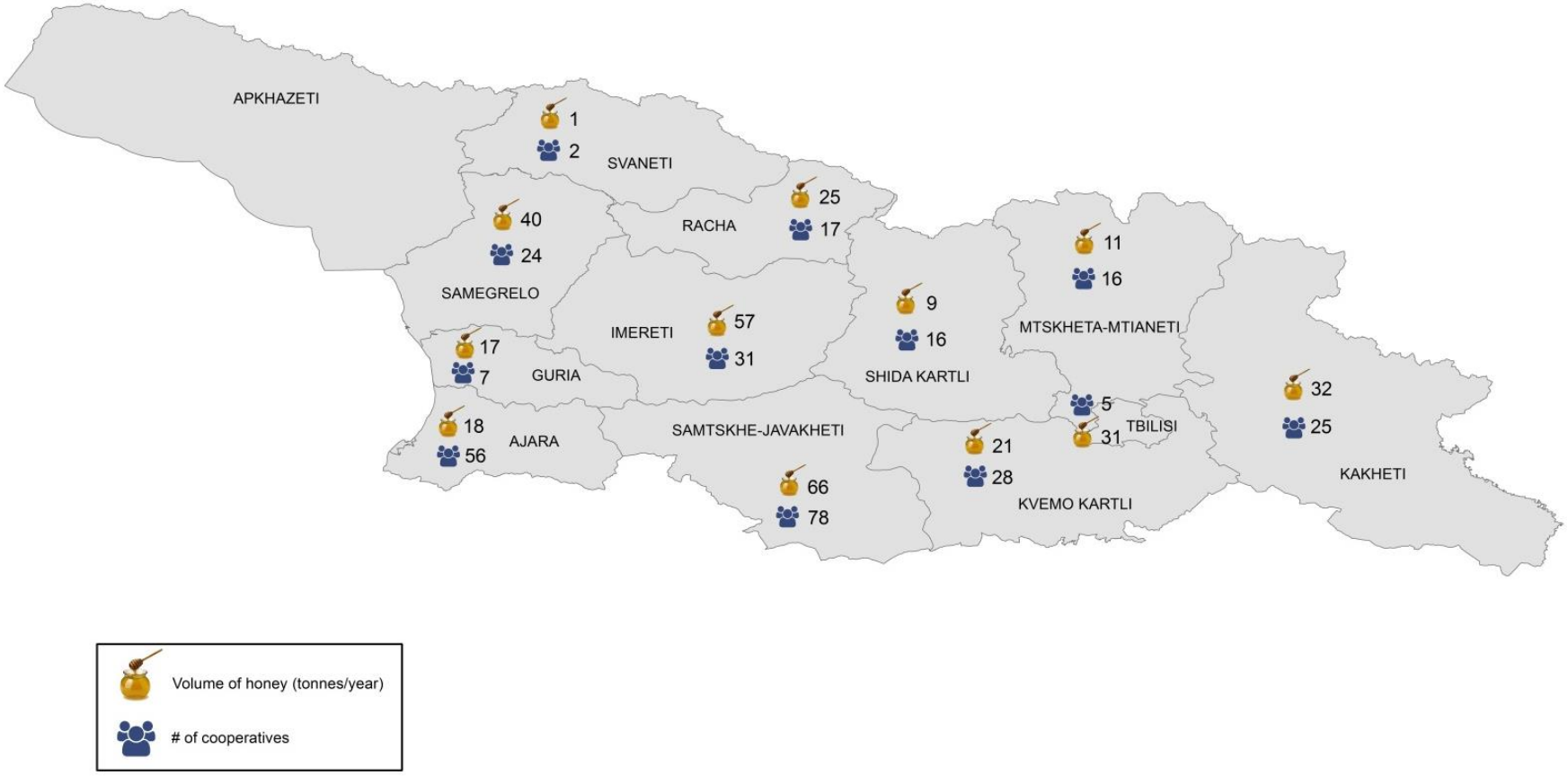
