A Gendered National Honey Sector Survey in Georgia

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REGIONAL MARKET ALLIANCES IN THE SOUTH CAUCASUS

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MERCY CORPS

EXECUTIVE SUMMARY

The following *A Gendered National Honey Sector Survey* is an attempt to identify gender roles and agency over resources in the honey sector and to ensure the inclusion of female and male beekeepers as compliant suppliers in the developing honey market sector. It is a sector with great potential, however its growth will rely on being able to aggregate compliant honey, which companies know they can trust, otherwise testing costs become onerous and will prevent export. Growth in the sector therefore requires knowledgeable suppliers producing quality, compliant honey.

Beekeeping in Georgia is regarded as being a male-dominated sector. It is traditionally considered a man's job, requiring strength for the loading and transportation of beehives during transhumance and in honey extraction. Beehives are usually inherited and owned by sons and in families where beekeeping is the main source of income, men overwhelmingly tend to play the main role.

Alliances has been conducting interventions in the honey sector in Georgia since 2014. Existing data presented a male centric view of the sector, essentially negating the role of women. However, over time and particularly on the expansion of honey activity from a regional to a national intervention, it became clear that women did play a role in the production and marketing of honey as a household based activity. The programme realized that even though women might not be obviously central figures in the sector, that there seemed to be potential for women to pursue beekeeping as an important source of income, as a main or subsidiary livelihood activity. It was clear that in-depth gendered research was required to unlock potential entry points and pinpoint constraints in order to structure gendered interventions to ensure maximum access for women and men in the honey market system. This report presents the results of this survey.

Women who identify themselves as beekeepers represent 8% of beekeepers in Georgia, approximately six hundred and thirty women out of a total of eight thousand[1]. Reasons that these women have become beekeepers include beekeeping being a family activity and women taking up the role after a father or husband have passed away, support from NGOs which has seen women based cooperatives formed and women given training, funding and beehives and women adopting more control over the business where it is an additional source of income linked to food production and rural tourism.

For the 92% who identify themselves as male beekeepers, beekeeping mostly remains a household activity and women still play an important role in beekeeping, the women take care of beehives, treat bees, negotiate with customers and sell honey. Men are responsible for bee transhumance, honey extraction/ packaging, buying vet medicines and inputs see Table 2 and Table 3 for Roles and Responsibilities and Access and Decision Making in the honey sector according to gender. The survey showed that the women's role is central in the production and sale of bee products. They tend to understand promotion, marketing activities and opportunities for selling honey. Tourists, agri and honey festivals are a very important market for women[2] and they are more likely to start entrepreneurial activities in tourism in general where there is often a strong link with beekeeping.

Although they have many constraints in common, constraints for beekeepers differ slightly in range and priority according to gender. One of the main constraints for female beekeepers is accessing finance for investing in beekeeping along with limited markets and the uncontrolled usage of pesticides against *Asian*

[1] According to data of the Ministry of Environmtal Protection and Agriculture MEPA Information Consultation Centers (ICC's), there are 6460 male and 351 female beekeepers throughout Georgia. However, our data collected from the *Georgian Beekeepers Union*, cooperatives and *Georgian Bee* on *Facebook* showed us that there are up to 8000 beekeepers in total, out of which 630 are female beekeepers with fill remit over roles, responsibilities, access and agency.

[2] Female beekeepers from Racha, Ajara and Imereti mentioned tourists as their customers.

bug, while male beekeepers' named limited markets and transport for bee transhumance as well as the uncontrolled usage of pesticides as their constraints in beekeeping. The women also name a lack of forage sources for bees near villages, while men prioritize roads to get to unused valleys in their regions for bee transhumance. Limited markets were mentioned as a priority constraint for both, with currently taking on average eight months to sell their entire crop of honey and thus they find it difficult to invest a capital sum in beekeeping.

All the interviewed female and male beekeepers highlighted the importance of representation and of establishing one umbrella organization, which would manage all the flows of information from beekeepers to government, private sector or NGOs and vice versa. Ethnicity is a constraint for both genders. Azerbaijani and Armenian beekeepers have a lack of information related to proper vet medicines, bee diseases, and treatment, they are not members of any associations and do not attend any trainings.

1: ALLIANCES WORK IN THE HONEY SECTOR 2014-2019

In March 2014, the ALCP expanded to Ajara and surveyed the livestock sector in Ajara. The *ALCP Ajara Market Analysis* and *Focus Group Survey ALCP Ajara* identified beekeeping as having high relevance for pro poor market development in Ajara and a vital sector for agri-tourism development, conservation and sustainable development. The programme then produced the *the Characteristics of Beekeeping in Ajara region*.

INTERVENTIONS

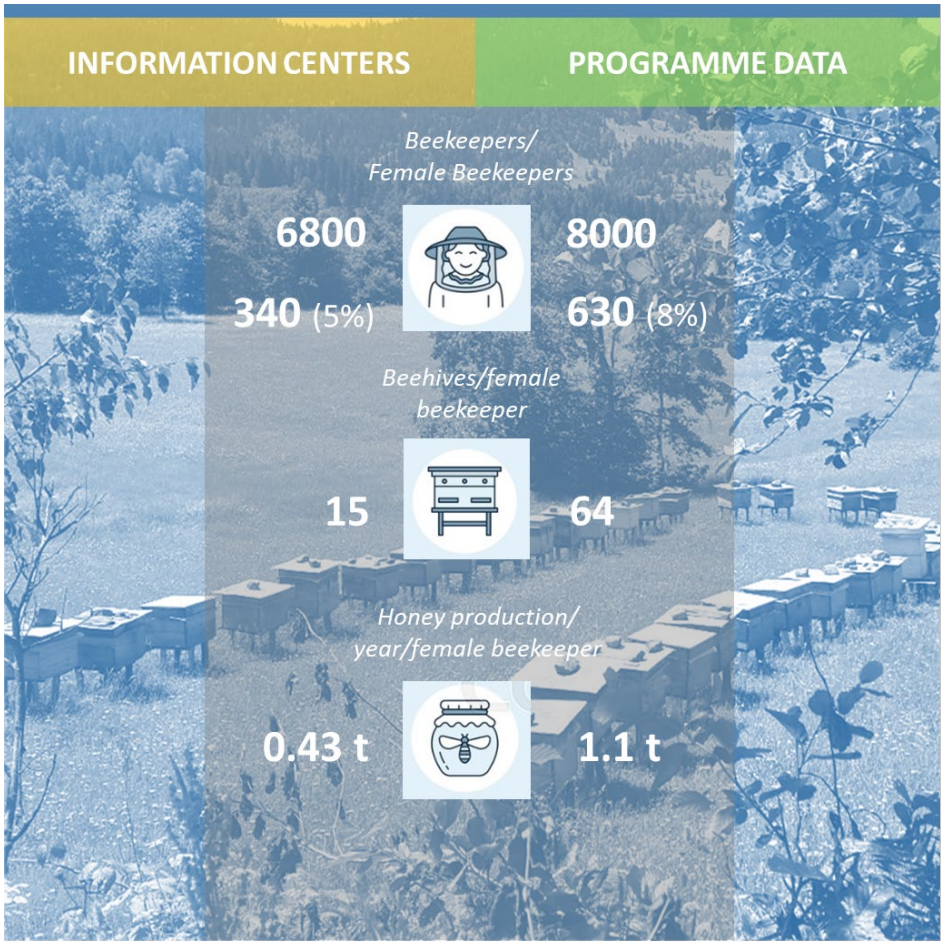
The programme facilitated; *Eco Films Ltd* (2015) to produce *Jara the Documentary* on traditional Jara beekeeping and biodiversity of Ajara; *Impervet Ltd* (2015) a national beekeeping inputs supplier to open a beekeeping shop in Ajara, expanded to Samegrelo in 2017; a *Honey Festival* (2015, 2016) in Batumi; *Ajara Beekeepers Business Association ABBA* (2015) to open its own office at the *Ajara Chamber of Commerce and Industry* for consultancy, training and advocating beekeepers' interests at a local and regional level; the honey processing company *Matchakhela Ltd* (2016) to expand the sourcing of honey; *ABBA*'s participation in the *Apimondia Congress* (2017) in Turkey to promote Georgian honey.

