



The European Union
for Georgia

ENPARD: Support to Agriculture
and Rural Development



Agribusiness Needs Assessment Report



ASSOCIATION OF YOUNG
ECONOMISTS OF GEORGIA

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and Rural Development



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Introduction

In 2014-2016, the Association of Young Economists of Georgia (AYEG) in partnership with relief and development organization “People in Need” conducted an assessment study of the needs of agribusinesses to learn the challenges faced by farmers and agricultural entrepreneurs and identify potential solutions to the challenges. The assessment results will assist local, regional and central government officials in the joint planning of agriculture development projects in the regions of Imereti and Racha.

The study was conducted in the framework of the project “Enhancing Small Farmers’ Cooperation and Productivity in Imereti and Racha Regions”, with the financial support from ENPARD Georgia and the Czech Development Agency.

Methodology

The agribusiness needs assessment study was a research of qualitative type based on the collection of data from selected representatives¹ from Ambrolauri, Bagdati, Kharagauli, Khoni, Oni, Terjola, Tkibuli, Tskaltubo and Zestaponi municipalities. The information was gathered through interviews with individual respondents and discussions with focus group participants who shared their views and ideas regarding the strengths, weaknesses, opportunities and risks of the local agriculture businesses. The process took three years – three municipalities have been studied per year. The following methods were used for research purposes:

- Desk Research;
- Focus Group Discussions;
- In-Depth Interviews;
- Priority Diagrams (applied in focus groups discussions); (give indication of where the method was applied – with IDI or FGD).

The following table shows the data collection methods used according to the categories of respondents.

Table 1

Respondents	Focus Groups	In-depth Interviews	Priority Diagrams
Small-scale farmers (<1 ha of land);	18 Focus Groups		Applied
Medium-scale farmers (1 to 3 ha of land);	15 Focus Group		Applied
Larger-scale farmers (>3 ha of land)	6 Focus Group		Applied
Veterinarians, agronomists, input suppliers and large-scale Farmers (>3 ha of land);		68 Interviews	

¹ The respondents were selected based on categories described in Table 1

Focus group meetings were conducted in the target municipalities in 2014-2016: 18 meetings were conducted with small-scale farmers (owners of <1 ha land and livestock farmers), 15 meetings were held with medium-scale farmers (owners of 1 to 3 ha of land and livestock farmers) and 6 meetings with large-scale farmers (>3 ha of land). Each focus group meeting was attended by an average of 8-10 farmers. In addition, 68 in-depth interviews were conducted with veterinarians, agronomists, representatives of the local agricultural stores and other actors. A special open-ended questionnaire, presented in the appendix, was used with both focus groups and individual respondents.

Focus group discussions and individual interviews were led by AYEG's research experts. The technical assistance to the experts, including organization of the meetings, and preparation of transcripts, was provided by students from Akaki Tsereteli State University. A special training session was held for the students where they were given relevant technical tasks. The analysis of the retrieved information was carried out by AYEG experts using a deductive approach. The analysis is based on the grouping of data, identification of similarities/common trends and differences.

Additionally, the interviewers and facilitators assisted the respondents in the analysis and categorization of their ideas. After the conducting the SWOT analysis, respondents were offered to use priority diagrams for ranking suggested options. The reliable data on agricultural sector is quite rare due to the lack of data collection instruments, expertise and resources across the country. Nevertheless, the information used for drafting the municipality profile and other information about agriculture was mainly provided by the municipalities.

Profile of Ambrolauri Municipality

General description

Municipality of Ambrolauri is located in the center of Racha-Lechkhumi and Kvemo Svaneti region. From the northeast, Ambrolauri is bordered by Oni Municipality, from the northwest – the municipalities of Lentekhi and Tsageri, from the southwest - Tskaltubo Municipality (Imereti region), from the south - Tkibuli Municipality (Imereti region) and from the southeast - Chiatura and Sachkhere municipalities (Imereti region). Since 2014, the municipality has been divided into two administrative units: the self-governing city of Ambrolauri and Ambrolauri Municipality. The distance between Ambrolauri town and Tbilisi is 280 km. The territory of the municipality is 1,142 km², of which 27,907 ha (or 24% of the total area) is agricultural land. Approximately 40% of the municipality's territory (about 40,500 ha) is covered by forest. The municipality has a complex terrain – the capital town is located at a relatively low altitude of 500 metres above sea level, while several mountainous settlements are set at the altitude of 1,000 metres or more. The climate is humid, with average annual rainfall of 1,042 mm and relatively even distribution of precipitation – from the lowest 75 mm in March to the highest 108 mm in December. The summers are long and warm, whilst the winters are cold. The annual temperature average is 10.4 °C.



Demography

According to the 2014 data, the municipality has a population of 13,600. Out of the total amount, only 20% (or 2,800 people) live in the town, while 80% (11,300) live in villages. The population density is 16 people per km², which is significantly less than the country's average (67 people per km²). The municipality has a total of 70 inhabited settlements: one city and 69 villages. The population migration and aging problem is rather acute in Ambrolauri. The ratio of young people in the total population is rather low.

Economy

In the Soviet times, agriculture, mining, food processing and manufacturing made the four pillars of municipality's economy. However, the picture of local economy changed rapidly in the early nineties after Georgia made a choice in favor of independence and free market economy. The municipality's collective and soviet farms ceased to exist; their land was fragmented and distributed to small farmers. The majority of large- and medium-scale food processing enterprises (fruit canning, dairy, slaughterhouse, etc.) lost their markets, stopped operations and their facilities were ultimately cannibalized. Only several winemaking enterprises survived the painful transition to new economic relations. An equally severe decline was observed in the mining and manufacturing sectors - the once

very profitable arsenic extraction plant in Uravi was closed in the early nineties and some other plants (like the garment one) also collapsed in the same period.

Currently, the manufacturing sector in the municipality is presented by several smaller-scale brick, concrete and asphalt plants serving the local market. Similarly, trade has also reduced in scale in the last decade, which, according to local experts, is associated with the shrinking population and its reduced purchasing power. In contrast with this, the service sector and particularly its elements associated with tourism have started to grow in the last decade. The number of hotels and guesthouses is constantly increasing in the municipality. According to official data, 37 hotels (the majority are family ones), 7 restaurants and 6 ritual service (usually post-funeral dinner) halls are in operation here. A tenfold increase in the number of hotels is expected in 2017 as compared to previous years.

1,522 families (3,577 people) are social welfare program recipients. The labor force of Ambrolauri Municipality amounts to 9,474 people, or 67% of the population. 8,147 people (86% of total municipal workforce) are self-employed².

Agriculture

Agricultural land makes up 27,907 ha, which is 24% of the municipality's total territory, including arable land of 2,060 ha, orchards (often abandoned) covering 1,739 ha and pastures dominating with their 24,108 ha. The irrigation and water collection infrastructure of any considerable size is non-existent in the municipality; however, the relatively high and evenly distributed precipitation allows sufficiently productive farming without irrigation. Historically, windbreaks existed in the municipality, over an area of 3 ha, however there are in poor shape due to no maintenance in the last 25 years.



Although the area of arable land is scarce and makes only 7% of the municipality's agricultural land, plant production remains the dominant sector of agriculture. In the past, the local collective and soviet farms were growing a variety of crops including grapes, apples, plums, beans, maize and other grains. However, in the modern times, the commercial plant farming in the municipality is mostly represented by viticulture that has a steadily growing importance in the villages located along the Rioni River down from the town of Ambrolauri but is virtually



² Farmers are generally considered self-employed

non-existent in the upper villages due to more severe climatic conditions. The incomes of grape-growers are relatively high because the locally grown grape varieties Aleksandreuli and Mujuretuli are among the most profitable ones in Georgia. It can be roughly estimated that 25-30% of households in Ambrolauri municipality generate a significant proportion of their income from the sale of grapes. Fruit farming has now lost its importance and very few farmers continue growing fruits for market.

The cattle-breeding is spread across the municipality relatively evenly, although has an unexpectedly low profile. Quite many households in the area keep cattle; however, the number of animals per household often does not exceed 2 or 3. This is despite the abundance of pastures in the area – the rate of land per cow in the municipality is one of the highest in Georgia – approx. 2.4 hectares per animal. The local specialists associate this with the gradual reduction and aging of the local workforce that prefers less labor-intensive income generation activities. The families that have a little number of cows often consider their livestock only as a contributor to the family food basket but not the source of income. They interact with market irregularly, only when there is some surplus produce to sell. The “larger” livestock farms in the area, those with some 20-30 cows, are very few and their contribution to the sub-sector output is equally little. In 2012, when preparing the government-sponsored cattle vaccination programme, the local veterinarians registered a total of 9,913 heads of cattle in the municipality.



The processing enterprises are represented by some 7-8 medium-scale wineries that are located in the vine-growing area between Ambrolauri-city and village Chreballo. "Geo-Flower" LLC is a dried-fruit manufacturing and processing company located in Ambrolauri. Its produced dried fruit is almost 100% exported. Geo-Flower collects products from Racha, Lechkhumi and Tkibuli.

In Ambrolauri, beekeeping became a quickly developing sector of local economy. Thanks to the supportive climatic conditions, honey production was always a “right” agricultural activity for the area, however its importance is steadily increasing in the recent years due to the growing regional market for honey. In 2016 the amount of honey produced in the area dropped as compared to the previous years, but this was solely a result of unfavorable weather. In fact, the number of farmers engaged in beekeeping estimated increased by some 5-7% in the recent years.