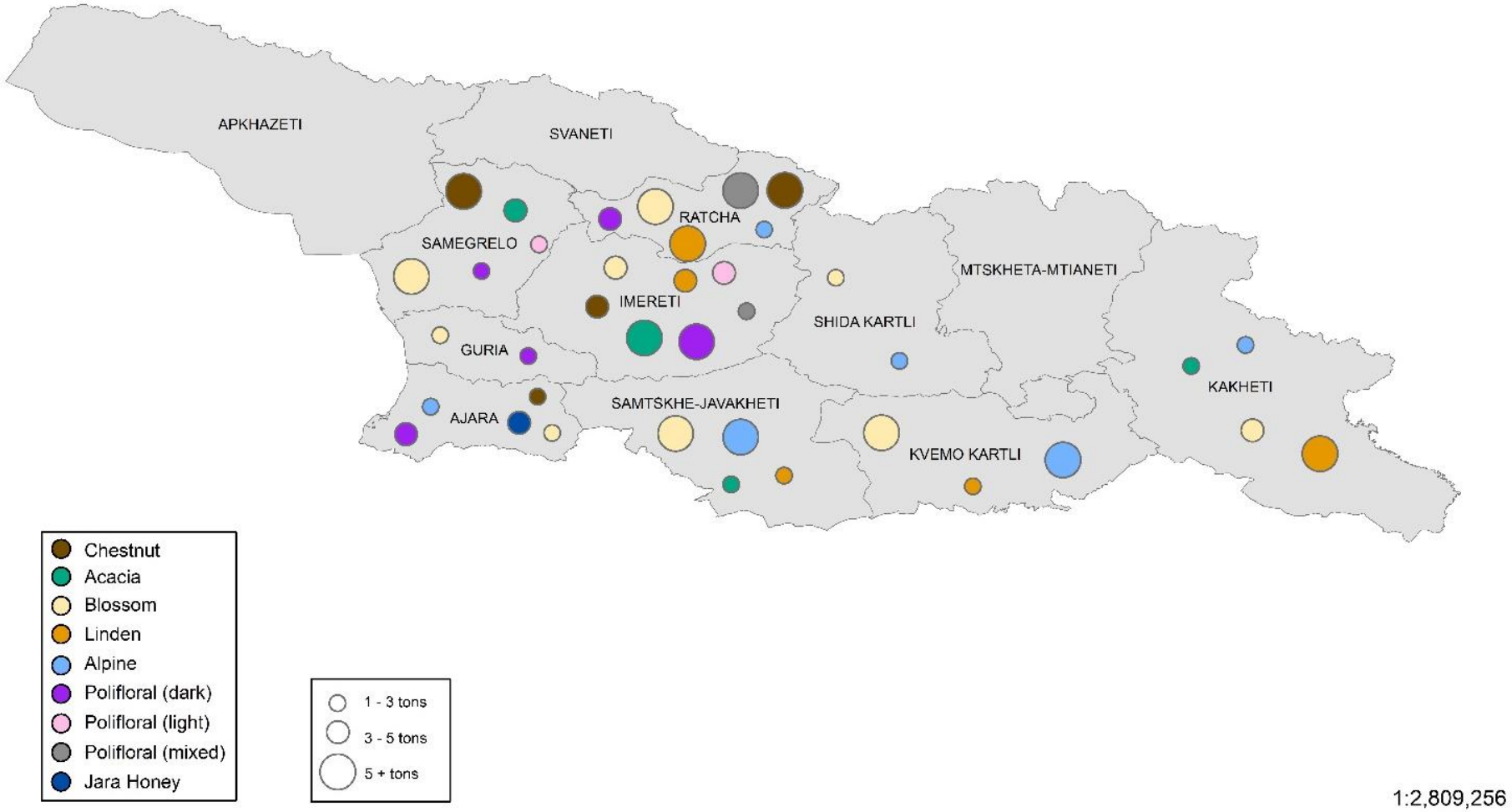