After expanding nationally in 2017 and seeking scale in the honey sector after addressing national perceptions of honey and building a regional base and inputs, the programme developed two documents; *Prospects for the Export of Georgian Honey* and a *Honey Export Business Case* (2017, Internal). The programme then facilitated; the *1st Honey National Advisory Committee Meeting* (2017) to bring together national honey stakeholders for national action on antibiotics in honey; *Kakhetian Traditional Winemaking Company Agro Keda* to collect, aggregate, test and export honey and produce and sell *Jara* honey (2018); ongoing work on honey aggregation, laboratory testing; the establishment of *The Georgian Beekeepers Union* (2018) as an umbrella association uniting nine associations and three private sector companies for advocating and representing beekeepers' interests and developed a database of Jara producers and initatived the *Jara Beekeepers Association* (2018) in Ajara helping them to become bio certified. A *Honey promotion video,* websites/catalogues of *Jara Honey* and *Georgian Honey* were developed for further promotion of honey (2019). All aimed to create a more efficient and resilient operating environment for beekeepers.

The following *A Gendered National Honey Sector Survey* is now an attempt to identify gender roles and agency over resources in the sector and to ensure the inclusion of female and male beekeepers as compliant suppliers in the developing honey market sector. It is a sector with great potential, however its growth will rely on being able to aggregate compliant honey which companies know they can trust, otherwise testing costs become onerous and will prevent export. Growth in the sector therefore requires knowledgeable suppliers producing quality, compliant honey.

In conducting this research, the programme knew that even though women were not obviously central figures in the sector, women still played important roles in beekeeping and that there was potential for women to follow beekeeping as a main or subsidiary livelihood activity. Existing data presented a male centric view of the sector, essentially negating the role of women. It was clear that in depth gendered research was required to unlock potential entry points and pinpoint constraints, in order to structure gendered interventions to ensure maximum access for women and men in the honey market system.

It was also clear that it was important to establish how many female beekeepers really are in the sector as the official data of *Geostat* and the *Information Consultation Centers (ICCs) of the Ministry of Environment Protection and Agriculture of Georgia* is not gender-disaggregated. Programme staff read through official statistics and using names disaggregated the data, they then collected and analyzed other sources of information[3] about women who identify themselves as beekeepers and triangulated it with the official data, to give a more accurate picture of the gender structure in the sector. See Figure 1 below.



Source: *The data is a combination of information provided by* ***Regional Information Centers*** *and the data gathered by* ***ALCP*** *from individual interviews with female beekeepers from different regions of Georgia; In general the numbers from Data collected by ALCP tend to be higher values than the information provided by regional information centers*

Figure 1Number of Female and Male Beekeepers in Georgia

[3] Georgian Beekeepers Union, beekeepers' cooperatives and Georgian Bee on Facebook

SECTION 2: METHODOLOGY

The programme conducted twenty focus groups in nine regions of Georgia, using a semi-structured questionnaire developed to capture information related to gender division of roles, the practices used in the treatment of bees, apiary management, market access and key constraints. 136 beekeepers were interviewed, see Table 1 below. The groups were organized by the MEPA ICC's who invited the participants. Women's participation in the focus groups was lower (fifty-three women) and of less comprehensive than the mens' focus groups (eighty-three men). The programme has significant evidence that women speak much less in group settings when men are present. Holding separate focus groups for women gives them the ability to voice opinions on all issues, especially on matters related to gender. The focus groups for women were grouped according to women who identify themselves as female beekeepers and women from HHs with beehives.

The programme decided to augment the focus group findings with in depth interviews where data was lacking, patchy or inconclusive. Fifty-two in-depth interviews were held with key market players in the honey sector. Forty-two women were interviewed as the quality and attendance of the womens' focus groups was less than that of the male groups, the majority of whom identified as female beekeepers and ten men who play key roles in the sector. Transcripts of these interviews can be found in *Annex 2 Key Informant Interviews*.

Data from *Geostat* and the ICCs were used to calculate the number of beekeepers/beehives/volume of honey produced by the regions. Programme staff used data provided by the *Georgian Beekeepers Union*, beekeepers' cooperatives and *Georgian Bee* on *Facebook* to triangulate with the official data.

Table 1Focus Group Participants By Gender and Region

Region	# of Focus Groups	Man	Woman
Ajara	2	7	4
Guria	2	13	4
Imereti	2	5	3
Samegrelo	2	10	15
Samtskhe-Javakheti	2	5	7
Kakheti	2	8	6
Racha-Lechkhumi	2	6	2
Shida Kartli	2	12	4
Akhalkalaki, Armenians	2	12	5
Kvemo Kartli, Azerbaijanis	2	5	3
Total: 136	**20**	**83**	**53**

SECTION 3: GENDER IN THE HONEY SECTOR

The sector is male-dominated which means that more men identify themselves as male beekeepers than women. Women represent 8% of beekeepers. Among the remaining 92% who identified as male beekeepers the gender analysis revealed that women play an important role in beekeeping, doing many activities jointly in the household including taking care of beehives, treating bees, negotiating with their customers and selling honey. However, women only have sole responsibility for the production of bee products; royal jelly, pollen and venom, as shown in Table 2 below. Table 3 shows that despite this inclusion within the honey production process women have far less access to resources and agency over them than men.

Table 2 Gender Division of Roles and Responsibilities in Beekeeping

Activities	Women	Men
Taking care of beehives		
Diagnosing of bee diseases	X	X
Treatment of bees		X
Buying drugs		X
Feeding bees	X	X
Beehives smoking	X	X
Making and using of traditional remedies for bee treatment	X	X
Making additional feed for bees-like syrup, invert sugar	X	X
Mending beehives		X
Transhumance		
Transportation		X
Loading beehives		X
Preparation of beehives: cleaning, sorting, placing planks	X	X
Taking care of beehives in pastures		X
Honey harvest		
Extraction of honey	X	X
Placing beeswax in frames	X	X
Packaging	X	X
Producing other bee products		
Royal jelly	X	
Pollen	X	
Propolis	X	X
Venom	X	
Beeswax		X
Queen bee breeding	X	X
Sale		
Sales management	X	X
Negotiations with clients	X	X
Marketing	X	X
Information		
Attending trainings on beekeeping		X
Teachers in beekeeping	X	

Table 3 Gender Division of Access and Agency (Decision Making Ability) in beekeeping led by 92% of men

	Access		Agency	
Resources	**Women**	**Men**	**Women**	**Man**
Apiary		X		X
Bee transhumance/bee gardens		X		X
Online information and TV programmes	X	X	X	X
Trainings in beekeeping		X		X
Finances		X		X
Inputs, medicines, etc.		X		X
Income from selling honey	X	X		X
Income from selling honey products	X	X	X	X

SECTION 4: CONSTRAINTS

The interviewed male and female beekeepers listed the majority of constraints in common, but prioritized them differently and had different perspectives on how to solve these issues. As an example, the interviewed women and men in Kakheti do not have enough forage sources. The women said that they know some places near to their villages where local government, beekeepers' cooperatives or associations should start planting trees and plants for bees. While the interviewed men said that there are lots of unused valleys and local government should help them with building road infrastructure to get there. See Figure 1 and Table 4 below.