Natural Hazards

Thunderstorms, hails, flooding, landslides, mudslides, avalanches, river bank erosion, drought and earthquakes are not rare in Ambrolauri municipality. In the last decade, the threat of natural disasters has been present on both residential and farming areas. In response, natural disaster prevention measures have been implemented by the local and central government. In particular, the following projects have been carried out:



river bank protection (including gabions), modernization of storm drains. The probability of natural disasters is taken into account during the planning of land use and the spatial planning of infrastructure projects.

Agricultural Business Needs in Ambrolauri Municipality

As said above, the agricultural business needs of Ambrolauri municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

According to the focus group participants - small and medium-scale farmers, one of the strengths of the local agriculture sector are the local climate conditions, which are advantageous for developing fruit farming, viticulture, beekeeping and livestock. An additional strength is the existence of local endemic varieties of vine.

The focus group participants feel that the development of viticulture, beekeeping and livestock should be supported. Small and medium-scale farmers believe that beekeeping is a profitable business. One of the participants of the focus group stated that: "It took us years to find partners in order to sell honey. We have won some difficult tenders throughout the country. In particular, we supply the Ministry of Defense and the Ministry of Interior Affairs with honey (20-22 tons). The price is not high and it's not a guaranteed market". Another participant farmer of the focus group noted: "The production of 1 kilogram of honey does not cost more than 4 lari; local farmers sell it for 15 lari per kilo, which yields 300% profit. Show me a business which makes a 300% profit".

Cattle-breeding is also named as a priority sector, with advantage of having significant areas of meadows. One of the participant farmers of the focus group stated that: "Ambrolauri has all the conditions needed for the development of livestock farming, sheep farming and beekeeping". Local small and medium-scale farmers underlined the existence of state programs as an important strength in the development of agriculture. The focus group participants brought up an example of the distribution of agricultural vouchers and emphasized their importance for them. One of the farmers stated: "As a result of the distribution of vouchers, many small farmers have been able to increase their harvest and their income."

Weaknesses

One of the weaknesses noted by medium-scale farmers is the lack of qualified workforce, which prevents them from effectively conducting their agricultural activities. According to the farmers, there

is a shortage of qualified workers in Racha, more specifically in Ambrolauri, that hinders the production growth. One of the respondents of an in-depth interview stated: "The new generation does not want to work. If someone had his own vineyard, she/he would have an income of 500-600 lari per month, what could be better? But they prefer going to Tbilisi and being unemployed. I'm thinking about employing the Chinese. I'll give them my name and let them stay at my place, they are usually good workers. I pay 25-30 Lari a day to my vineyard workers, which are not easy to hire and most are lazy." Also, during an in-depth interview the owner of a wine factory stated that "migration is very frequent in this region; therefore it is difficult to find workers." Another weakness which the farmers noted is the complicated procedures required for the acquisition of loans and grants. They stated that farmers lack the skills and resources needed to properly prepare business projects and meet requirements.

Another significant weakness, which the focus group participants cited, was the problems related to the irrigation systems. One of the focus group participants stated: "It is difficult for us to work since we depend on natural irrigation and lack resources for artificial irrigation."

According to the farmers, one of the significant obstacles for the development of local agriculture is the absence of soil research and relevant mineralization/fertilization activities. One of the farmers of the focus group stated: "The land/soil needs laboratory examination/testing greatly, which has not been done for a very long time. We lack the resources needed to check which land can be used for what."

The farmers participating in the focus group believe a stricter regulation of the trade in fertilizers and agricultural chemicals is needed to safeguard the quality of production. The respondents stated that it is difficult for farmers to distinguish between high-quality and low-quality chemicals. One of the farmers during the focus group stated: "There are many cases when we buy low-quality chemicals and the results are much worse than if we had not used any chemicals at all." In addition to control, farmers believe that it is important for them to know exactly when and what chemicals they should use and need additional training in this field. One of the participants of the focus group stated: "The use of chemicals could be a good thing, but it requires special knowledge to know when and to what use. It is important to have the relevant knowledge in order to get a good harvest and not ruin the vineyard." Compared to small-scale farmers it is less of a problem for medium-scale farmers to buy high-quality chemicals. One of the medium-scale farmers said: "I and those who have a relatively larger income use the Bayer's products, which are of very good quality."

An agro shop owner stated in an interview: "We have been working successfully for 2 years; people did not expect such results from us. The lack of knowledge of farmers of chemicals usage can be considered as a weak point; we hand out leaflets for them to receive complete information about the chemicals. We are usually blamed for the mistakes which are caused by their lack of knowledge."



One of the major obstacles of agriculture development is the low availability of agricultural machinery and its limited technical abilities. In this regard, small and medium-scale farmers enjoy the free cultivation state program, but they believe the technology is outdated and, for some villages, machinery is not fully available. One of the participant farmers of the focus group stated: "There is not enough machinery in Ambrolauri municipality and we are in need of smaller machinery considering local the landscape." It is also important for the municipality to have the necessary amount of machinery and having them to be available for everyone. One of the farmers stated: "One might think that there is access of machinery but it still a problem since we always get access too late and also the machinery is too large for ploughing, so smaller ones are needed on this landscape. There is also a lack of drivers for the tractors; there are about 20 tractors and only a couple of drivers."

Medium and small-scale farmers stated that one of the problems hindering the development of local beekeeping is the low level of knowledge and skills among famers. Ambrolauri sets an interesting precedent in this way. Some farmers are involved in private teaching and cooperative farms have been established. One focus group participant said: "We teach beekeeping to farmers in Oni, Ambrolauri, Tsageri and Lentekhi municipalities. Also, we set up a cooperative in order to carry out our beekeeping activities and believe that it is possible for others to do the same." One of the obstacles which farmers listed regarding the development of livestock breeding and plant growing, was low access to agronomists and veterinarians as well as varieties of animals with low productivity.

One of the biggest problems which small and medium-scale farmers stated regarding the development of local winemaking is the existence of counterfeit wine on the market, which makes it difficult to sell natural wine. Furthermore, the farmers participating in the focus groups stated that it is difficult to gain access to full and exact information regarding different support projects and programs, therefore informational campaigns should be conducted periodically in Ambrolauri. In addition, the farmers participating in focus groups and in-depth interviews stated that, because of low income, local farmers are not able to participate in grant and loan programs, therefore low accessibility to sponsorship is seen as a weakness.

Opportunities

Vocational training and the provision of information about modern technologies was stated as one of the potential ways of promoting the development of beekeeping, livestock farming and viticulture. One of the participant farmers of the focus group stated:



Farmers participating in the focus group meeting

“We should not have to go to Tbilisi twice a year in order to get new information. For example, a new chemical might be available on the market and we don’t know about it. Therefore, it is important that we have the opportunity to receive new information.” Moreover, one of the participants stated: “About three years ago my friend and I opened a store in which we sold agricultural chemicals. Since we could not find a specialist in chemicals, I went to Tbilisi and took some courses. Before leaving the course, I wrote down the contact information of the trainers to give my customers their number in case of any questions. Therefore, it is really important that we are provided with courses to gain more knowledge, so we can develop our agricultural businesses.”

According to the focus group participants, the production of perennial plants and fruit has great potential in the Ambrolauri municipality. One of the focus group participants stated: "For example, the quality of our plums is unique; you probably have already been informed of this. It is being sold for 3 Lari per kilogram. People should start thinking about returning to their abandoned lands and producing these plums, for example. There is also a large amount of wild fruit trees, for example apples and pears." The farmers of the Ambrolauri municipality also believe that there is a need of adopting special legislative norms. In particular, the focus group participants believe that tax incentives should be issued for farmers in mountainous regions, in order for them to have more funds to expand their businesses.

Small and medium-scale farmers who participated in the focus group noted, that there is a need to renew varieties to develop local livestock breeding. One of the farmers of the focus group stated: "Our cattle varieties are old and in need of renewal in order to satisfy the market demand for more meat and milk." In addition, one of the farmers stated during the in-depth interview: "Trout farms have great potential for development." Apart from trout farming, farmers frequently mentioned the great potential for the development of pig farms. Most small and medium-scale farmers agree that, in addition to funding, the government should provide farmers with consultation services, which will ensure that they develop high-quality project proposals for grants and other types of competitions. According to small and medium-scale farmers, through training and consultation they will be able to develop their farms by gaining easier access to loans and increasing the efficiency of their agricultural work.

The creation of cooperatives on the market with joint resources is an important opportunity for small and medium-scale farmers to be able to expand their activities. One of the farmers stated during the focus group meeting: “We held meetings on the development of cooperatives; at the beginning we had a lot of participation although it was gradually decreased. We obtained information about the nature of cooperatives work, established one and later applied for a grant.”

In addition, a part of increasing opportunities to additional funding, the participants of the focus group spoke about the importance of cooperation between farmers and the government for development of local infrastructure (mostly roads). The respondents stated that if the infrastructure is not improved, even if there is money for production, the sales of products will be difficult. Also, according to the farmers, accessibility to the internet will increase their level of knowledge and therefore necessary

measures should be taken for this. According to one of the focus group participant: "The mountain people don't have the 60 Lari needed to gain access to the internet, so it would be good if we are provided with some information by other means so we learn new things and develop our business."

In addition, the farmers claim that it is necessary to speed up and simplify the process of legalization of agricultural land, which will contribute to the development of local agriculture. Farmers say they often find it difficult to follow legislative procedures and land ownership is frequently contested. This process is particularly problematic in the appropriation process of meadows. An in-depth interview respondent, a farmer working in viticulture, stated that: "Land ownership is now less likely to be extended. People have lands inherited, which are undocumented. Undocumented land cannot be bought. This problem should be resolved soon."

Threats

Migration is believed to be one of the threats of local agriculture, which affects the outflow of knowledge in this field. One of the farmers of the focus group stated: "More and more people are leaving villages and moving to big cities, you might see one or two cars in Ambrolauri, although this summer there was a record number of visitors, about 14,000 people." The focus group participants believe that the biggest threat to their industry is the migration of young people, which makes the development of the local economy and agriculture more difficult every year.