Figure 2. *Honey Available for Sale (Cooperatives)*[45]



[45] The data is based on the survey (90% of all beekeeping cooperatives were interviewed).

Figure 3: *Types and Volume of Honey Available for sale by Cooperatives per Region (Nov, 2017)*

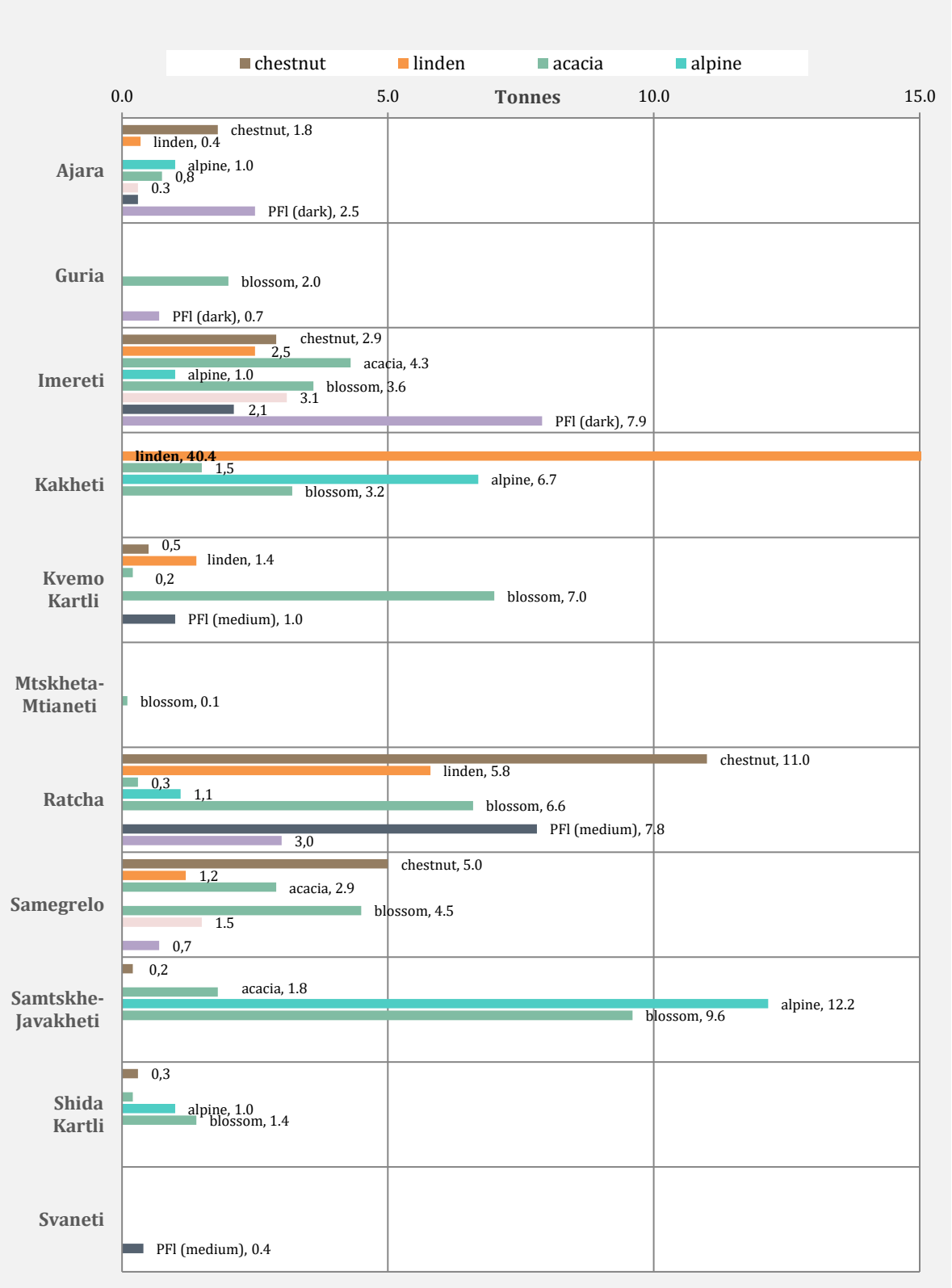
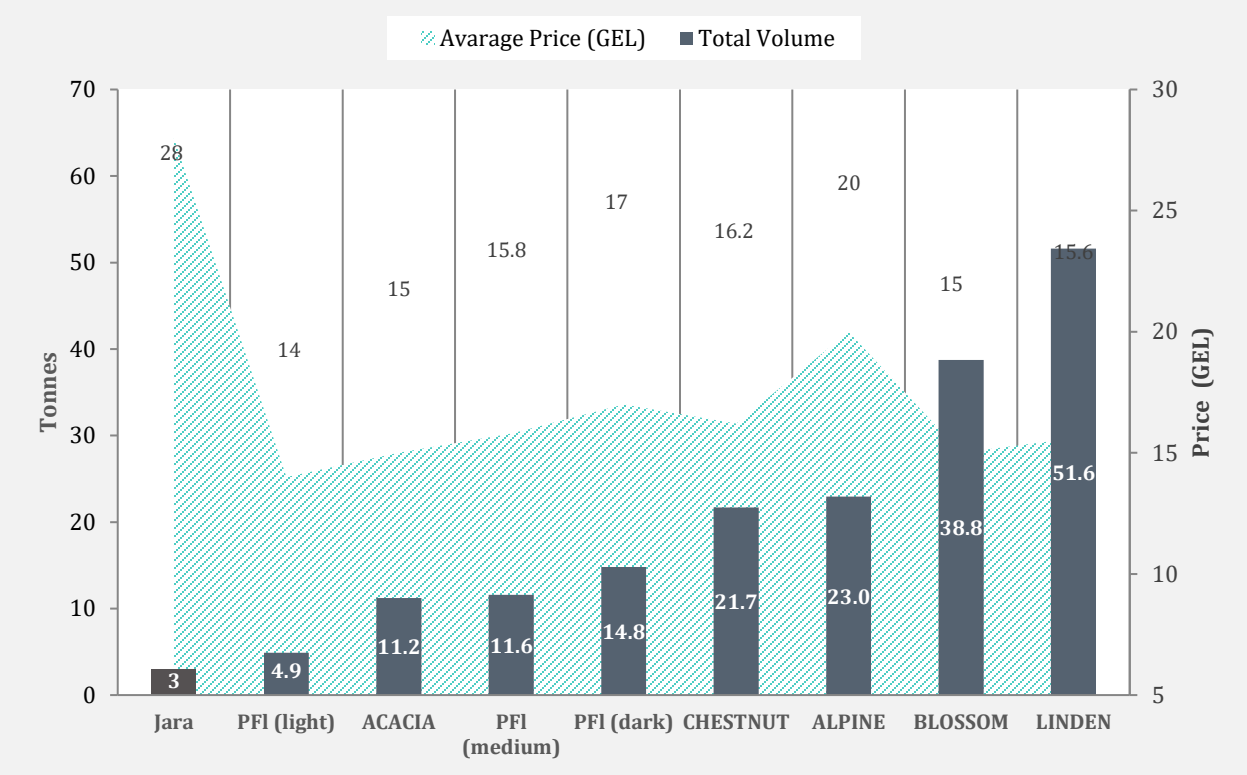
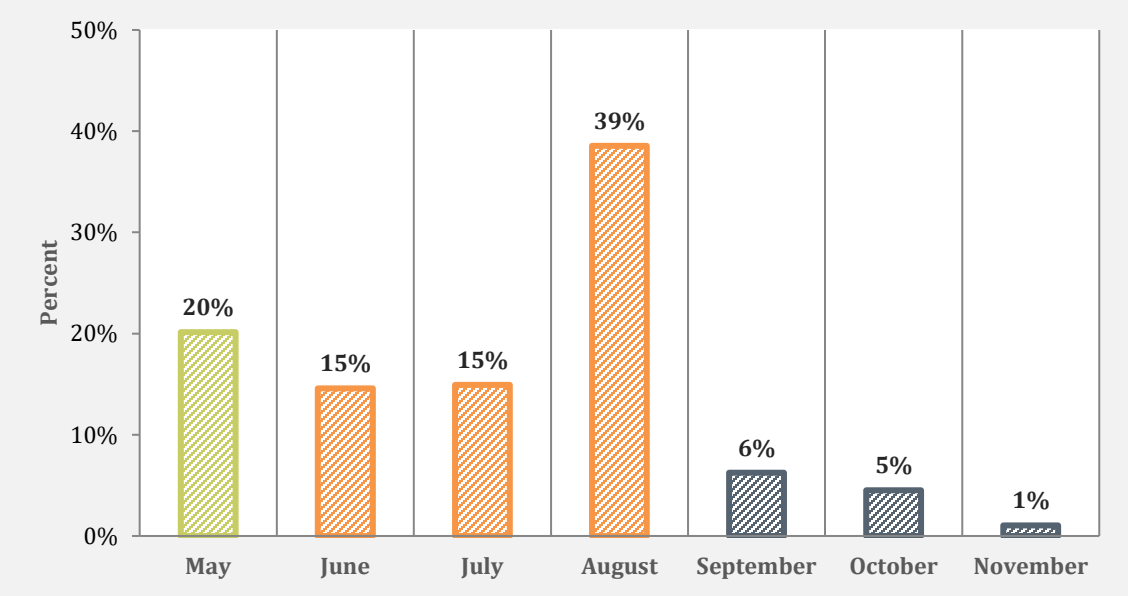