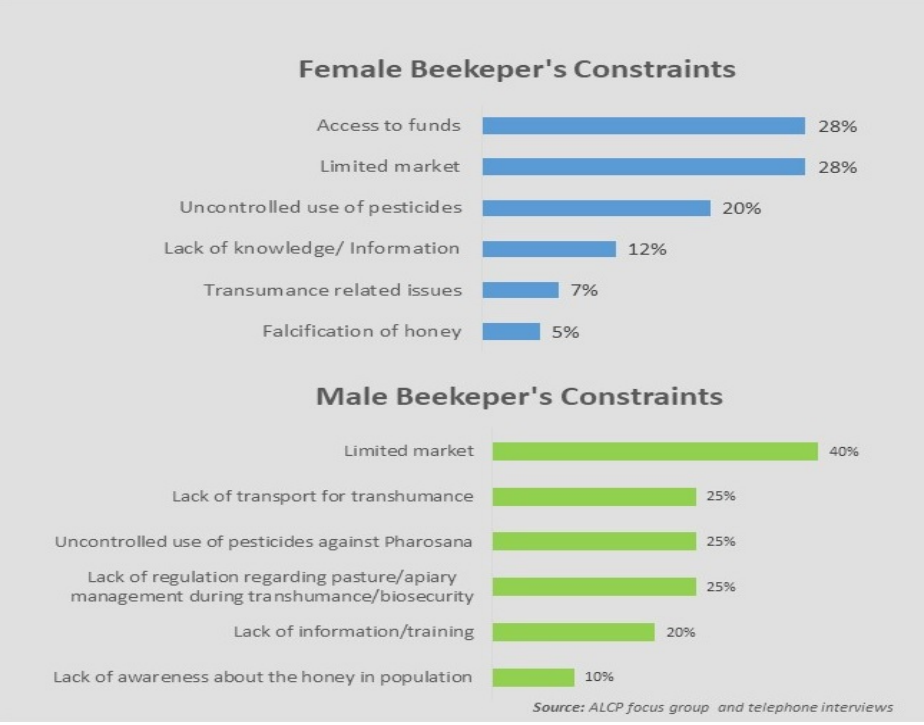


Figure 2Female and Male Beekeepers' Constraints in the Sector

Table 4 Detailed constraints of female and male beekeepers by regions

Region	Constraints
Bee Transhumance	
In all regions	- Allocation places for beehives in valleys is a constraint in the municipalities where bee transhumance is the most common practice - Many unused valleys could be used for transhumance, but there is no road to get there - Lack of forage sources near to villages for beekeepers who do not do bee transhumance - Lack of proper transport that is not available locally - High Costs for hiring transport for bee transhumance *Women* - Lack of forage sources for bees near female beekeepers' villages - Lack of access to transport for bee transhumance, also, they need somebody who can stay with beehives in valleys. These services do not exist. - The women mentioned the importance of investigating chemicals used against *Asian Bug*
Samegrelo	- Biosecurity. No control of bee diseases. Apiaries do not have health certificates before transhumance to avoid spreading of disease. - Land designation of common land for beekeepers to prevent conflict with other land users. - Poor road infrastructure to get to valleys *Women* - Lack of access to proper/special transport or high prices for the services, especially for taking apiaries to alpine zones.
Guria	- Bee transhumance is costly for those who have a small number of beehives.
Inputs	
Shida Kartli, Akhaltsikhe, Ninotsminda and Akhalkalaki	- Low quality of beehives, even those beehives, which were delivered by the *Cooperative Agency.* Wood was raw and they soon broke. - Due to the low quality of beehives, some beekeepers cannot take their bees to pastures.
Guria, Shida Kartli and Racha-Lechkhumi	- Low quality of vet medicines and beeswax - No control of the quality of beeswax by government
Veterinary	
In all regions	- Lack of information about proper vet medicines. Note: Some beekeepers say that they use antibiotics, however, the programme checked the vet medicines they named and they do not contain antibiotics - All the interviewed female and male beekeepers mentioned that some of those bees which spend the whole year in villages were poisoned or died due to pesticides against *Asian Bug*. In Kakheti and Samtskhe Javakheti they mentioned pesticides used for vegetables too - In the case of disease, they try to treat bees by themselves; or ask each other for advice and do not call a vet. - High prices of laboratory tests for their honey are preventing people testing their honey. *Women* The majority of women in Kakheti and Shida Kartli have not heard any information that one of the sources of antibiotics in honey might be beeswax.
Shida Kartli	- Inability to diagnose bee diseases – the interviewed female beekeepers said that they often do not know the reason for the death of their bees and in the most cases they suspect that the reason was pesticides against *Asian Stink Bug*

SJ, Kakheti, Kvemo Kartli, Imereti, Guria and Gori	There are no special bee shops, beekeeping inputs are hard to find.
Knowledge/Information	
In the majority of municipalities	- Beekeepers need an organization to manage information flow from beekeepers to government, private sector, media, NGOs or associations, and vice versa.
Ethnicity	- The interviewed female and male beekeepers do not have information on whether the vet medicines they use are allowed or not and if there are other medicines to replace them. - Lack of information related to bee diseases.
	- Information related to proper honey equipment and how to keep honey. - Female and male Azerbaijani beekeepers are not members of any cooperatives. Some of them are members of associations, however, they could not name which associations, they do not participate in any meetings. Some of them who attended training for beekeepers said that they left the training as they could not understand Georgian. - The only source of information for them is books sent from Baku or Turkey - Azerbaijani and Armenian female and male beekeepers do not follow the most popular Facebook page -*Georgian Bee*
Kakheti, Kvemo Kartli, Ninotsminda, Akhalkalaki	- All the interviewed female and male beekeepers mentioned that they have not attended any training or meetings related to beekeeping for years
Imereti, Shida Kartli	- The interviewed women mostly women from HH's with beehives, are willing to attend certified courses in beekeeping and mentioned that they have not attended any training in beekeeping yet.
Samegrelo	- Sources of information and books in Georgian are poor
In all municipalities	- All the interviewed female and male beekeepers want information related to standards, laboratory analysis, honey filtration, vet medicines and technologies *Women* - Women want and would use information related to the production of bee products, usage of vet medicines and bee treatment - The majority of women who are involved in sales and promotion of their honey would attend training in promotion, marketing, logistics and branding.
Market	
West Georgia	- Lack of a stable market. It takes from six to eight months to sell the entire honey harvest; it hinders investment in beekeeping. - Falsification of honey - Over the last two years, the number of Turkish intermediaries has significantly decreased because of the inflation of Turkish Lira and increased control of the border - Low consumption of honey by locals
In all regions	- Beekeepers see linking honey to tourism as a potential honey market
Ajara and Racha-Lechkhumi	- Only 10 % of male beekeepers in Ajara and 15% in Racha-Lechkhumi mentioned that they have up to two tonnes of honey/beekeeper left from the previous year.

There are several types of honey produced in Georgia see Table 5 below.

Table 5: Types of Honey

Region	Types of Honey
Guria	Linden, chestnut, acacia
Samegrelo	Linden, chestnut, acacia and goldenrod
Imereti	Acacia, linden, chestnut, clover, goldenrod
Samtkhe-Javakheti	Acacia, alpine, blossom
Ajara	Chestnut, linden, acacia, alpine
Kakheti	Acacia, linden, blossom
Racha-Lechkhumi	Blossom, linden, chestnut
Shida Kartli	Blossom, linden, acacia

Note*: the majority of interviewed beekeepers mentioned that they have Linden honey, but after several tests in internationally accredited laboratories, so-called 'Linden honey' consists of about 97% of the chestnut flower*

The majority of interviewed beekeepers from all the regions of Georgia mentioned that it takes from six to eight months to sell their entire crop of honey harvest. In Ninotsminda however beekeepers sell their entire crop of honey in a week in contrast to Ajara where 10% of the interviewed male beekeepers and in Racha-Lechkhumi 15% of the interviewed male beekeepers have unsold honey left from the previous years, on average two tonnes/beekeeper. Everyone mentioned that the tradition of cooking *Gozinaki*[4] for *Christmas* helps them to sell the leftover honey. On average the majority of beekeepers sell 20% of their honey to locals and 80% to relatives in Tbilisi and other cities and towns. Male beekeepers in Racha-Lechkhumi mentioned that they do not know how to find clients and how to communicate with them see Table 6 below.

Table 6: Honey Market

Region	Honey sales take	Clients
Guria	Up to 1 year	Relatives, neighbours
Samegrelo	Up to 1 year	Relatives, neighbours, festivals, Azeri and Turkish intermediaries
Imereti	During one year	Relatives, neighbours, intermediaries from Turkey
Samtskhe-Javakheti	5-6 months	Relatives, neighbours A few mentioned Iran, Turkey and Armenia
Ajara	More than a year	Relatives, neighbours, Turkish intermediaries One female beekeeper mentioned Arab countries, Kazakhstan
Ninotsminda	1 week	Relatives, neighbours, locals, relatives in Tbilisi
Akhalkalaki	Up to 5 months	Relatives, neighbours, locals, relatives in Tbilisi
Kvemo Kartli	6-8 months	Relatives, neighbours, intermediaries from Azerbaijan
Shida Kartli	6-8 months	Relatives, agri market, locals
Racha-Lechkhumi	More than 1 year	Relatives, neighbours, loyal clients

[4] Gozinaki is a traditional Georgian confection made of caramelized nuts, usually walnuts, fried in honey, and served exclusively on New Year's Eve and Christmas.

Unofficial Export

- Cooperative *Mtis Surneli*, sells honey to intermediaries from Iran, Armenia and Turkey, they produce one tonne of alpine honey/year and sell for 18 Gel/kg.
- One female beekeeper from Ajara sells her honey to intermediaries from the Arab countries, Iran and Kazakhstan, she produces two tonnes of honey/year and sells for 20-25 Gel/kg.[5]
- One female beekeeper has a shop near to the border of Turkey in Ajara and the majority of their customers are from Turkey.

Internal market Stakeholders

- One female beekeeper sold 2.5 tonnes of honey to *Kakhetian Traditional Winemaking*, one of the biggest wine and spirits producer/exporter companies, which entered the honey sector two years ago.
- One female beekeeper sells to cafes in Tbilisi
- One female beekeeper in Senaki sells to *Rooms hotels*.
- The men FG in Kakheti mentioned that *Honey Producing company Tapliskatsi in Alaverdi Eparchy bought* their honey; and the women FG in Kakheti mentioned *BRETI Ltd*.
- One male beekeeper in Guria, one male beekeeper in Imereti and two female beekeepers in Kakheti mentioned Lekso Nasuashvili[6] as one of the biggest buyers of their honey.
- One female beekeeper from Saguramo and one cooperative *Ska* from SJ are selling their honey online.