Medium-scale farmers stated that the instability of the export market is one of the biggest threats. One of the farmers noted: "In the past decades, wine, which was developed with the use of our grapes, was exported to Russia. Although some wine is still exported, there is still a big risk that this market will be closed again. Later our product was exported to Ukraine and now because of the instability there we must look for some new markets. This unstable environment is very damaging for the local wine industry."

Small and medium-scale farmers mentioned the threats associated with the use of chemicals, as they see them having a significant environmental impact and complicating the production of high-quality products. One of the farmers of the focus group stated: "Our district is well-known by local favorable environmental conditions and of course measures must be taken to preserve it. There is a great danger that the environment will be polluted, and then we will lose an important strength of our agriculture."

Small and medium-scale farmers consider epizootic diseases as one of the biggest threats to their livestock. The farmers believe that availability of veterinarians is low, since there are only private vegetarian clinics and they often cannot find time for all of their clients. Therefore, some of the livestock frequently die due to the lack of medical attention. Also, one of the respondents of the in-depth interviews responded: "Ambrolauri has very good conditions for pig farming and many farmers

are working in this field, although it is very difficult for us to combat with diseases. Many do not have the financial resources needed to consult with a veterinarian, but the biggest problem is still the lack of time which the veterinarians have. We are constantly in fear that our livestock will die of a disease.”

Natural events such as drought, hail and flood are also named as one of the biggest threats by small and medium-scale farmers. One of the focus group participant farmer stated: “This year my neighbors planted beans and because of the drought they dried and consequently no profit was seen. This is a very common problem.”

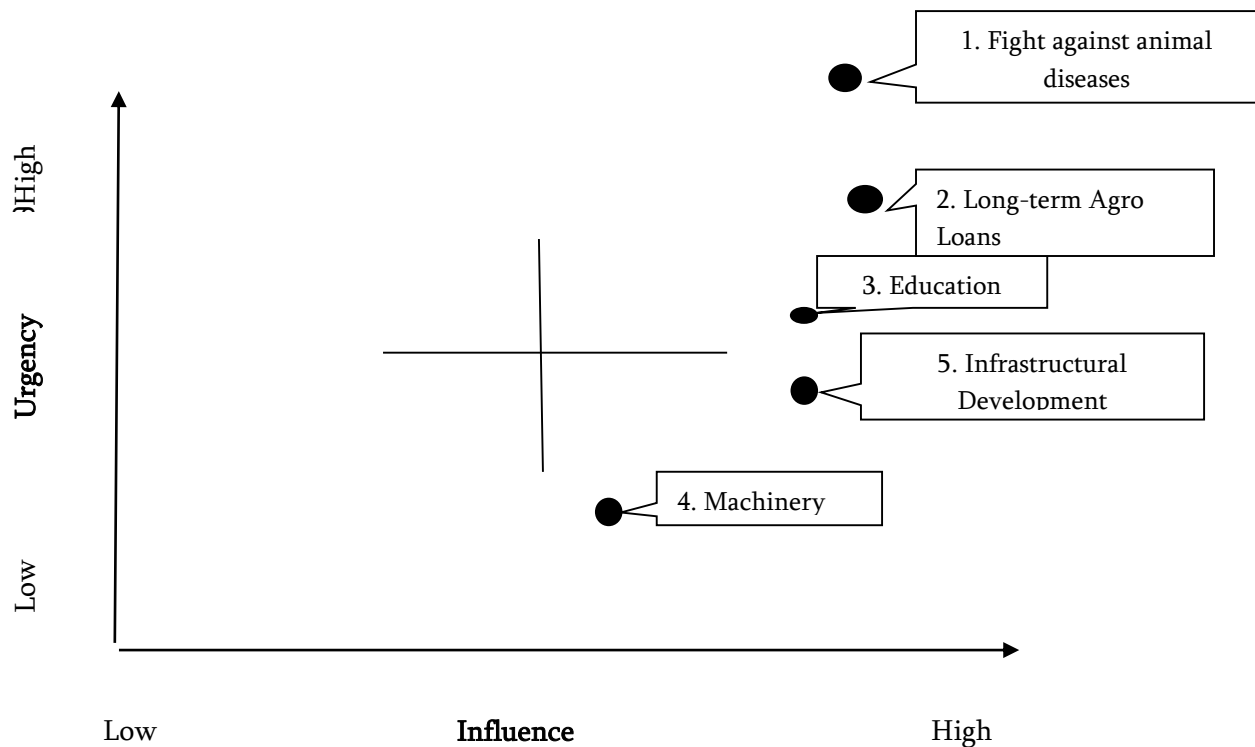
Needs of Agribusiness in the Ambrolauri Municipality - SWOT Analysis

The opinions of small and medium-scale farmers are more or less the same; therefore, for the purposes of the Ambrolauri municipality agribusiness SWOT analysis is shown for both groups:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of livestock farming, beekeeping and winemaking; • Fertile land in most of the areas; • Availability of some water resources for irrigation; • Large amount of meadows; • Existence of endemic varieties of wine; • Traditional engagement in agriculture activities; • Airport existence. 	<ul style="list-style-type: none"> • Low access to high-quality agricultural machinery; • Lack of information on different programs (agricultural loans, grant competitions); • Lack of quality work force; • Low level of knowledge among small farmers about modern technologies; and development of business plans; • Low-productivity breeds in livestock; • Lack of programs for business loans and business grants for small farmers; • Lack of irrigation system; • Limited availability of quality agricultural chemicals and fertilizers; • The existence of counterfeit products (mostly wine) on the market; • Low availability of qualified veterinarian and agronomic services; • Lack of agricultural land; • Undocumented agricultural land.
Opportunities	Threats
<ul style="list-style-type: none"> • Delivery of special training courses for farmers; • The development of fish farming (trout farms); 	<ul style="list-style-type: none"> • Natural hazards (drought, hail, etc.); • Outmigration of the young and outflow of knowledge; • Environmental pollution;

<ul style="list-style-type: none"> • Attract and maintain workforce; • Provide accessibility to qualified veterinarian and agronomic services; • Control of animal diseases; • Providing business consultancy for the development of business plans; • Implementation of business loan and grant programs for small-scale farmers; • Improvement of livestock varieties; • Fight against counterfeit products (wine); • Upgrading the irrigation systems; • Conducting informational meetings about agricultural support programs and projects; • Creation of cooperatives with the involvement of small and medium-scale farmers; • Upgrade of agricultural machinery, increase accessibility and the implementation of new technologies of production; • More accessibility to the internet; • Start of the process of the legalization of agricultural lands; • Reduce damage from natural hazards. 	<ul style="list-style-type: none"> • Epizootic diseases; • Instability of the export markets.
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The focus group participants, small and medium-scale farmers, allocated the priorities for the development of the municipality in the following way:



The needs shown on the diagram above are:

- (1) **Effective control of animal (livestock) diseases** - The local farmers and veterinarians have insufficient capacity means to prevent the spread of diseases among their livestock and to reduce the harm caused.
- (2) **Long-term, low interest Agro Loans** – Currently, there are virtually no loan products from financial institutions that are accessible to the vast majority of farmers – the banks ask for a stable collateral (e.g. house/apartment in the city, high value land, etc.) that farmers don't have in their possession . Plus, the existing loans do not fit farmers' needs due to a number of reasons including high interest rate and short repayment terms.
- (3) **Farmer-oriented education** Farmers don't value the knowledge and don't trust the education institutions and ICCs, and the training institutions /ICCs are weak to work with larger groups of farmers and push forward modern technologies.
- (4) **High-quality agricultural equipment** -the renewal of equipment at the majority of farms is virtually impossible due to the number of reasons including extremely limited capacity of farmers to make long-term and high-cost investments, poor choice of options from input suppliers, limited understanding of what exactly is needed, lack of facilities that rent the equipment out, etc

(5) **Infrastructure conducive to farms, agri-businesses and support services** – Road infrastructure represents one of the biggest needs for local farmers and businesses since they represent a key precondition for the good access to markets and services. The government invests its available resources in rehabilitation of old and construction of new intercity roads, however the majority of secondary and tertiary roads lack attention and remain in poor condition. The access to electric power is not very reliable (blackouts are not rare in remote areas) and only few villages have access to the natural gas. This hinders the development of local processing and service facilities.

Profile of Baghdati Municipality

General description

The municipality of Baghdati is located in the center of the Imereti Region. Its total area is 81,500 hectares (ha), from which a major part is the north slopes of the Meskheti range; while a small part is located on the Imereti lowland. Accordingly, the municipality is mostly mountainous. Agricultural lands make up 19,089 ha, which is 23% of the whole territory of Baghdati; whereas forests cover 61,000 ha (75%). The average level of rainfall is 1,500 mm a year.



The administrative units which border the municipality of Baghdati are Adigeni, Vani, Tskaltubo, Zestaponi and Kharagauli. The municipality is rich with mineral waters, e.g. Sairme mineral water. In addition, there are tuff, granite, marble deposits in the municipality.

Demography

According to official data, the municipality has a population of 28,800 people. Out of the total population, only 17% (5,000 people) live in the town, while 23,800 live in villages. There are 26 settlements in the municipality out of which one is a town. The population density is 35 persons/km², which is much less than the country average of 67 persons/ km².

Economy

The leading economic branches of agriculture in the region are viticulture and winemaking. However, there is also fruit, vegetable and livestock farming. The main branch of production is the food industry. As for winery, the Vartsikhe factory is leader in production. Some small production of construction materials is also developed. National roads in the direction of Kutaisi, Zestaponi, Vani and Abastumani run through the municipality. The municipality is located near two balneology resorts: Sairme and Zekari. Here, the mineral water Sairme is obtained and produced, most of which is exported.