Figure 4: *Honey Types available for Sale and Average prices (based on cooperatives' survey, Nov 2017)*



Note: *This table gives data based on interviewed cooperatives and companies, which is small share of total amount of honey produced in Georgia.*

Figure 5: *Honey Harvest Seasons (based on cooperatives' survey)*



ANNEX 2: LIST OF HONEY PROCESSING ENTERPRISES (COOPERATIVES) IN GEORGIA

#	Cooperative Name	Region	Technological Line[46]	Product Brand	Contact Information	Capacity	Types of Honey	Sales market	Supply	Additional Information
1	Cooperative Naturgift	Ajara	✓	Bunebis sachukari	Tengiz Malakmadze 593 990 477	N/A[47]	Chestnut Linden (mixed)	Local market (Ajara)	Only from its members	Needs assistance in developing a proper labeling
2	Taflis sachino	Imereti	✓	Honey Sachino	Mindia Kavtaradze 598 107 165	4 tonnes/day	Chestnut Linden (mixed)	Local HoReCa market (holiday inn, Hualing Tbilisi etc.)	Cooperative members (capacity 30 tonnes of supply)	Holds a negotiation with the European Chamber of Commerce to export honey to the EU. The factory needs establishment of FS&H standards, such as HACCP, Global Gap or ISO.
3	Ratcha Natural Products	Ratcha-Lechkhumi	✓	X	Lasha Gagoshidze 599 971 775	10 tonnes/ day	Linden Blossom	Plans to supply local & international market	cooperative members, willing to work with local beekeepers as well	The factory is in process of renovation. Renovation works will be finished in November, implementation of HACCP is in process. The company holds negotiations with German company, honey samples were sent to Germany and the test results will be known in November. The company needs assistance in equipping the laboratory.
4	Bee House in Pshavi	Mtskheta-Mtianeti	✓	Bee House in Pshavi	Gocha Khadiashvili 595 292 911	1 tonnes/ day	Operational from the next year	Local market	Only from its members	NFA sent a sample to Lithuania, waiting for the results in November.