Honey consumers

- The interviewed beekeepers said that their honey consumers trust them and do not ask for a label, packaging or honey laboratory tests. Clients/consumers assess the quality of honey by taste, color and buy thereafter. The majority of the interviewed men and women say that consumers do not know the benefits of honey and other bee products, more information should be disseminated by doctors and teachers about the benefits of honey.

SECTION 7: BEE TRANSHUMANCE

Honey productivity highly depends on transhumance, which allows beekeepers to collect honey several times throughout the year by following the flowering period at different altitudes.

- Bee transhumance is the most common for both male and female beekeepers in Imereti, Samegrelo, Akhaltsikhe and only for male beekeepers in Kakheti and Shida Kartli.[7]
- Only 10% of the interviewed beekeepers in Ajara do bee transhumance as the majority of these beekeepers have apiaries in their villages and honey flowers are available. If a beekeeper is willing to produce alpine honey, he/she takes apiaries to highland pastures in Khulo.
- 60% of the interviewed male beekeepers in Ninotsminda and Akhalkalaki leave their beehives in their villages throughout the year because of lack of access to transport.
- The interviewed beekeepers in all regions hire someone, usually a landowner to look after their apiary. They rent a truck and pay 100-200 Gel/way and give half a litre or one litre of honey/ beehive to the landowner.

[5] She found the intermediaries from Iran, Arab countries and Kazakhstan by herself in Batumi, they were tourists.
[6] Lekso Nasuashvili is supplying to Carrefour, Ori Nabiji, Magniti, Smart and Spar supermarkets.
[7] Bee Transhumance Routes: from Imereti to Kolkheti National Park, Tkibuli; from Samegrelo to Svaneti; from Akhaltsikhe to Javakheti plateau and sometimes to Imereti and Samegrelo; from Kakheti to Alazani, Sviana, Lechuri and Gombori; from Shida Kartli to Boshuri valley, Kareli and Ninotsminda; from Khelvachauri, Ajara to Goderdzi, Ajara.

- The interviewed beekeepers who leave their bees in their villages are ready to be involved in the campaign to avoid uncontrolled usage of pesticides against Asian Bug and for vegetable during the whole year.

SECTION 8: VETERINARY INPUTS AND TREATMENT

Varroa is the most widespread and common disease in all regions. It usually leads to the destruction of a bee colony in the late autumn through early spring and has an economic impact on beekeepers. Only the interviewed beekeepers in Racha-Lechkhumi mentioned *Nosema* as the most widespread disease[8] see Table 7 below.

Table &: Main Bee Diseases by Region

Region	Common diseases	Less spread diseases
Guria	Varroa	Nosema
Samegrelo	Varroa	Nosema
Imereti	Varroa	Ascospaera
Samtskhe-Javakheti	Varroa	American Foulbrood, Ascospaera
Akhalkalai, Ninotsminda	Varroa	American Foulbrood, Ascospaera, Nosema
Ajara	Varroa	American Foulbrood
Kakheti	Varroa	-
Shida Kartli	Varroa	-
Racha	Nosema	Varroa

- The majority of beekeepers in all regions buy vet medicines, beeswax and inputs in their towns or regions.
- The majority of beekeepers said that they read labels and check validity, instruction and producer, but they also admit that in most cases they just rely on the vet pharmacist. Some of the beekeepers also mentioned that certain types of vet drugs are sold separately from one package and that not every unit has a label.
- Both focus groups of beekeepers in Akhaltsikhe mentioned that they do not read the label and mostly rely on the vet pharmacy.
- The majority of male beekeepers stated that they are not using antibiotics for the treatment of bees, while women admitted that they were using antibiotics as it was common practice, but after training and media campaigns[9] they have changed their practice. Only one large female beekeeper in Akhalkalaki and one in Ajara mentioned that they are still using vet medicines that contain antibiotics.
- *Traditional remedies* are also widely used by the interviewed beekeepers, for example, a mix of garlic and pepper, nettle infusion, etc
- *Honey Laboratory Tests* The majority of interviewed beekeepers have not tested their honey in any laboratory yet. Two cooperatives *Elna* and *Nektari* in Kakheti; one cooperative *Mtis Surneli* in Akhaltsikhe and two beekeepers in Racha-Lechkhumi were checked by the NFA for the annual residue monitoring plan. Only one sample from Racha-Lechkhumi was contaminated. Two female beekeepers who produce up to four tonnes of honey/year mentioned that *Kakheti Traditional Winemaking Ltd* tested their honey and one of the samples was contaminated with antibiotics.

[8] This may be caused by a closed geographical location of the region, where transhumance from other regions is not a practice and *Varroa* disease has not been spread there yet.

[9] The programme facilitated a media campaign on antibiotics in honey. In total 20 media reports were developed. Also, *Do's and Don'ts Antibiotic Use Infographic* was developed through the Georgian Beekeepers Union (GBU) providing guidelines for preventing honey and beeswax from contamination with the antibiotics.

- There are sixteen female beekeepers whose honey was checked by the NFA and results were good. They are interested in applying for bio certification[10]or any mark which states that their honey is clean.
- *Ethnicity*: In Akhalkalaki and Ninotsminda beekeepers buy vet medicines in local vet pharmacies or their relatives send them the medicines from Russia.

SECTION 9: INFORMATION

- The majority of male and female beekeepers, excluding Armenian and Azerbaijanian beekeepers, named *Georgian Bee* on Facebook and its administrator Aleko Papava the most important source of information.
- In Kakheti, Guria, Imereti, Samegrelo and Akhaltsikhe the main sources of information for women are *Youtube; Facebook*; and word of mouth. Men also named the same sources, plus books and TV agri programmes *Perma, Saperavi TV, Me Var Permeri.*
- *Ethnicity* other beekeepers and the internet are the main sources of information for Armenian and Azerbaijani male and female beekeepers.
- Only women in Samegrelo out of the entire sample mentioned *the Information Consultation Centre of the MEPA* as a source of information, along with *Facebook.*

Training

- Training and meetings are more accessible to beekeepers in Western Georgia rather than Eastern regions[11].
- Male and female beekeepers who lead beekeeping attend training/meetings in beekeeping more often and women who help their husbands with beekeeping, who do not usually attend training.
- *USAID ZRDA* and UNDP were mentioned as the sources of information related to antibiotic use in honey along with the ALCP facilitated Georrgian Beekeepers Media campaign.
- *Training for women:* the VET college in Kachreti[12] was named as a very good opportunity for the interviewed female beekeepers in Kakheti and Guria to get information and certification in beekeeping. Also, six female beekeepers mentioned beekeeping courses at *Holy Trinity Cathedral of Tbilisi*[13].
- The interviewed women are interested in getting information about the usage of vet medicines, wax, bee treatment and the production of bee products[14]. The interviewed women in Kakheti would prefer to have trainings for 3 hours, on working days after they leave their kids at school or kindergartens, they want regular meetings related to news, women's room is good for them for the location of the training.
- The interviewed female beekeepers in Kakheti mentioned that they would like to get information about the usage of vet medicines and beekeeping calendar via SMS.

[10] There are fifteen female beekeepers, ten out of them are members of two cooperatives in Kakheti and four are members of one cooperative in Akhaltsikhe.

[11] Less access to training in beekeeping in KK, SJ, Kakheti and Imereti, good access to training in Shida Kartli, Samegrelo and Guria although the reasons for this are not clear, perhaps concentration of donor projects with an interest in honey.

[12] http://collegeaisi.ge offers beekeeping course.

[13] The beekeeping course (three-four months) was initiated by the Catholicos-Patriarch of Georgia to promote beekeeping four years ago. It was free and offered for anyone interested in beekeeping. The course covered practical and theoretical lectures. The students were awarded certificates and one bee family with its hive for further motivation.

[14]

SECTION 10: AVAILABLE FINANCING

Ten out of forty two in-depth interviewed female beekeepers and twenty-two male beekeepers from focus groups see methodology section said that they had received grants from *Produce in Georgia, Agricultural Cooperatives Development Agency, ENPARD, Poland and Czech governments, USAID Zrda and World Bank* throughout Georgia see Table 8 below.