Agriculture

Agriculture is the key source of income in the Baghdati municipality. Agricultural lands make up 19,089 ha, which is 23% of the total area. According to 2005 statistics 5,185 ha is arable, which is 27% of the total area; meanwhile orchards



cover 2,319 ha (12%) and meadows 11,585 ha (61%).

Since the municipality of Baghdati is a mountainous region it has scarce arable land and mostly unsuitable for the development of crop farming. The main crops grown in the municipality are vine, corn, vegetables and melons. The average production of vine is 4 t/ha, corn - 2.5-3 t/ha, vegetable yield - 5 t/ha, and melons - 30 t/ha. It should be noted that about 50% of arable land requires irrigation. However, the land cannot be fully irrigated due to water shortages, as well as the small scale and poor conditions of the irrigation system. In addition, about 10-15% of the agricultural land needs drainage; however, the municipality does not have drainage systems.

Live-stock farming

Meadows occupy about 61% of all arable land located in the Baghdati municipality. Accordingly, livestock farming is widespread in the municipality, mostly cattle breeding as well as a small amount of sheep farming. According to the Municipal Council, 14,000 cattle were recorded in 2012. In addition, cattle are brought to the summer meadows from other administrative units; however, their number is not recorded. In recent years, the number of cattle has increased. The municipality grazing rate is 1 animal per ha. However, if we calculate only the local cattle population it would be per 0.83 ha.

Natural Hazards

Strong wind storms, landslides, avalanches, earthquakes and drought are characteristics of the Baghdati municipality. In the last decade, drought, earthquakes and wind storms have been the most frequent form of natural hazard. In the last decade natural disasters posed a threat to both residential and arable lands. In particular, about 25 ha of agricultural lands are damaged.

Agricultural Business Needs in Baghdati Municipality

As said above, the agricultural business needs of Baghdati municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

The farmers in the Baghdati municipality believe that traditionally developed fields of agriculture include viticulture-winemaking, animal farming and corn farming. According to the farmers, the development of bee farming also a great potential, since the cost is relatively low. In addition, honey is not perishable, which enables the farmers to sell the product for a better price. It is important that there is high market demand for local wine, cheese and honey and farmers believe that it is possible to make a profit. One of the interview respondent stated: "I own a successful farm, therefore, I have lots of experience. I harvest 10 tons of different varieties (Aladasturi, Tsolikauri, etc.) of grapes each year. I love my work and I feel that viniculture should become one of the leading fields of agriculture in the region. However, I am in need of some financial help in order to expand my work". One of the bee farmer who participated in a focus group stated: "One of the strengths of this field is that there is demand on the market and therefore, it is easy to sell. However, you have to be know very well how to take care of the bees". It should be noted that all focus group meetings revealed a high demand for the development of bee farming. One of the focus group participants stated: "Bee keeping requires low operation costs but has high profit. Our bees are highly productive".

Local climate conditions and the fertile land are favorable for growing local endemic varieties of vine. "Compared to Kakheti our vineyards are not treated as much with chemicals. Therefore, the grapes are environmentally clean "- one of the focus group participants stated.

One of the strengths is for the development of animal farming are the large amount meadows. There is some confusion among farmers about the ownership of the land and the meadows are being used freely. The farmers believe that the meadows are of good quality. "I own 300 cattle, as well as land where I grow wheat grain. One of the most important aspects in livestock farming to produce good milk and dairy products is the quality of the meadows. I have pasture land which I lease now and I need to be able to buy it" - one livestock farmers stated. Baghdati municipality has mineral water resources as a major strength of its rural development, which can lead to the development of local tourism. An increase of visitors, in turn, will increase the demand for local agricultural products.

Weaknesses

The farmers name the low availability of agricultural machinery as a major weakness. The amount of machinery available as well as the long waiting time to get is seen as major challenge. "We get our machinery from the Zestaponi Service Center and since their machinery is not enough we are forced to wait "- one in-depth interview respondent stated. The LTD Meqanizatori has lots of problems with

the timely availability of machinery, as one of the focus group participant stated : “you are not provided with machinery if you have small land and preference is given to the larger land owners ” - a view many focus group participants agreed with.

Low levels of accessibility to qualified agronomists and veterinarians are also one of the most frequently mentioned problems from the farmers. One of the main challenges is disease control and prevention. There have been special requests for qualified veterinarians from livestock farmers and bee farmers. “The older generation of veterinarians and agronomists don't have enough knowledge regarding new drugs,” - said one farmer. One in-depth interview respondent explained: “In the past we did not have the opportunity to receive information regarding new drugs. Now through the association we go through trainings 3-4 times a month. It is unfortunate that the younger generation does not attend these trainings and are not interested in veterinary. At the moment, there are some diseases which we are unable to deal with (especially in pigs) due to the lack of drugs and resources”. A crop farmer stated: “There should be some kind of association of specialists; for example, in the last three years our tomatoes have had some kind of disease but we have been unable to treat due to our limited knowledge about it”.

Although it might seem that the farmers are informed about state agriculture support programs, farmers believe that they have low levels of accessibility to those programs. There is large demand for agricultural loans. “Although I have not used some state service, I know that there are low interest rate loans for farmers. I know some who got loans for their agricultural work, with some satisfied and others disappointed. It is important to have a grace periods, since it takes time to see profit in agriculture business” - one in-depth respondent stated. Another farmer pointed out that: “One of the biggest challenges is the lack of financial resources; of course, I don't mean state should give us the money as a gift. Our banking system is not good. In other countries, there are low interest rates and here we have 20%, 38%, 40%, 60% rates; that makes it impossible to develop a business. I have a power station in Baghdati, therefore I have free access to electricity. I would like to develop a greenhouse but I can't, since it has been three years since we got a loan for 300,000 GEL for the power station and we still have to pay 50,000 GEL. As the interest rates are very high, I'm not able to build the greenhouse. I am fortunate that my loan is in Georgian lari since if it were in US dollar, I would have to sell my business due of the exchange rates volatility” - one of the farmers stated.

As counterfeit or low-quality chemicals are common on the market, farmers in Baghdati believe that stricter regulation over the trade of fertilizers and agricultural chemicals is needed. The agro store owners shared same view. One of the in-depth interview respondent stated: “There should be licenses for selling the fertilizers and agricultural chemicals. A person who doesn't have information about the usage of specific chemicals should not be allowed to sell them. A specialist is needed who will inform the farmers about the instructions of chemicals application”. Some focus group participants noted: “I bought some chemicals but



didn't get the results I sought, since they were counterfeit products, so later I just used a natural chemicals instead"; "The chemicals very low quality and often falsified"; "my neighbor and I both chemical protection for our crops and got different results"; "you have to be lucky, "state control is needed"; "we have no means to determining the quality of the chemicals".

Participants of the different focus groups also stated the generally low level of education in agriculture activity low levels of access to new varieties and technologies are main obstacles for development. Some farmers believe that even with existing resources it is possible to increase productivity - of cattle breeding, crop production or bee-keeping. One of the respondent stated: "Using new technologies and methods with existing breeds would greatly increase productivity but we don't have enough information about modern technologies. People tell us to use the Internet but I don't have the skills for that". Another farmer stated that: "There is only one consultation center in the whole region where they have only four consultants, which is not enough for us".

Opportunities

According to some farmers the introduction of new varieties in animal farming and fruit farming is one of the biggest opportunities for the development of local agriculture. Some farmers already have general knowledge from watching television or from speaking with neighbors about how to increase productivity by planting new varieties; but in reality, they do not know how to implement new initiatives. "In the Netherlands a cow can produce 100-120 liters daily but it is necessary to know how to care for these breeds, otherwise they will not be productive. If I am not aware of these methods, then I would rather continue to use old breeds"- one farmer stated.

This issue is also closely related with provision of educational courses for farmers. It is hard to determine if all farmers realize the need for more knowledge, but a large number (especially medium and large farmers) do understand the importance of getting additional training. "If we want to develop agriculture, first and foremost we need to be informed and get better education because our traditional methods of activity is not enough" - stated one of the focus group participant farmer.

All farmers agree that an increase in access to qualified agronomists and veterinarians, as well as diseases control is essential. Even most educated and knowledgeable farmers must have access to qualified agronomist and veterinarians, who will be able to solve their problems effectively on site. According to the local veterinarian: "It has been 2-3 years since last disease prevention activities have been carried out throughout the nation. Vaccinations were done for plague, rabies, brucellosis, and other diseases. But when the animals have specific problems the farmers are not always able deal with them on time and we can't always go on site which can turn out to be critical for the animal."

Business consultation is also important for farmers to be able to develop business plans as well as to participate in different state and international support programs. One of



the biggest barriers for the farmers is the lack of skills that is required to prepare relevant documents. In most cases, farmers cannot conduct financial forecasting, create business plans etc., which might become the reason why some potentially successful ideas are never carried out. "It is very important for us understand all the requirements correctly and then receive consultation from specialists on site as well as in field conditions" - one of the farmers stated.

Threats

Wild animals and diseases are the main threats to livestock farmers. "One of the biggest problems which we face, are wild animals. For example, yesterday a wolf killed many of our cattle. This is a mountainous area therefore there are a lot of wild animals. We used to have thousands of goats but people stopped farming them since they were getting killed by wild animals". Another major problem is diseases: "we used to have pigs and chickens but they all died from some diseases" – stated on of the focus group participant.