[46] Includes honey mixer or homogenizer, bottling and packaging machines

[47] 1.6 tonnes of honey was bottled in 2016

ANNEX 3: LIST OF HONEY PROCESSING ENTERPRISES (LIMITED LIABILITY COMPANIES) IN GEORGIA

#	Company Name	Region	Technological Line[48]	Product Brand	Contact Information	Capacity	Types of Honey	Sales Market	Supply	Additional Information
1	Matchakhela	Ajara	✓	Datunia	Tamaz Kakhidze 577 304 262	3 tonnes/ day	Acacia Blossom Linden Chestnut	Local market	Local beekeepers	Application has been handed in to NFA asking for granting the recognition. HACCP needs to be established.
2	Putkara	Tbilisi	Only bottling machine and honey mixer	Putkara	Mikheil Tetruashvili 597 588 653	1 tonnes/ day	Alpine Linden Chestnut	Local market	Its own apiary, but mainly from local beekeepers	Small amount of honey was exported to Japan in 2017.
3	Mefutkre	Tbilisi	Bottling machine and honey mixer	Mefutkre	595 771 513	20 tonnes/ year	Blossom Linden Chestnut Alpine	Local Market (supermarket chains except Smart)	its own apiary (up to 150 hives) other is purchased from 4-6 large beekeepers.	The company has an *export story* in China and Korea but it was the single case and with small amounts: *300 kg in China* (honey wasn`t the product of main interest of Chinese side and was exported in the compartment with wine) and *small amount in Korea*.
4	Pepe	Tbilisi	only bottling and packaging machine	Pepe	Giorgi Tatishvili 595 392 957	Maximum 2 tonnes per season	Alpine	Local market	Its own apiary (100 beehives)	Has a negotiation with Saudi Arabia. Arab countries are more attractive for export, as they pay high prices.
5	Kartuli Putkari	Tbilisi	Has purchased bottling and packing machine in Turkey and will be delivered in November, 2017 Has was production equipment	In process of developing	Gela Kapanadze 599 243 501	10 tonnes/year 20 tonnes/ year (March-July)	Acacia Blossom Linden Chestnut	Local market, through own shop	600 bee colonies (own) and sources from 3-4 large beekeepers (6-7 tonnes/ year)	Has exported 100kg of honey in Iraq. Has positive attitudes toward export. Has an experience of getting Vet Certificate from NFA (June, 2016) and has laboratory test results (quality parameters).

[48] Includes honey mixer or homogenizer, bottling and packaging machines

6	Gremi Comapny	Rustavi	Has already ordered all the equipment for the whole production line in Poland and Ukrain which will be delivered within 2 months.	Gremi	558 818 668 gremicompany.ge	1 tons/day	Alpine Blossom Ivy	Local market in small amounts	50 bee colonies (own) and source from 6 large beekeepers who are at the same time members of Georgian Beekeepers Union.	The main direction of the company is to export honey to Asian and European countries. As soon as the whole production line is assembled, the company is going to implement HACCP standard and gain recognition from NFA. The honey of supplier beekeepers was sent to Riga and tests are positive.
7	Metaplia	Sagarejo (Kakheti)	Only Packing machine	Metaplia	Roland Zirakashvili 595 488 489	400 kg/ day	Alpine Blossom Linden Chestnut Goldenrod Ivy Citrus	Local market, owns shops in Tbilisi and Batumi	50% from its apiary, 50% from its relatives	The owner is willing to export honey to Arab countries.
8	Kula	Gori	N/A	Kula	Sopho 574 747 007	N/A	Blossom	Local market	Local beekeepers	The honey is produced in small amounts. As the company is mainly focused on canned production it does not have any plans to increase honey production and export honey.
9	Lile	Telavi	X	Lile	551 156 175	Maximum 2 tonnes per season	Linden Chestnut	Local market	Its own apiary (120 beehives)	Had negotiations with Saudi Arabia but due to high price (20Gel/kg for Linden honey) Saudi Arabian company found another supplier in Russia.
10	Agro Keda	Ajara	Only Bottling Machine	Nena	Aleko Dadiani 595367737	500kg/day	Acacia Alpine Blossom Linden Chestnut	Local, Supermarket Chains	Sources from beekeepers	The company produces fruit jams and juices from sourced fruits from locals. The company started to source honey since June 2017. Up to now, 5 tonnes was sourced from 4 large beekeepers from Guria, Kakheti and Ajara. The company is interested in honey export.