Table 8 Gender Division of funds available revealed through FGS

Beekeepers	#	Location	Fund	Purpose
Female beekeepers	2	Guria	*USAID REAP*	Honey extractor and primary processing equipment
Male beekeepers	5	Zugdidi	ENPARD	Honey extractor and bee frames
Male beekeepers	4 2 8	Ninotsminda Racha-Lechkhumi Shida Kartli	Agricultural Cooperatives Development Agency	Beehives Note: the quality is poor Barrels Beehives, honey extractor and primary processing equipment
Male beekeepers	2	Akhaltsikhe	Austria Development Agency 20,000 Euro Produce in Georgia, 20000 Gel	Homogenizer and honey heating machine for decrementation Honey extractor and other equipment
Female beekeepers	5	Kakheti	World Vision	Beehives
Male beekeepers	1	Kakheti	ENPARD	Honey extractor, transhumance equipment and etc.

ANNEX 1: GENERAL HONEY SECTOR DATA

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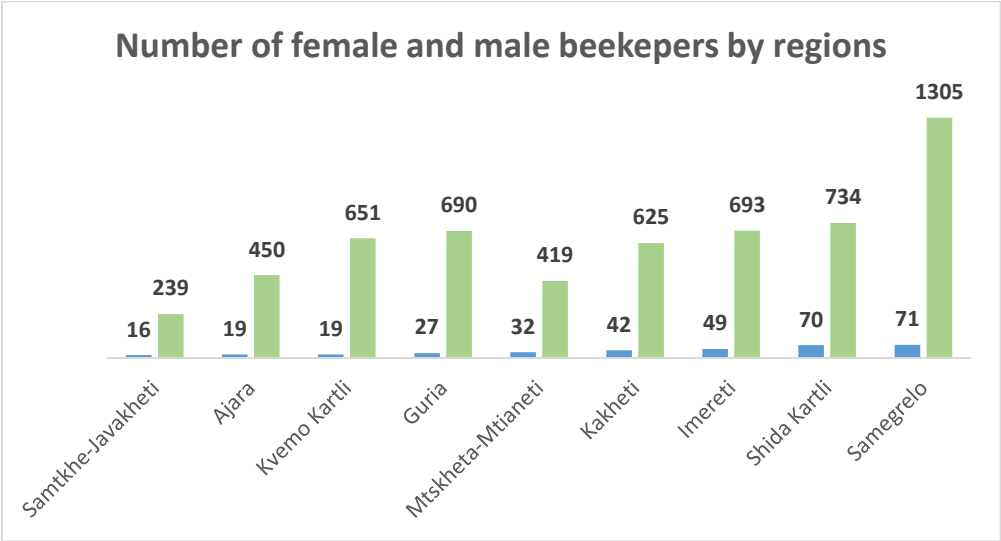
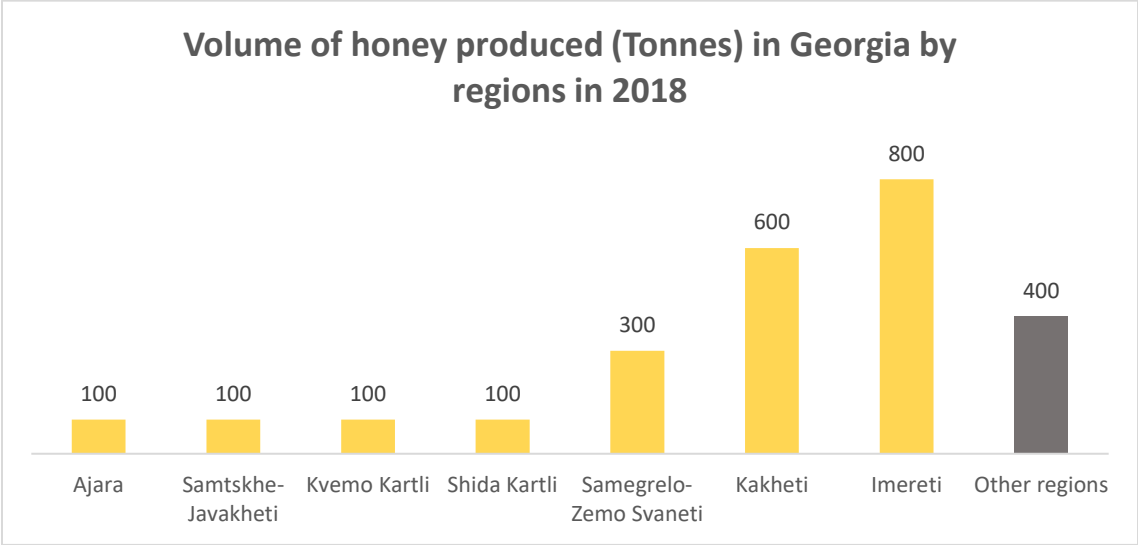


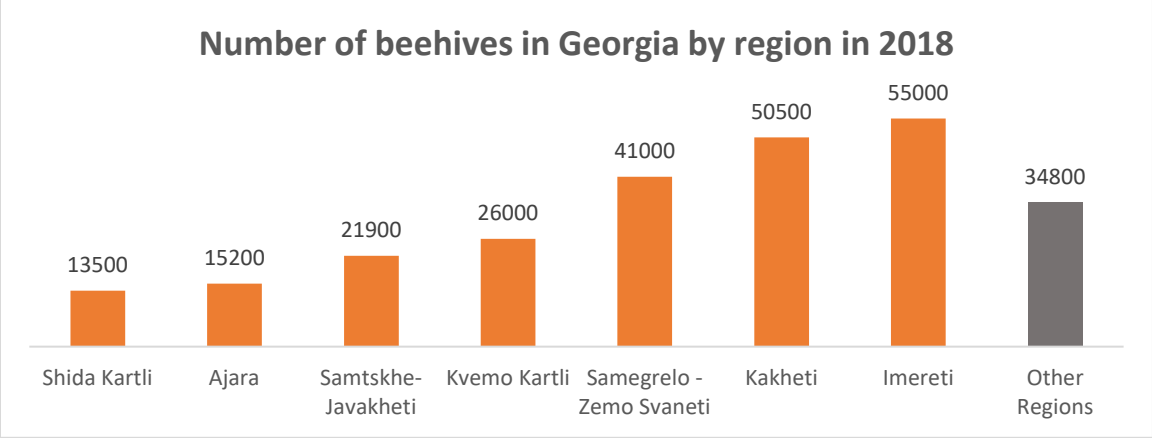
Source: Information Consultation Centres

Figure 2: Gender Division of Beekeepers by the Regions



Source: Geostat

Figure 4: Produced Honey by Region



Source: Geostat

Figure 5: Number of Beehives by the Regions

ANNEX 2 KEY INFORMANTS

#	Key Informant Interview	Date	Organization	Information
Vet pharmacy				
1	Davit Tatoshvili Male	28.05.2019	Vet pharmacy owner in SJ	The vet pharmacy is in agrarian market of Akhaltsikhe. This is one of the largest vet pharmacies and the most popular among beekeepers due to its location. They serve five beekeepers/day. They sell different beekeeping vet medicines and inputs, supplied by *Impervet Ltd*. The highest demand is for vet medicines *Varokom, Askovari, Ekopol, Nozestat* and beeswax produced by Ukrainian and Chinese. They do not sell queen bees. The owner has not attended any training in beekeeping yet and is getting information about bee treatment from *Impervet.* The majority of his beekeepers/customers rely on the vet pharmacist and do not look at labels on vet drugs.
2	Zura Sadatenashvili Male	28.05.2019	Vet pharmacy owner in SJ	The owner of the vet pharmacy network unites six pharmacies in SJ and have been working since 2007. They have a wide variety of beekeeping inputs and vet drugs supplied by *Impervet Ltd* once a week. There is some equipment that is imported by themselves. The most demanded product are vet drugs. The demand for equipment, for example, a honey extractor, decreased, due to cooperative programmes of the *Agency of Cooperatives* are awarding beekeepers with honey extractors. After financing from the *Agency of Cooperatives,* there are many new beekeepers who have lack of knowledge about the treatment of apiaries. From April to May, beekeepers buy vet drugs (*Varokom, Bipin, Varostop*) and beeswax. Beekeepers have the problem of bee transhumance as there is not enough forage sources as many beehives are gathered in one place. The owner does not know about a regulation prohibiting registration of vet drugs containing antibiotics.
3	Armen Vardanyan Male, Armenian	28.05.2019	Vet pharmacy owner and beekeeper from Akhalkalaki.	There are three vet pharmacies in Akhalkalaki, vet drugs for beekeeping are also in some ordinary private pharmacies, there are five such pharmacies in Akhalkalaki. - Beekeepers buy seasonal vet drugs - *Akva-Flo* - against **Varotoz** - *Virusan*and *Nozematsid* –antibiotics. - *Kandi*- feed. Armen has ten beehives and his customers are his neighbours, he doesn't have any problem of selling honey. He receives information on beekeeping from internet and books. He sells honey for 20 Gel/ kg. He thinks the main source of bee diseases are old beehives. When beehives' wood is old it has harmful substances that infect bees and also contaminate honey.
4	Rafik Martirosyan Male	28.05.2019	Vet pharmacy owner in Akhalkalaki	
Beekeepers				
5	Gaiane Sukiasyan Female, Armenian	28.05.2019	Female beekeeper in Ninotsminda, Eshtia Village	Gaiane has been involved in beekeeping for five years and has thirty-nine beehives. She moved from Armenia to Ninotsminda and started beekeeping. Her husband helps her. Beekeeping is the main source of income for their family. On average she gets15 Kg honey/ beehive and sells 20 Gel/Kg. She produces alpine blossom honey. She has a special room in her house for bees in winter. She buys beekeeping equipment and inputs in Akhaltsikhe or Tbilisi. She knows about