Natural climatic conditions is challenging for all farmers of the Baghdati Municipality, which consists of mainly drought and hail. Farmers believe that hail can be avoided with appropriate state intervention. Accurate weather forecasting methods and providing farmers with relevant and timely information are important. "It is really risky when you depend on natural conditions. For instance, some weren't able to harvest honey this year. Things might get worse in years to come, so the government should help us in reducing the damage from weather conditions" - one of the focus group farmers stated.

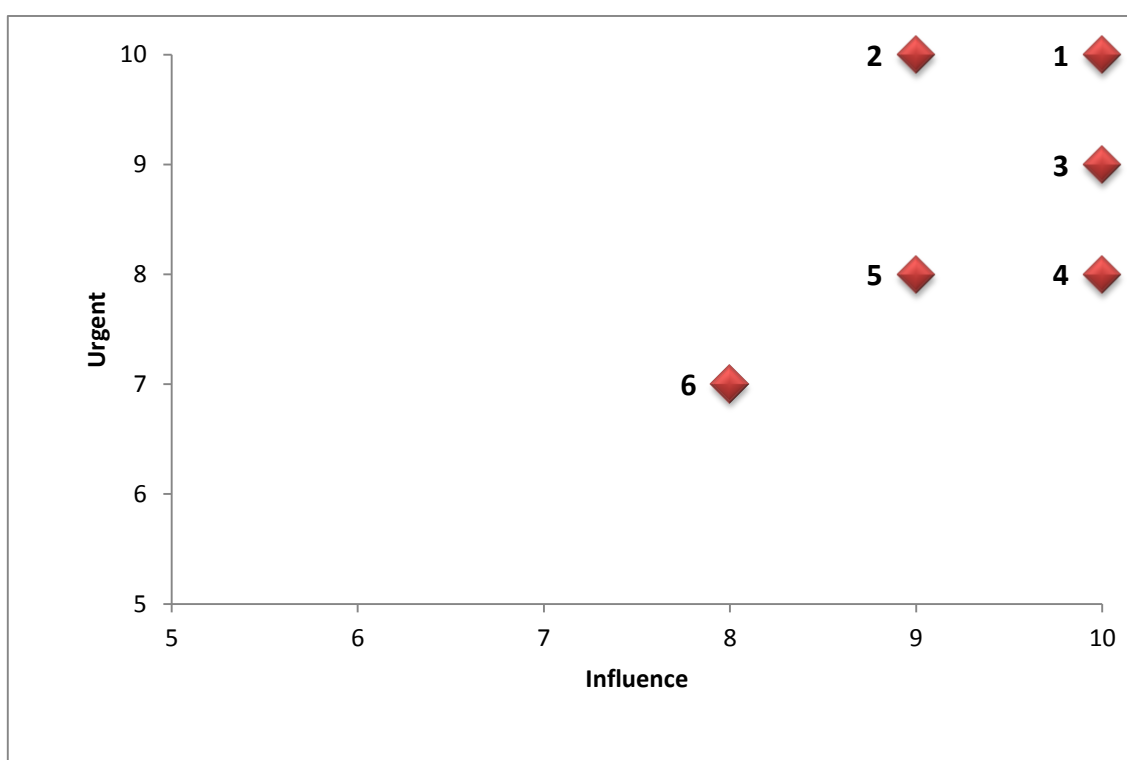
Another big problem for the farmers are counterfeit and low quality agricultural chemicals, which in their opinion can only be solved at the state level since the farmers do not have enough knowledge and resources to assess the products and.

Needs of Agribusiness in the Baghdati Municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of agriculture; • Fertile land in most of the areas; • Rich in water resources; • Large amount of meadows; • Existence of endemic varieties of wine; • High demand for products (viticulture-winery, hazelnut farming, bee farming) 	<ul style="list-style-type: none"> • Low accessibility to high-quality agricultural machinery; • Limited access to services from qualified veterinarians and agronomists; • Low accessibility to different programs (agricultural loans, grant competitions); • Low accessibility to new breeds and technologies; • Low level of general knowledge among farmers about agriculture activities;

	<ul style="list-style-type: none"> • Counterfeit agricultural chemicals;
Opportunities	Threats
<ul style="list-style-type: none"> • Development of greenhouse farming; • Delivery of special training courses for farmers; • High accessibility to qualified veterinarian and agronomic services; • Control of animal diseases; • Provision of business consultancy; • Development of hazelnut farming; • Development of viticulture; • Usage of new breeds in animal farming; 	<ul style="list-style-type: none"> • Natural hazards (drought, hail, etc.); • Diseases; • Wild animals;



The focus group participants, small- and medium-scale farmers, allocated their priorities for the development of the municipality in the following way:

The needs shown on the diagram above are:

1. **Quality control for agricultural chemicals** - Counterfeit and low quality chemicals are a big problem for local farmers. It has a negative effect on crop production and also damages bee farming.
2. **Long-term, low-cost agro-credits** – increases accessibility to low interest, long-term agro-credits; availability of certain grace period is also very important for farmers.

3. **Machinery** - increasing access to high quality agricultural equipment that can be used in small areas.
4. **Legislation** - the farmers believe that regulations should be imposed on imported agricultural products.
5. **Qualified veterinarians and agronomists** - Increasing access to the services of qualified veterinarians and agronomists.
6. **Farmer oriented education** – farmers need additional trainings to increase the productivity. It is important that they have more access to modern technologies.

Profile of Tskaltubo Municipality

General description

Tskaltubo municipality is located in the central part of west Georgia on the east side of Kolkheti lowland, in the gorge of the Rioni and Gubistskali rivers. From the east it is bordered with Kutaisi, from the west – with Samtredia and Khoni, from the north - Tsageri and Ambrolauri and from the south with the Baghdati and Vani municipalities. The Administrative unit covers 70 100 ha, from which - agricultural land occupies 29 208 ha and forests cover – more than 25 000 ha. It's landscape is mainly plain that is surrounded by mountains from all sides and is only open from the side of the Kolkheti lowland. The average precipitation amounts 1420 mm/year, and the average annual humidity is 76%. The municipality is rich with water resources. Its main river is Rioni. Additionally, well-known medical thermal waters are presented in Tskaltubo, which have unique chemical features.



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Demography

According to the 2012 official data, the municipality's population amounts 74 100 people. Out of the total population, only 22% (16 550 people) live in the town, while 78% (57 550) live in the villages. The municipality consists of 50 settlements, including 1 town. The population density is 106 persons/km², which is 1.5 times more than the average density (67 persons/ km²) in the country.

Economy

Over a long period of time, manufacturing industry and agriculture were the main sources of income in Tskaltubo municipality, although their productivity has declined in recent years. There are an inert material processing plants, stone processing factory, and a couple of small food enterprises. The main source of income for the population of Tskaltubo municipality is: agriculture, foreign transfers and social insurance. The local government has developed an economic development strategy, based on which the priorities of the municipality are primarily agriculture and tourism.

Agriculture

Agriculture is the key source of employment in Tskaltubo municipality. Agricultural lands hold 29 208 ha, which is 42% of the total area, including arable land - 14 815 ha (51% of the agricultural lands). Orchards are on 2 355 ha (8%),



meadows - 11 954 ha (41%)³. According to the municipality data, agricultural lands have decreased over the last 10 years primarily because of the change of the land-use categories, landslides and river erosion. However, there is no official information about the reduced and degraded agricultural land areas.

Plant farming

The most common crops include vegetables, melons, maize, grapes and fruit. The average vegetable output is 20 t/ha, melons 340 t/ha. These crops are widespread in the lower zones of the municipality. The corn output is 3 t/ha, vines 10 t/ha. Approximately 50% of the lower area of arable land requires irrigation. Mainly, traditional irrigation methods are used for irrigation. Additionally, rainwater is not collected and used for irrigation.

Live-stock farming

Meadows occupy 11 954 ha (41%) of the agricultural lands of Tskaltubo municipality. According to 2012 data, 35 000 cattle were accounted in the municipality. As for sheep, it's number is more or less stable and amounts to 1400 animals. Livestock from other municipalities are not brought to the territory of Tskaltubo municipality for grazing. There is only 0.34 ha of pasture for each cattle, which is a very low figure and therefore there is a deficit of pasturelands.

Natural Hazards

According to the data provided by the local government, Tskaltubo municipality is characterized with the following natural threats: strong winds, heavy rain, riverbank erosion, earthquakes and drought. Over the past 10 years, the erosion off riverbanks has increased. The upper zones of the municipality create a risk of landslides, riverbank erosion and strong winds. The natural disasters pose a threat to homes and public infrastructure as well as agricultural land and meadows.

³ Source: results of data analysis conducted in 2004.

Agricultural Business Needs in Tskaltubo Municipality

As said above, the agricultural business needs of Tskaltubo municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

According to the small and medium farmers residing in Tskaltubo municipality, one of the strengths of the local agriculture sector is the local climate conditions, which is favorable for development of herb farming, livestock farming, corn farming, vineyards and hazelnut production. The fertile soil supports the development of fruit growing. As one of the focus group participants noted, "the land is fertile, almost all plants grow".



The farmers believe that there are good natural conditions for the development of herb farming, which also makes this activity cost effective. "Herb farming is relatively easy since it does not need heating and is easy to grow"; "Herb farming is one of the leading fields of agriculture in Tskaltubo, it is sold in large amounts although it takes a lot of work"; "The land is really rocky, which has both positive and negative aspects, the positive side is that it is better for growing herbs" – the farmers stated.