ANNEX 4: LIST OF GEORGIAN LABORATORIES ACCREDITED FOR HONEY TESTING

#	Organization	Accreditation until:	Quality Analyses	Research Method	Safety Analyses (antibiotics Pesticides)	Research Method	Provides research on Honey	Client	LCMS	Note
1	G. Natadze Scientific-Research Institute of Sanitary, Hygiene and Medical Ecology Testing Laboratory	04.02.2020	YES. Excluding analyses of sugars (fructose/glucos)	GOST	several antibiotics	ELISA	Yes	Private, LEPL	No	
2	"Eqspertiza +" LLC Products certification body	24.02.2018	YES	GOST	Unclear	unclear	Yes	Private (often)	No	The Lab has GCMS (gas, not liquid chromatography)
3	"Norma" LLC Testing Laboratory	16.12.2017	YES	GOST	NO. In case of increasing demand they can implement the methodologies	unclear	Yes	Private (90%) price 200-300 GEL	No	
4	LEPL "Laboratory Research Center" Testing Laboratory	28.11.2017	YES. Not all components	GOST	No. However has a capacity to do on pesticides	GCMS	Yes	Mixed	No	The Lab has GCMS (gas, not liquid chromatography)
5	Testing Laboratory of Agricultural University of Georgia "Test Lab"	16.05.2018	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No information
6	"Etaloni" LLC Testing Laboratory	14.05.2017	YES	GOST	10 types of antibiotics	ELISA	No	NFA (tender) 3-4 samples/month	No	Does not trust private sector (Issues with taking samples and payment)
7	"Multitesti" LLC Testing Laboratory	09.01.2018	YES	GOST	No. However can do research on pesticides (50-70 types)	LCMS	Yes	Private. However very poor. No demand. Was the client who wanted to export 12 t in Asia but refused at the end.	Yes	If the demand increases, the company is ready to implement and develop methodologies
8	Levan Samkharauli National Forensics Bureau Testing Laboratories	26.08.2017	N/A	N/A	N/A	N/A	N/A	N/A	N/A	No information
9	"Eqspertiza +" LLC Testing Laboratory	13.01.2018	YES. According to GOST	GOST	NO. no demand	unclear	Yes	Private 2-3 samples/month. Price 160 GEL	No	Too expensive and high cost for testing antibiotics. Pure samples are expensive.
10	The Laboratory of Ministry of Agriculture (LMA)		YES	own	Chloromphenilicol, Tetracycline, Oxytetracycline and Chlortetracycline	LCMS Randox	Yes	Cooperatives	Yes	

ANNEX 5: INFORMATION ON LABORATORY TESTS DONE BY LOCAL AND INTERNATIONAL LABORATORIES

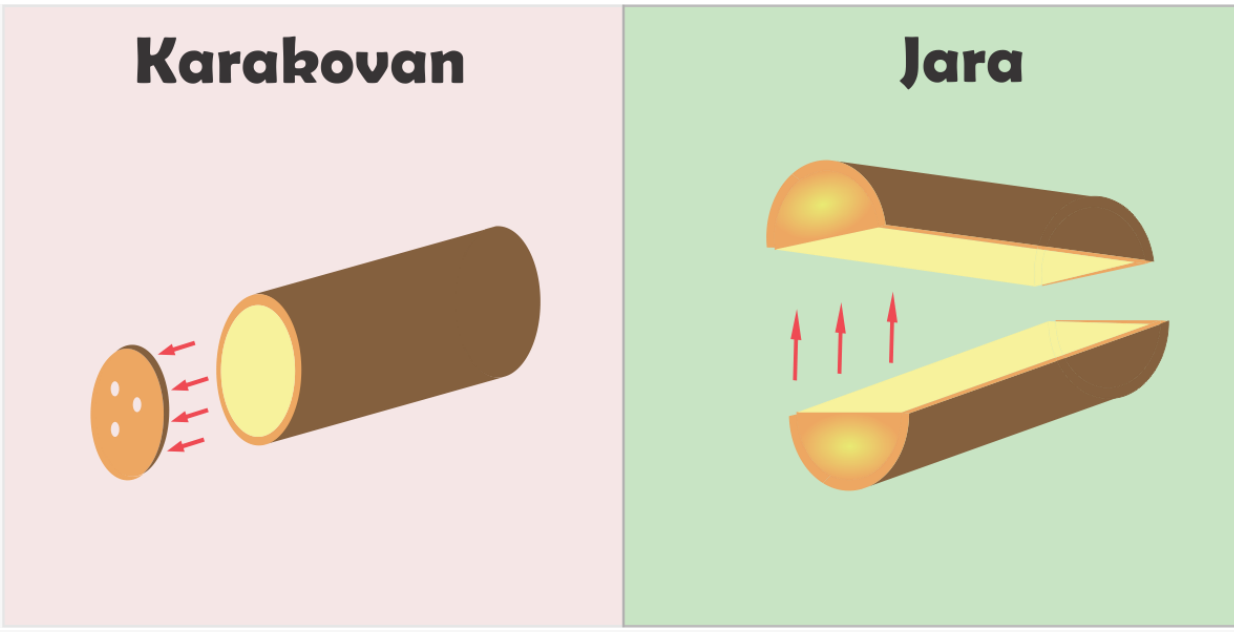
Internationally Required common tests	Intertek International Lab			Lab of Ministry of Agriculture			
	Method	Price USD per sample	Timeframe (days)	Method	Price USD per sample	Price USD per sample (40 samples) *	Timeframe (days)
Main qualitative parameters		150	5	Randox Screening	40	40	7
Chloramphenicol	Package: ELISA LC-MS Screening	240	5		2225	58	5
Nitromidazoles: dimetridazole, metronidazole, ronidazole							5
Nitrofurane: AOZ, AMOZ, AHD, SEM					2225	58	5
Tetracyclines	LC-MS	72	5		2225	58	5
Streptomycin		62	5				5
Sulfonamides and Trimethoprim		82	5		-	-	5
Pesticides	GC-MS	178	5	GC-MS	80	80	7