				beekeeping from books, internet and other beekeepers. She uses vet drugs produced in Russia, sent by her son. She has never had training in beekeeping. She has not had any problems with bee diseases yet. Her major problem is the low quality of beehives.
6	Siranush Arosian Female, Armenian	28.05.2019	Female beekeepers in Ninotsminda, Ushmana Village	Siranush has been involved in beekeeping for 48 years, eight years ago her husband died and she is doing it by herself. She produces alpine blossom honey which is very popular and the region provides this opportunity to produce this type of honey. She has eleven beehives and harvests honey twice a year, 15 kg/beehive/honey harvest and sells 15Gel/ kg. She sells honey to relatives and neighbours and has not problem of selling honey because she is the only beekeeper in the village. She has never had training or consultations on beekeeping, her father-in-law was a beekeeper and she learned everything from him. Her daughters live in Russia and they send her all necessary vet drugs; she knows that the vet drugs contain antibiotics but she says if she does not give antibiotics when the weather is bad bees die. She produces beeswax and exchanges it for printing wax in Ninotsminda. She uses the syrup in winter and she has never used *Kandi*. In winter she keeps bees in her house in a special room. Her major problem is the low quality of beeswax.
7	Gaiane Grigoryan Female, Armenian	28.05.2019	Female beekeeper from Majadia Village, Akhalkalaki	Gaiane has twenty-five beehives, she started beekeeping eight years ago after her father's death. She has a 300 kg honey/alpine blossom honey harvest and harvests twice a year. Beekeeping is her main source of income. She has problems with bee transhumance; she keeps bees in her house in a special room in winter. There are many beekeepers in her village, but she is the only female beekeeper and she owns the biggest amount of beehives in the village. She has never had a problem with selling honey because people trust her as a woman. 1 kg of honey costs 15 Gel in the village. She sells wax and buys printed wax in an Akhalkalaki vet pharmacy. She has never attended training; she gets advice from old beekeepers. When the weather is bad and rainy she gives **Trikhopol-** it is antibiotic. She thinks that beekeeping is a very hard job for women, for example, her beehives needs stands and she can't make them herself, but she makes wooden frames for beehives by herself and changes them every 3-4 years.
8	Ia Urushadze Female, beekeeping is a household business	29.05.2019	Household beekeeping, Ozurgeti, Guria	Beekeeping is a family business, they own 200 beehives and produce four tonnes of chestnut and blossom honey/year. She does sales management and promotion of her honey and it would be beneficial if she attends training in promotion, marketing, logistics and branding. Last year she sold 2.5 tonnes of honey to KTW and she wishes to continue to do so since KTW, offers good prices and pay on time. She thinks that people are unaware of the benefits of honey, and feels that doctors and teachers should talk about it. She also states that consumers prefer to buy unlabeled and non-branded honey. She is now changing her label and will include that her honey is clean from antibiotics. Many years ago her family changed their old style of bee treatment, not painting bee hives anymore and are very careful when using vet medicine. She received grants from *USAID Zrda* and *World Bank*.
9	Lali Chankseliani Female	30.05.2019	Ozurgeti, Guria	She has been in the sector for fifteen years owning 150 beehives and producing 2.5 tonnes of chestnut, acacia and blossom honey/year. She is a member of *Farmers Association*; she hires two workers when she does honey extraction, she is the only beekeeper in her family. She named limited market as a constraint and she would like to share knowledge and experience of beekeeping. She sells honey to Ozurgeti and a honey collector Lekso Nasurashvili who supplies Ori Nabiji shops. Part of her honey is sold under the name *Misheri.*

				She received grants from *USAID Zrda, Produce in Georgia and Czech Embassy.*
10	Maia Ninidze Female	30.05.2019	Chokhatauri, Guria	She owns eight beehives, produce 200 kg of blossom honey/year and sells to locals, she named a limited market and lack of information related to vet medicines as constraints. She has been involved in beekeeping since her husband, a beekeeper, passed away. She decreased the number of beehives as she cannot look after more than eight on her own.
11	Lamara Tsikhelidze Female	30.05.2019	Kvatsikhe Village, Imereti	She decreased the number of beehives from fifty to twenty this year, produces up to one tonne of acacia and blossom honey/year. Lamara is a vet and she is quite knowledgeable in the area of beekeeping. She is the head of *Farmers Center* in the municipality. She takes care of her bees by herself, also she gives consultation to other beekeepers in the region. She thinks that beekeeping has a very big potential in Georgia and wants to create a school where she can teach other vets beekeeping. Last year she had 50 beehives and 30 died, she thinks that it happened because of pesticides against *Asian Bug.*
12	Eka Gogotashvili, Female Beekeeping is a household business.	31.05.2019	Sachkhere, Imereti	Her family owns eighty beehives and produce acacia and blossom honey. their clients are locals and relatives. She is a member of Aleko Papava's beekeepers' group. She thinks that the main problem is the usage of beeswax which they do not know is residue or not with antibiotics. She thinks there is not a proper beeswax printing equipment. She attended training in beekeeping. Her husband has been engaged in this business more than 25 years, and six years ago she joined, as her husband asked her because he found a new job. Before, she thought that it was not beekeeping was hard and it was not woman's job do beekeeping but after she involved, she sees that nothing is impossible and hard. She needs more information about low, regulations and honey filtration and low price of laboratory analysis to use the service.
13	Aza Bajadze Female, beekeeping is a family business	31.05.2019	Samtredia, Imereti	Her family has been followed beekeeping for many years, she is a doctor and three years ago she joined her family business after she attended courses in beekeeping conducted by at *Holy Trinity Cathedral of Tbilisi*. Now they own fifty beehives and produce 1.2tonnes of Her profession helps her with treating of apiaries. Her family followed beekeeping for many years before. She is a member of local cooperative *Deburkhana*
14	Eka Bliadze Female, beekeeping is a family business	3.06.2019	Kvemo Kartli	She owns 170 beehives, out of them 70 are Jara beehives and produce up to 3 tonnes of honey/year. She is supplying *Carrefour* supermarkets and up to 200 small shops in agri markets and towns throughout Georgia. Her husband is a honey collector Lekso Nasuashvili who is supplying about 20 tonnes of honey/year from beekeepers. She is a certified beekeeper by Kachreti College. She is involved in the marketing and management of honey processing.
15	Eter Gloveli Female	3.06.2019	Gardabani, Kvemo Kartli	She owns up to thirty beehives and produce on average 500kg of blossom honey/year. She is also producing Royal Jelly and is going to start producing bee-bread and Propolis. She has been involved in beekeeping for 10 years since her husband passed away. She is a subscriber of *Georgian Bee* on *Facebook* and gets recommendations from Aleko Papava who manages this page. She named bee transhumance related issues and limited market as constraints in beekeeping. Her customers are relatives and locals.
16	Khatuna Shashurashvili Female	3.06.2019	Gardabani, Kvemo Kartli	She has 400 beehives and produce up to six tonnes of Chestnut, Linden and Blossom honey/year, she is also producing Propolis, Pollen and wax vodka. She has her own land in Gudauri where she has apiaries and sell honey to tourists there. Over the last two years she has had a problem selling honey as honey falsification increased. Her brother and nephew are helping her in taking care of apiaries and during honey harvest she also hires additional people. She is willing to start agri tours lined to beekeeping. She named limited market and the falsification of honey as main constraints.