The focus group participant farmers stated that there are large amounts of meadows for livestock farming that makes this activity a priority. It would be more profitable for the farmers to be engaged in the meat business rather than to produce milk products since the local breeds of cows have low milk output and produce an average of 5 liters of milk per day. "Our family mainly operates in the meat industry rather than milk production business, since meat production is much easier in Georgia compared to milk and dairy production. We have no animals, which produce more than 5 liters of milk per day. Thus, use of the cattle for milk production is not profitable. There is always a demand for meat and we have easy access to meadows and drinking water" – one of the farmers stated. Additionally, livestock farming is advantageous since local farmers are also engaged in corn production. However, some of the farmers stated that corn production is not very profitable because due to the small land plots. "One of the advantages is that we use the corn for feeding animals." – one of the focus group participants stated.

Furthermore, local farmers state that there are favorable natural conditions in Tskaltubo for growing hazelnuts and production of the Jvari and Tsolikauri vines. Although, these are more labor-intense in

comparison to other activities, but are profitable. The advantage of hazelnut farming is the possibility to grow corn on the same land, which is additional motivation for farmers to be involved in this activity. „We cannot say that there are any obstacles, which prevent us from hazelnut production.; “hazelnut is easy to grow and if you take good care of, it can be very profitable, we also have about 500 vines, Tsolikauri and Jvari, we sell mainly wine and Vodka”, “I own a hazelnut plantation, which is growing every year and gives me a good profit” – some of the small and medium farmers stated.

Weaknesses

All focus group meetings stated the availability of low-priced agricultural loans is a problem. This is mainly due to high interest rates on agricultural loans. This is problematic particularly during the first stages of activity, when the farmers are not earning income. In addition, the exchange rate fluctuations between the GEL and USD are additional obstacles for taking a loan. Aforementioned factors affect the development of local agricultural businesses. “The farmers should have a grace period for the loans, during which the farmer would be able to save money, develop business and not be afraid that the bank will start calling every day to collect the loan”; “I was planning to take a loan, however now I’m afraid of the currency rate changes, this is obstacle for the farmers”; “the state should ensure the lowest possible interest rate for farmers, since the farmers might lose both businesses and homes. The loans should not be in USD. The bank refuses to allow me to redistribute the remaining loan over 13 months” –stated some of the focus group participants.

Farmers are fully aware of the need for qualified veterinarian and agronomist services and state that this service not available for them. Therefore, they are unable to receive qualified consultancy, which leads to financial loss and crop deterioration. “At least one agronomist should be in the village, who knows the doses of chemicals to be applied and inform us about innovations”; “The village should have a good agronomist, real specialist, who has expertise in his field in order to give some proper advices to the farmer and explain the rules of maintenance. It is up to the farmer to do everything including being an agronomist”; “From my personal experience, last year I planted Bulgarian peppers and that had some growth problems. I took examples to an agronomists, however they were unable to advise me anything, then I sent them to Tbilisi. The same happened to my cucumbers and everyone is telling me different reasons” - one of the focus group participants stated.

Although Tskaltubo municipality is rich with water resources, the access to irrigation is low. The farmers stated that the main problem is that there is no centralized network for the water channels. The increase of droughts over the last period has made frequent watering needed. “There are lands, which would be good for planting if they had access to irrigation services. If the irrigation systems were functioning properly we would be able to see some results but without water nothing can be done due to droughts”; “Our land is very fertile and good for planting, but irrigation is necessary for anything to grow”; – the farmers stated.

Farmers named low awareness about modern technologies and agricultural state programs as another weakness. It is important for the farmers to be fully aware of new technologies in livestock farming and they are ready to gain new knowledge and skills. However, they have no information about relevant educational programs. Farmers also think they lack complete information about state support programs, which leads them to have wrong expectations and attitudes. As the farmers stated: “I believe that more information should be provided to the farmers in accurate manner. The Ministry of Agriculture provides free vaccines for the animals, however 90% of the farmers refuse to vaccinate their animals since they do not have enough information about the program procedures. Also, they believe that since the vaccines are free, they are low quality. Everything should be explained to the farmers in a way that they will understand”. Additionally, a group of farmers had recommendation about the existing state programs: “it would be better if the government co-financed, instead of financing 100% of the plowing works. It would work better, had the government financed 70%, and assisted the farmers in other activities. The lands of some of the farmers are so small that it makes no big difference whether plowing is financed or not. They return the vouchers and the government makes unnecessary expenses”. “It would be much better if there were a co-financing system. In this case, the state will finance only the part (e.g. GEL 100) of the total costs, while the farmer will have to pay the remaining part (e.g. GEL 40). If the farmer needs no cultivation of his/her land, then he/she will refuse to pay the above co-financing amount and accordingly, the state will save some funds for other support programs”.

Some of the farmers named problems in management as main reasons for the low accessibility to agriculture machinery. As they stated, that there is enough machinery, however a problem is its management, distribution and use of the machinery, which leads to the loss of time. “The region should have its own mechanization center. According to the schedule, we were in the waiting list to have access to the machinery in June, it is almost June already and we still have no information who will be getting a tractor for example. If the village would have its own machinery, this type of things would not happen”. “There is enough machinery although it is hard to gain access to it, I still cannot determine who makes decisions about the distribution. It is hard to use and is quite expensive, especially without a voucher” – the respondents stated.

Opportunities

During the qualitative survey, the respondents noted that besides traditional, developed fields there is potential for the development of tea and citrus plantations in Tskaltubo municipality. According to some respondents, the tea culture used to be a well-developed and profitable field, since the climate conditions are favorable for tea growing. The climate conditions are also favorable for citrus plants



specifically for tangerine. The focus group participants stated: "the development of the citrus industry is possible, for example, I grow tangerine and they grow very well"; "The tea culture used to be well developed before it was destroyed, it brought large profit".

The farmers think that the creation of a fruit receiving and processing factory is important for the development of the municipality, which will ensure a stable demand on existing products. "It would be great for the population if a processing factory were opened in our area. The farmers would be able to take and sell their products without the intermediaries for a reasonable price". "The development of fruit farming and dry fruit production is possible. Dried black plum is very profitable"; "It would be a great support if a processing factory would be available nearby, even if they buy the fruit for a low price. At least it would be stable income source and the harvest would not be wasted"; "there are lots of fruit here, if a canning factory were established, at least 2000 people would find work".

Farmers believe that supporting potentially profitable agriculture activities, is important to develop Tskaltubo municipality. This requires introduction of new varieties in animal husbandry and fruit growing. At the same time, the farmers should be trained and equipped with new skills and knowledge. As one of the farmers stated: "the farmers do not know what chemicals to use on the land, we know only nitrogen, and add it to everything".

Farmers believe that increasing access to low interest rate agro-loans would greatly help the development of their businesses. The high interest rate of loans and very little grace period have negative impact on the agriculture development. "Of course, the family has no resources to develop fast, therefore, it takes much time to grow the business. I can plant 10 trees with my own financial resources, but I would be able to plant 200 trees with a loan and this would give me a big boost since it takes a couple of years for the trees to grow and give a profit. A certain grace period is also important if the government can help us" – one of the farmers stated.

It should be noted that the farmers have positive attitudes towards the development of cooperatives. In their opinion, the creation of cooperatives will further increase the demand for qualified staff in agriculture and motivate youth. "Creation of cooperatives is important, it will motivate younger generations as there will be a demand for professional staff. At this stage, youth seek education where they see employment opportunities, so it is necessary to create cooperatives and attract the interest of younger people in this field".

Threats

Farmers stated that they have had problems with selling their herbs during the last period because large quantities of herbs are being imported from Iran, which is sold at a lower price. "Herbs imported from Iran are cheaper, so the competition is fierce, but the quality of our product is better. Now we are unable to export our products, since export markets are closed, prices have dropped and

it is no longer reasonable for farmers to grow herbs ". "Iranian products pose great competition to our greenhouse products, there is no point to grow herbs anymore. Our main market was Russia, which has been taken over by Iranian goods. We are now growing cucumbers and tomatoes. Herb market failed to work and farmers have large debts". Some participants noted they are very pessimistic about growing greenhouse herbs: "There is no point to have a greenhouse now, since the Russian market is closed for us. In the recent period, farmers were trying to sell their herbs for 0.3 GEL on the Georgian market. The only option left is Europe, but the market in Europe is hard to penetrate".

Farmers view, drought and wind as the most significant threats to agricultural development: "The Drought affects nuts, it reduces the size and weight of the nut". Drought has adverse effects on livestock farming. As the farmers stated, feeding the cattle becomes especially problematic during the drought season when the grass dries up and the corn harvest is scarce. "Last year the drought was particularly damaging, the animals lost much weight", "last year the drought ruined all of our crops" - the focus group participants stated. The situation is complicated due to the fact that the farmers do not have sufficient access to irrigation systems. "If the lands were irrigated the problem would be resolved and we would be able to have some harvest".

The farmers stated that another threat is the absence of signs on roads about animals crossing. They have to pay a penalty if a car hits one of their animals. "The government restricted livestock to cross roads which go through the village and we are responsible for paying a fine if a car accident happens. It would be very helpful if there were some signs for the drivers. This way the driver would drive slowly and our animals would have safe space to cross the roads" – one of the focus group participants stated.

Another threat that was stated by the farmers is migration, which relates to the decrease of qualified workforce. Farmers noted that there are less young people willing to live in the villages, since they do not see any opportunities for future development in the villages and have no motivation to work in agriculture. "Villages are getting empty from young people in the whole Tskaltubo municipality. Everyone would rather go to the city to work and have a salary there". "When you do not see any results from your work, it makes you lose the motivation and therefore younger generations make a decision to leave the area".

The focus group participant farmers also believe that unqualified veterinarians and agronomists are a big threat to the development of the agriculture field. They stated that the consultancy provided by the veterinarians and agronomists frequently has no value since they have trouble to identify the diseases correctly. According to the local farmers, the agricultural chemical store's personnel sometimes take the role of an agronomist but they lack sufficient knowledge. "Many agricultural chemical stores have opened, and these are stores opened by people who have never used fertilizers, the farmers ask them for advice, but unfortunately, the personnel is not educated to give adequate

recommendations. The agronomists were replaced by the store managing people” – one of the focus group participant stated.