** In the case of providing up to 40 samples for analyses jointly the price decreases as 1 Randox kit can check 40 samples at the same time. The costs are calculated according to the formula (price for 1 kit/ #of samples). In other words, in the case of using Randox method the costs for checking 1 sample do not differ from the costs of checking 40 samples. In both cases, the total price is 2,225 USD. Therefore, a customer benefits from using Randox method of checking in the case of checking large number of samples. The same applies to other similar screening methods of checking (e.g. Biorex).*

ANNEX 6: LIST OF THE MOST FAMOUS SPECIAL HONEYS

Anzer honey	Lavender honey
Alfalfa honey	Leatherwood honey
Australian box honey	Lifemel honey
Bashkir honey	Mad honey
Basswood honey	Maharishi honey
Berringa honey	Manuka honey
Blackberry honey	Moringa honey
Borage honey	Metcalfa honey
Buckwheat honey	Neen honey
Cannabis honey	Noni honey
Citrus honey	Oregano honey
Clover honey	Palmeyo honey
Coffee honey	Pacelia honey
Coriander honey	Pine honey
Dandelion honey	Rapeseed honey
Eucalyptus honey	Rosemary honey
Elvish honey	Sage honey
Gallberry honey	Sidr honey
Melaleuca honey	Sourwood honey
Heather honey	Sunflower honey
Hymalaian red honey	Sweet chestnut honey
Honeydew honey	Thyme honey
Ikaria honey	Tualang honey
Jarrah honey	Tupelo honey
	Vipers buglas honey

ANNEX 7: DIFFERENCES BETWEEN JARA AND KARAKOVAN HIVES



Jara hive as Karakovan hive is made from 1 wooden log. However, difference is that in Jara case the log is cut into two parts and during the harvest one of the side of the top bar is taken vertically up;

In the case of Karakovan hive inside part of a wooden log is cut out and harvesting is done "horizontally";

Karakovan hive can be also made of wooden staves (similar to barrel) by beekeepers.

Karakovan as a rule is smaller than Jara;

Karakovan hive in Georgia is called Kovani. Such type of traditional hives can be also found in the villages of Khelvachauri and Keda municipalities, especially in Matchakhela. However, their number is too small.

ANNEX 8: BLOGS AND WEBSITES RELATED TO HONEY

https://www.perfectbee.com/
http://www.beeculture.com/
http://www.naturalbeekeepingtrust.org/blog
http://americanbeejournal.com/
https://beekeepersnaturals.com/blog/
https://honeybeesuite.com/
http://www.beesfordevelopment.org/
http://www.honeytraveler.com/
https://honeyandspice.in/blogs/raw-honey-blog
http://www.naturalbeekeepingtrust.org/blog