17	Maia Khatiashvili Female	3.06.2019	Rustavi, Kvemo Kartli	She became involved in beekeeping seven years ago and is a member of a cooperative in Kvemo Kartli which owns 400 beehives. She owns thirty beehives and produces blossom and acacia honey. She sells to locals and participates in festivals to sell her honey. She heard about the campaign against antibiotics in honey and so she had a laboratory test done by the NFA under the cooperative and the results show that her honey is clean. A mark is given to state that honey is tested and clean. She also needs finances to buy her own beehives to expand her business, and a car for bee transhumance. She received a grant from the Czech Embassy and 185 beehives from *Cooperatives Development Agency*
18	Tamar Minadze-Lomsadze	3.06.2019	Rustavi, Kvemo Kartli	She owns forty beehives and produce up to 500kg of blossom and alpine honey/year, she has clients in Tbilisi. She also produces queen bee breeding. She started beekeeping six years ago. Her husband's family used to do beekeeping and she is now leading the business with her children helping her with harvesting and marketing. She is a member of cooperative *Mandili*. She attended training of *Holy Trinity Cathedral of Tbilisi.*
19	Nino Mikeladze	5.06.2019	Kareli, Shida Kartli	Nino owns five beehives and produces blossom honey. She is a new beekeeper and has been involved in beekeeping for four years now. She had training in Sameba Cathedral. She sold her first harvest last year. She takes care of apiary by herself and her husband helps her during the honey harvest.
20	Tsira Avtandishvili Female	5.06.2019	Kareli, Shida Kartli	Tsira owns nineteen beehives. She is also a new beekeeper and has been involved in beekeeping for four years now. Her father, who used to be a beekeeper but quit after finding a job, is now teaching her beekeeping.
21	Tamar Davitashvili Female	5.06.2019	Gori, Shida Kartli	She has been involved in beekeeping since 2007. Her relative had some beehives, that is how she became interested. Now she is leading this activity with the help of her family members during honey harvest. She attended trainings organized by USAID Zrda where the issue of antibiotics was also discussed. There are some spraying works against *Asian Bug* that harms bees. She is willing to have a honey extractor that will help her in honey harvesting process.
22	Eliso Poniava Female	5.06.2019	Chkhorotskhu, Samegrelo-ZemoSvaneti region	Eliso follows beekeeping as it was a family activity. She and her husband take care of 150 beehives and produce acacia and blossom honey. Her husband is mainly involved during transhumance and taking care of hives. There is no stable markets thus not many women are interested in producing honey.
23	Nino Dzadzamia Female	5.06.2019	Martvili, Samegrelo	She has been involved in beekeeping since her childhood as it was a family activity. She has forty beehives and produces about one toone of honey annually. She is involved in the marketing of honey and treatment of the apiaries. Her father helps her during the honey harvest. She is willing to develop and produce more. She is also interested in the production of honey by-products as she is a doctor by profession and is willing to learn more.
24	Inga Jagunava Female	5.06.2019	Senaki, Samegrelo region	Inga has been involved in beekeeping for more than 15 years now and owns thirty beehives. She was a teacher at school, and because of her low salary she decided to start a new agricultural activity with her husband. She produces Propolis and sells it for 10 Gel/gram. She prepares salve for burns and skin problems and sells it to cosmetologists locally. She is interested in starting the wider production of salve and healing products. She applied to *Enterprise Georgia* Government Programme but her ideas were rejected. She does not have enough resources to develop further.
25	Tamar Jologua Female	06.06.2019	Senaki, Samegrelo region	Tamar owns up to sixty beehives. She states that there are informal rules, traditionally it is a man's job, but in their family they share roles and responsibilities. She works in sales management, marketing and promotion. She is studying at VET college in Senaki. They use traditional remedies to prevent bee diseases. she is participating in a mentorship programme by the Centre of Creative Development in Tbilisi. Tamar wants to have branded honey but the market is limited,

				there is no access to lab tests. She says that her brother makes the final decisions, for example, he does not allow her to become a member of cooperative as it needs to manage documentation. She thinks that if she becomes a member of any cooperatives the fee for the lab test will be free or partially paid.
26	Ekaterine Tsikhiseli Female	06.06.2019	Oni, Racha-Lechkhumi region	She started beekeeping in 2012. Her husband motivated her as well. In 2018, she attended a course organized by *NEO* organization. She wants to develop agro tourism tours for tourists where she will explain the basics of beekeeping and make gift packages with beeswax. She is informed about issues related to beeswax from the local information-consultation center which has done some research in this regard. There are intensive trainings from *UNDP* and she is also a trainer herself and shares information with other beekeepers too.
27	Ia Iremadze Female	06.06.2019	Tsagveri, Samtskhe-Javakheti region	Ia owns forty beehives and was interested in beekeeping as child helping her father. She takes beehives for transhumance three times a year. Her husband and mother-in-law help her with the apiary transhumance and honey harvest. There is more demand for flower honey rather than chestnut, as tourists buy it for their children.
28	Tinatin Gelkhvidze Female	06.06.2019	Tbilisi, Georgia	Tinatin is one of the few therapists in Georgia who treats patients with bee venom. She learned this profession in Russia. Beekeeping was a family business and she now has four beehives to produce bee venom. She says there is lack of awareness of apitherapy that requires additional information support.
29	Ana Toronjadze Female	06.06.2019	Tbilisi, apiary in Saguramo	Ana is 17 and she has been involved in beekeeping for 3 years now. A family relative gave her a beehive. Her parents attended some courses and she became interested. She owns twenty-nine beehives. She does all the work and her brother helps her. Ana mainly works for the producing of royal jelly which she sells through Facebook.
30	Maia Arachashvili Female	06.06.2019	Dusheti, Mtskheta-Mtianeti region	She has been involved in beekeeping since 1995 as it was a family agricultural activity. She says she enjoys the process. She used to have thirty beehives but now she only has two. She believes it was caused by spraying pesticides against *Asia Bug.* She sells honey to her neighbors and relatives. Maia names limited market and the uncontrolled usage of pesticides against *Asian Bug*as the major constraints for beekeeping.
31	Khatuna Dzodzuashvili Female	07.06.2019	Tbilisi, apiary in Saguramo	Khatuna started beekeeping one year ago. She attended a course in beekeeping at *Sameba Cathedral* in Tbilisi, took a risk and now has twenty beehives, she is planning to have more. She is interested in producing other bee products too. She gets information about beekeeping through *Georgian Bee on Facebook*.
32	Elisabed Navradishvili Female	07.06.2019	Mtkheta, Mtskheta-Mtianeti region	Elisabed is a teacher at a local school. Her father had some beehives and she always wanted to be involved in beekeeping by herself. She attended a training at *Sameba Cathedral.* She now has three beehives and is learning beekeeping. She is interested in the production of royal jelly.
33	Mariam Kiladze Female	07.06.2019	Tbilisi, apiary in Saguramo	Mariam has forty beehives and she takes care of the apiaries together with her husband. She does the treatment and sales. She says that many beekeepers heard about the antibiotics campaign, and says it worked well and should be continued.
34	Darina Tedoradze Female	07.06.2019	Mtkheta, Mtskheta-Mtianeti region	Darina interest came from her neighbor, who had beehives. She started beekeeping by herself one year ago. She attended training in *Sameba Cathedral*. She also produces royal jelly and is interested in producing other bee products.
35	Nino Khomaldishvili Female	07.06.2019	Kvareli, Kakheti region	Nino was interested in beekeeping as her son was learning it. After some period of time she started by herself and now has seven beehives. She always searches for new information, mainly through *Georgian Bee*on *Facebook.*