Market price fluctuations on hazelnuts, herbs and vegetables were named as another threat by the respondents. Farmers noted that significant price volatility causes serious problems in the production process. They explained that the reason for this is the large number of imported goods. "There is so much imported goods that the local market is getting lost for us. Tomatoes, cucumbers are imported all year from Turkey and the local products are not being sold. We are even having difficulty selling Lechkhumuri apples, which does have a higher price and is much better than the imported product. It is the same situation regarding the poultry. Imported chicken meat took the local market". "I have a problem with selling of the hazelnuts, as the price has dropped in compared to last year. Last year the price was 10 GEL. It would be great if prices were stable, it is not worth to sell for a lesser price since you have to use fertilizers and also hire people for additional help". Another threat, which was named by the farmers, is plant and livestock diseases. The farmers find it difficult to take appropriate actions in response to the diseases because due to the lack of qualified agronomists and veterinarians.

Needs of agribusiness in Tskaltubo Municipality - SWOT Analysis

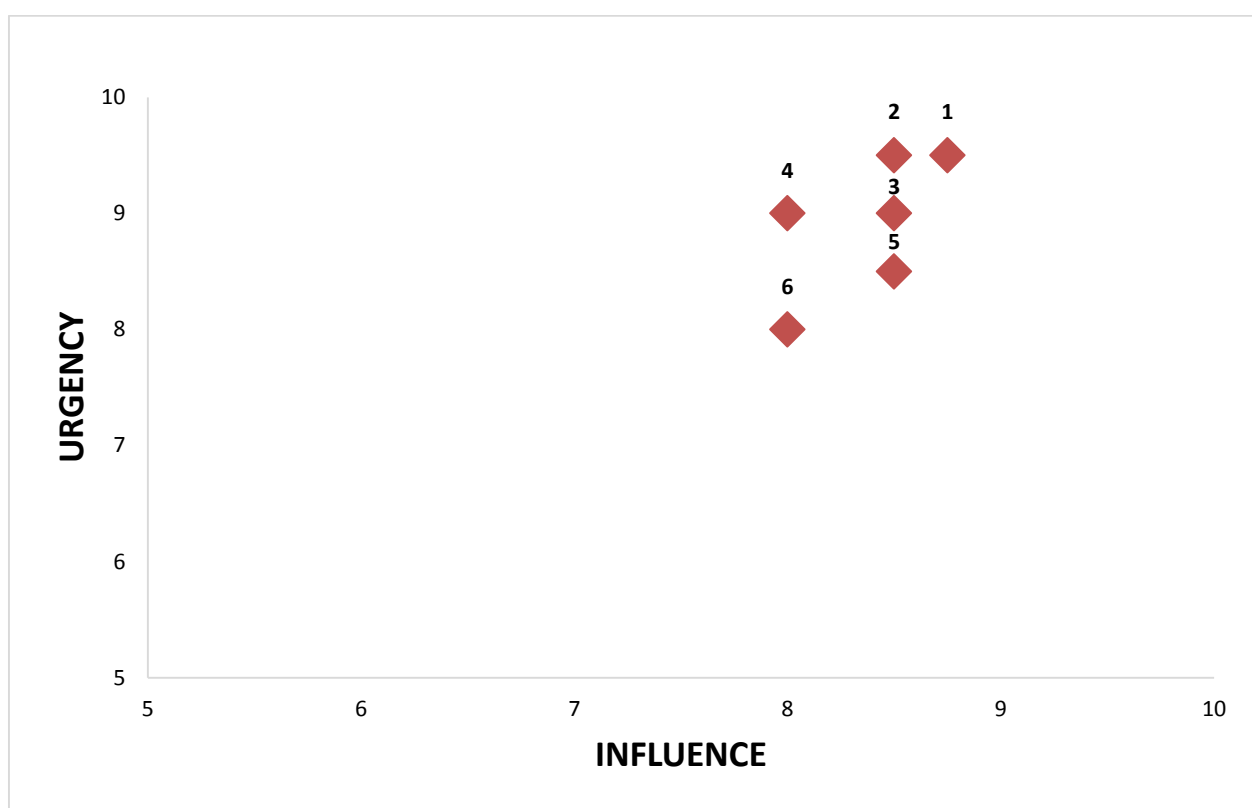
The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Market demand and capability to produce financially profitable products (hazelnuts, herbs, corn, pig farming, viticulture); • Large amount of meadows; • The existence of fertile agricultural lands; • Favorable climate; • Vegetables production capacities. 	<ul style="list-style-type: none"> • Limited accessibility to agricultural machinery; • Limited access to qualified agronomist and veterinarian services; • Low quality chemicals; • Modest rural roads; • Low availability of new varieties and technologies; • Limited availability of financial resources; • Low level of agricultural education; • The lack of irrigation systems; • Lack of agricultural land; • An unstable market price of herbs.
Opportunities	Threats
<ul style="list-style-type: none"> • Opportunity for greenhouse development (strawberries, vegetables); • Opportunity for development of dried fruit (black plum); • Recovery and development of the tea culture; • Opportunity to develop the crop farming (hazelnuts, fruits, bee-keeping, wheat, melons, watermelon, eggplant, citrus) 	<ul style="list-style-type: none"> • Climate conditions (drought, wind); • Low-cost imported GMO products; • Unqualified staff (veterinarians, agronomists and specialized shops with unqualified consultants); • Outmigration of the young and outflow of knowledge; • The current economic situation (exchange rate high volatility);

<ul style="list-style-type: none"> • The development of livestock farming (goats, sheep) • The development of poultry farming; • The introduction of new varieties of livestock • The development of experimental farms. 	<ul style="list-style-type: none"> • Diseases; • Polluted environment; • Market price fluctuations (hazelnuts, herbs and vegetables); • Wild predatory animals (wolves).
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In addition, the focus group participants, small and medium scale farmers, made the priorities for the development of the municipality in the following way:

Diagram N2 – Priorities Diagram



The needs shown on the diagram above are:

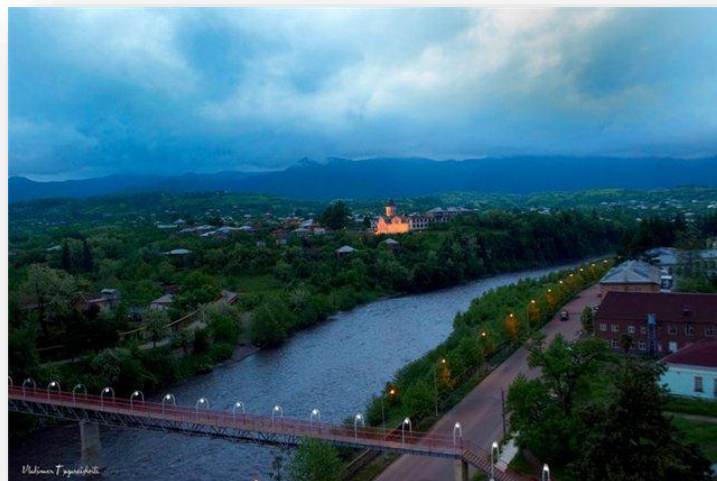
- 1) **Access to agriculture machinery** - Increasing the access to high quality agricultural machinery is important for farmers to conduct their work.
- 2) **Long-term, low interest rate agribusiness loans** – increasing access to low interest rate and long term loans are important for the development of the agricultural businesses. It is also important for them to be provided by long-term grace period.
- 3) **Access to qualified veterinarian and agronomist services** – farmers believe that the access to quality veterinary services is very low and this issue needs an urgent attention.

- 4) **Irrigation systems** – one of the most urgent needs for the local farmers is the infrastructural arrangement of irrigation systems and it is the only way to combat against drought.
- 5) **Farmer oriented education** – the farmers acknowledge the need to raise their level of skills and knowledge in order to increase the efficiency of their agricultural activities. They also express the will to learn about new technologies.
- 6) **Control the quality of chemicals** - the farmers stated the significant problem is low-quality chemicals, since their useage reduces output and has a negative impact on the quality of the crops.

Profile of Zestaponi Municipality

General description

The municipality of Zestaponi is located approximately 160 meters above sea level, in the eastern part of the Kolkhis plain on both banks of the river Kvirila. On the east side it is bordered by the municipality of Kharagauli, in the north-east the Chiatura municipality, from the west the municipality of Terjola, and from the south-west the municipality of Baghdati. The extent of annual rainfall is 1,190 mm.



The municipality has one town and 17 communities (56 villages). The town of Zestaponi, which is the municipal centre, is located on both the right and left bank of the river Kvirila; the main railway station is located in the town.

Demography

According to official data, the municipality has a population of 76,208. Out of the total population, only 32% (24,158 people) live in the town, while 68% live in the villages. On average, there are 888 people per village. The population density is 179 persons/km², which is three times more than the country average of 67 persons/km².

Economy

A significant portion of the country's industrial enterprises is located in Zestaponi. In particular, joint-stock companies: "Ferro", "Saqkabeli", "Ioni", "Graci", "Imereti", "Vachevi", "Sviri" - where a large quantity of wine, wine material, brand spirits and brandy are produced. The main industrial products include: Various types of ferroalloys, silicomanganese, electrolytic manganese, aluminum and copper in different types of cables, bare conductors, high voltage converters, auto block and alarm systems, voltage transformers for railways, home autotransformers and generators, electric battery charger accessories, refractory bricks and garment products, etc.