36	Nana Kanchaveli Female	07.06.2019	Kvareli, Kakheti region	Nana has been following beekeeping for 2 years now. Before her father had six beehives and she continued this activity. Her father helps her with honey harvesting and her husband helps during the treatment of bees. She used antibiotics before, but she now knows about the possible risks and tries to choose vet medicines without any antibiotics.
37	Aslan Chobanovi Male, Azerbaijan	07.06.2019	Kvemo Kartli region	Aslan is a member of one of the beekeepers' associations but does not participate in any trainings or meetings. The only information source for him are books. He has fifty beehives and honey is one of the main sources of income (50%) for him. He buys equipment at Marneuli honey market. All his family members are involved in this business. Aslan says one of the biggest constraints is limited market as it is not easy to sell honey and it takes several months. He needs to buy good quality equipment for beekeeping which is not available at the local market.
38	Gulnara Gasanova Female, Azerbaijani	07.06.2019	Kvemo Kartli region	Gulnara has twenty-five beehives. She is involved in a family business. After her husband's death the number of beehives decreased, as it is difficult for her to take care of all apiaries alone. She needs proper equipment and a building for the processing and packaging of honey, as she is under a risk to be fined by the NFA, as the processing is done in a small apartment with incompliant conditions.
39	Kazim Bairomovi Male, Azerbaijani	07.06.2019	Kvemo Kartli region	Kazim is a member of the *Beekeeper Association* and participates in meetings, he reads books about beekeeping in Azeri, which he brings from Baku. His family member lives in Baku and he sells honey there, because it is more beneficial (50 Gel/per kg). He does not receive any support from the government. He says that in Marneuli there are no places to take beehives in valleys, as they are private and sold by the local government. He has to move the beehives to other municipalities and it takes more money and time.
40	Emin Mustafeyevi Male, Azerbaijani	10.06.2019	Kvemo Kartli region	He has twenty-five beehives. He takes care of beehives and his wife helps him with harvesting and transhumance, he thinks that it is very important that women are involved in this business. He needs to buy good quality equipment, it is a problem for local beekeepers.
41	Aibaniz Giulmamedova Female, Azerbaijani	10.06.2019	Kvemo Kartli region	Aibaniz now has thirty beehives. Her main information source for beekeeping is Turkish TV program (Topraq); She has a lot of experience and knowledge in beekeeping and has the ability and desire to increase beehives, but lacks access to finances. She loves beekeeping and has discovered new methods of treating bees. Her main constraint is access to finance to increase number of beehives.
42	Qurban Kazimovi Male, Azerbaijani	10.06.2019	Kvemo Kartli region	Qurban has fifty beehives. His family members are involved in beekeeping and it is the main source of income. He is not a member of any association but wishes to be. He thinks he is an experienced beekeeper and is sure that he can share it with others and learn from them as well. He did not have any support from the government. He says price for honey is very low and it takes about three or four months to sell the entire harvest of honey.
Cooperatives				
43	Davit Sauridi Male	28.05.2019	Representative From the cooperative Meskhi Meputkreebi, SJ	David Sauridi is a member of the cooperative *Meskhi Meputkreebi* which unites three beekeepers in Samtskhe-Javakheti. In total, they have 180 beehives and produce up to one tonne of alpine honey. The *Austrian Development Agency* financed the cooperative, awarding 20,000 Euros. The cooperative has a small enterprise with the equipment for honey heating, packaging, homogenizer, a car for transportation of honey and beehives. The major market for honey is relatives and tourists through shops in *BorjomiPark*, the price is 18-20 Gel/Kg. The market is limited and it takes five months to sell the entire crop of honey. The cooperative is willing to export honey and participate in international exhibitions (like, Green Week). The cooperative is going to open a beekeeping shop in Agara. They are going to have some tours for tourists.

44	Tina Gelashvili Female	29.05.2019	Manager of cooperative Mtis Surneli in SJ	The cooperative *Mtis Surneli* unites six members, four are women. They have about 125 beehives. Tina Gelashvili is a teacher of the business administration at Akhalkalaki university. The cooperative produces up to one tonne of alpine honey, the retail price is 20 Gel/Kg and the wholesale price is 18 Gel/kg. The major market is relatives and neighbours and some intermediaries from Turkey, Armenia and Iran. It takes five months to sell the entire crop of honey. The major problem is to increase the amount of honey produced. She gets recommendations about the treatment of apiaries from a consultant in Tbilisi. They print their own beeswax or buy it in a local vet pharmacy, mainly, Ukrainian as Chinese has low quality. The honey samples of the cooperative were taken by the NFA and sent to an international laboratory and results were positive, no prohibited substances were detected. The programme *Zrda* helped them with branding and equipment for packaging. They received low quality beehives from the *Cooperatives Agency*, the wood was raw and was soon damaged. The cooperative is willing to develop agro-tours in one of the oldest villages of Meskheti where archeological works are undergoing. There is a lack of knowledge among beekeepers and more information/ training is required.
45	Manana Bolkvadze Female	21.05.2019	Cooperative "Bee Georgia" ABBA Ajara	Manana is a chairwoman of *the Ajara Beekeeping Business Association (ABBA),* the head of the cooperative *Bee Georgia*, which unites seventeen female beekeepers. She is also teaching beekeeping at *Batumi State University*. She has 129 hives and two Jaras and produces up to 1.8 tons of honey (chestnut, alpine, acacia) annually and sells with 20-25 Gel/Kg. She sells honey under *Bee's Queen*. Her main customers are locals and tourists from Iran and other Arab countries. She does not have problems of selling honey. She was financed by *ENPARD t*o purchase equipment for making wax vodka. There are some stereotypes regarding woman's involvement in beekeeping and she was often a subject of mocking. But things are now changing. She thinks the major problem for female beekeepers is lack of access to funds.
46	Natela Mosulashvili Female	27.05.2019	Head of Cooperative in Gurjaani *Nektari*	Out of eleven farmers, only five are beekeepers. Honey is sold in families in Vejini and Tbilisi. The honey was tested twice and was clean. They have Linden and blossom honey. There are five women in the cooperatives with 150 beehives with 1.5 tonnes of honey/year. The MEPA called Natela if she could host tourists, but she could not as she does not have a showroom. She studied beekeeping at VET college *Aisi* and is ready to share her knowledge with others. She knows a plot in Gurjaani under the government and she has an idea to plant trees and make a place for tourists, share the place with other beekeepers and put at least 300 beehives, the plot will be public goods. She is also interested in bio certification of their honey. They sell their honey to relatives from town and cities 12-13Gel/kg.
47	Nino Gomurashvili Female	29.05.2019	Head of Cooperative in Kakheti	She is the Head of cooperative *Tkbili Nobati* with nine female beekeepers. They participated in the project financed by the Polish government and were granted 14,000 USD to buy wax printing equipment, honey filtration equipment and other necessary equipment. She is aware of antibiotics in honey and thinks that the major problem is wax which they buy not knowing if they contain antibiotics or not. She sells at festivals and to locals.
48	Sopio Tabatadze Female	27.05.2019	Head of Cooperative in Telavi *Tapliani*	The members of the cooperative, five women and one man. They sell labelled honey at fair exhibitions; honey is also sold to locals, the cooperative produces one tonnes of honey/year. They have Linden Honey, Acacia Honey, Multifloral Honey with 25 Gel/kg for tourist

				and 20 Gel/kg for locals. World Vision, Poland and Czech embassies helped the cooperative with different projects. She thinks that the government, beekeeping cooperatives or associations should initiate a programme of tree planting for bees.
49	Marine Kardava Female	03.06.2019	Member of Cooperative *Tapli Kolkhuri* in Samegrelo region	Marine is a member of cooperative *Tapli Kolkhuri* owning 103 beehives. She is a trainer and conducts training in beekeeping across Georgia. She is involved in two months training for beekeepers in Western Georgia. She was financed by *Produce in Georgia* to purchase beehives. She also produces royal jelly and bee families with queen bee for sale.
50	Tinatin Bulia Female	03.06.2019	Cooperative *Nektari 2016* in Samegrelo region	Tinatin has been Involved in beekeeping for 25 years. Her father was a beekeeper and she was also interested in it. She takes care of beehives and her husband and son help her during the honey harvest and transhumance. She was financed by the ZRDA programme to purchase equipment for bee transhumance. She took a teaching module in beekeeping offered by UNDP. She also underwent a course on the production of inversed sugar, feed for bees and now offers consultations for others on its production. She also sells under the name of cooperative, which is planning to sell bee families.
51	Nino Gomurashvili Female	07.06.2019	Member of cooperative in Telavi, Kakheti region	Nino is one of the nine female members of the cooperative. They participated in the project financed by the Polish government and were granted 14000 USD to buy beeswax printing equipment, honey filtration equipment and other necessary equipment. She is aware of the antibiotics problem and thinks that the major problem is wax which they buy and do not know whether it contains antibiotics or not.
Information-Consultation Centre				
52	Giorgi Beruchashvili Male	26.06.2019	Representative of Information-Consultation Center in Oni	Giorgi took six-month TOT training in beekeeping organized by the UNDP. Now he is a main responsible body for beekeeping in Oni Municipality, Racha. After it was discovered that two samples out of four taken by the NFA for the annual residue monitoring plan was contaminated with the antibiotics, local ICC decided to conduct research on the practices used by the beekeepers while taking care of apiary. They have discovered that usually beekeepers do not use antibiotics and the contamination source may be from the wax, this was also strengthened with media campaigns. Giorgi is disseminating this information with the beekeepers and always emphasizes the damages caused by using antibiotics for the treatment of bees. He is also facilitating *Scientific-Research Center* to come to the region and take samples for testing in a local laboratory and identifying its content. Giorgi was an initiator to start training in beekeeping for schoolchildren of 9-12th grades with the support of the UNDP, as he thinks that if the local youth is interested in, it will support the sector and decrease the migration of youth. The interest from the schoolchildren is very high, especially among girls, and now Giorgi is planning to organize a study tour in Ajara for schoolchildren, to show them practices in beekeeping, female beekeepers, Jara beekeeping, etc.