Agriculture

Agriculture is the key source of income in the Zestaponi municipality. Agricultural lands make up 19,200 ha, which is 46% of the total area, including arable land of 7,697 ha, which is 40% of all agricultural lands. Orchards cover 3,058 ha (16%) and meadows have 8,445 ha (44%). Vine, corn and vegetables production is priority in the municipality. Viticulture accounts 80% of all agricultural production per year. Vineyards occupy approximately 5,000 ha of land. From the vine varieties harvested in the municipality (Tsolikauri, Tsitska, Krakhuna) are produced. There are a couple of

successful wine factories in the region, including "Sviri" and "Sakari Cellar". Cattle breeding is widespread in the municipality. According to official data the administrative unit accounted for some 26,450 cattle. Sheep breeding is also popular in the municipality, with approximately 5,500 sheep. The number of livestock per hectare of pasture is approximately 3.2; however, this figure does not include the number of sheep.

Natural Hazards

Strong storms, floods, landslides, avalanches, riverbank erosion, earthquakes and drought are characteristic of the Zestaponi municipality. In the last decade, drought has been the most frequent natural hazard. There is no early warning system or approved emergency response plan in the Zestaponi municipality. The local government does not have the capacity to take any prevention measures itself and needs support from the region. Spatial plans have not been developed for land use and infrastructure projects for the municipality.

Agricultural Business Needs in Zestaponi Municipality

As said above, the agricultural business needs of Zestaponi municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

According to the participating small- and medium-scale farmers of the focus groups, one of the strengths of the local agriculture sector is the local climate conditions, which is favorable for the development of fruit farming, viticulture, beekeeping and livestock farming. In addition, a strength is the existence of local endemic varieties of vine. Also, according to the farmers, the land is good for the development of hazelnut farming. One of the focus group fruit farmers stated that "the climate conditions are perfect for growing many types of high-quality and highly-demanded fruits; however, we are in need of more information regarding new technologies to be able to produce more". One bee farmer stated that "our environment is ideal for bees and it is easy to reproduce bees. Selling the honey has not been a problem for me over the last 30 years".

At the local level viticulture, hazelnut farming, animal husbandry and fish farming are stated as priorities by small and medium farmers. The focus group participants believe that these activities should be supported. The farmers frequently take into consideration the successful examples of other farmers from their village and believe that these priority activities of agriculture should be developed other's experiences. "We had a great grape harvest this year because of the weather. There will be

also probably a good hazelnut harvest. My parents were against when I first planted the hazelnut trees as they



believed that vine was had better potential but now everyone is trying to do the same"- one of the farmers stated. Medium-scale farmers believe that animal farming has serious potential for development. For example, one respondent said: "farmers own 70 animal farms in Rodinauli and Tskhentaro, while there is one family who has 200 cows, plus they have sheep and goats and live close to meadows, therefore they make a good profit".

According to the representative of the local agriculture consultancy service, one of the biggest strengths of the municipality is its geographical location, which is an favorable for the products sale. "The best part is that we have a good geographical location, a highway and a railway, which passes through the municipality, which is favorable for the development of agriculture. This gives the opportunity for creating agricultural product processing factories; the transport of products is easy".

Weaknesses

The farmers named the limited availability of agricultural machinery as a main weakness. On the one hand they feel that the existing machinery centers are a is good but on the other, there are long queues and therefore the farmers are usually unable to meet their needs. Another problem is that the machinery is outdated. It should be noted that the many large farmers stated that they own most of the necessary machinery but this issue is still a big problem for small and medium farmers. As some respondents stated: "There are a couple of new service centers but the queues are too long and time is very important for crop production"; "The machinery is gets frequently broken; I have offered them to buy the spare parts myself, but did not give me permission. Then I called the ministry's hotline and they came after one week and did nothing"; "These centers send the machinery at around midday and then they work five hours, which is not enough; they need to change their management of work".

The majority of the farmers name the need for qualified veterinarians and agronomists as important factor for the development. Demand is high on such services and they are ready to pay the appropriate price for such services; however they feel that the supply of such services is scarce and low quality. Farmers stated that the

government should intervene in order to make the necessary amount of qualified veterinarians and agronomists available. Many farmers face similar problems: "I used to have a bird farm but because of a lack of qualified veterinarians 300 of my chickens died. I was also raising



sheep and cattle but I made significant losses"; "There are many new varieties of fruit but there isn't a single person who can advise or teach you on how to care for them". The local veterinarians share same opinion: "There used to be vet-districts, which were divided amongst 4-6 villages. There used to be a vaccination plan. The younger generation does not want to study this field anymore. The government should help raise qualifications of veterinarians. Recently, two qualified specialists were

provided and they conducted a practical trainings, but this should happen systematically in order to have an impact" - a local veterinarian stated in an in-depth interview.

The farmers stated that limited access to cheap agro-loans and participation in different state support programs are also problematic. Television advertisements and booklets sometimes seem to create false expectations among the farmers who believe that they are eligible for certain programs before being declined. Some of the focus group participants stated the following: "There should be long-term loans, otherwise it is very difficult for me to pay throughout the whole year"; "The first year when these loans were introduced I went to the bank office and someone very young said that I had to insure my loan with all the livestock that I own and my house; under these circumstances I'd rather get a loan from an individual rather than a bank"; "These loans should be long term as they are in other countries. In this case, you have to pay the interest rate in one year and then start paying the actual loan after that. Also, I would rather have a loan with a 30% interest rate but start paying after two years when I start seeing a profit".

There is also a negative attitude towards some state programs, as there are more farmers who wish to participate than actual beneficiaries. The farmers had the expectation that participation in these programs would be easily accessible and simple. For instance, some of the responses were: "I devised a project for the "Produce in Georgia" project, which representatives from the Czech Republic acknowledged and approved. There is an abandoned building in the village which is the property of the government. I wrote an official letter about this building for which I spent 3-4 days going back and forth to the ministry and when I was supposed to sign the contract the ministry told me that I would have to do the building assessment with my own money and not with the grant money. Is this support?"; "All the programs which are conducted are written by people sitting in offices with high levels of education but they do not know the real needs of the farmers. If a program pays money for only plowing this is not enough; there are many things that need to be done after the land is plowed. "; "They should let us participate in planning and creating the programs".

Farmers want to have new varieties and to use new technologies. They feel that they do not have the relevant education or information. Some livestock farmers stated the following: "nothing is being done with regard to selective breeding and that the cows produce only five liters per day, therefore the price of milk is very high since as it costs 2-3 GEL each day to feed each cow. Selective breeding is necessary and something needs to be done in this regard"; "There are so many new methods in medicine but we are not equipped with such information". "We know that there are many different types of fruits which have great potential but we don't know where it is possible to buy the seeds or how to care for them"; "There is one agronomist and it would be helpful if he would visit the village once a month as well as some representatives from the consultation center in Zestaponi town."

Opportunities

The following priorities were identified for the agricultural development of the Zestaponi municipality: viticulture, cattle farming, nut farming, fruit farming, and beekeeping. At the same time, fish farming has great potential. Farmers believe that supporting the creation of food processing

factories is important for the development of these activities, particularly dairy and fruit, which will have a guaranteed sales market. "Say there is a milk processing factory; if today I have 30 cattle, tomorrow I would have 50 and the day after I would have 100. I prefer to sell milk at a normal price and know for sure that it will sell" - a focus group participant stated. The farmers feel that the adoption of new varieties and technologies is important for the development of these activities. They feel that the role of the government has no alternative. According to an in-depth interview respondent, "the creation of a demonstration farm is necessary, as this would be the best way to show a farmer how to work on the land".

It is also important to have qualified veterinarians and agronomists in the municipality. The local veterinarians believe they need trainings and be informed about new diseases and new methods against them. Also, the number of veterinarians in the municipality is not enough. A local veterinarian stated that "I do not have the financial means or obligation to travel village-to-village; I try to do my best to explain and help farmers who come to me but I know that this is not enough".

Farmers are more or less informed about state and international programs but they have difficulties participating in them. These programs would give them the opportunity to develop their farms and to implement new initiatives. Therefore, the focus group participants feel that it is important for the farmers to be better informed about various support programs. Also, farmers noted that frequently different state and international programs are confused with one another, and that the farmers do not know where they should go in order to obtain information.

Some of the farmers also named the importance of agricultural and business education and access to consulting opportunities, and realized that in order to participate in programs and communicate with banks it is necessary for them to be able to write business projects and develop business plans, for which they lack the necessary knowledge and skills. Thus, providing relevant business educational courses will significantly increase their capacities. As for specific trainings, farmers believe that these types of trainings should be offered periodically since new methods are being introduced each year. Some local farmers expressed their concerns, which included: "We do not have education; I am not talking about higher education but rather farming education. I would like to plant hazelnuts but the place where I can obtain information regarding this activity is from my neighbor and I have no other resource"; "For a grant or bank loan there is too much paperwork to be filled out. I am not able to do this.".

Threats

Natural hazards (drought and hail) were stated as one of the biggest threats to crop production. As some farmers stated: "it would be great if government installs hail defense units here, the same way as they did in Kakheti or elsewhere"; "Last year hail ruined 95% of our vineyard" - some of the in-depth interview respondents stated. Also, irrigation systems are practically non-existent therefore farmers are solely depended on the weather.

Wild animals is a real concern for some animal farmers. There are many wolves in the forest which hunt domestic animals. One of the focus group participants stated that "A wolf killed two of my

neighbor's cows, with five animals killed in one week by a wolf. We spoke with the authorities but they replied that they could only do something if wolves come into our homes".

Local veterinarians and farmers stated that livestock diseases are one of the biggest risk factors. For example, the chicken and pig livestock of a couple of farmers all died due to some diseases. For risk prevention, livestock vaccinations can be used more, but the issue remains a challenge: the import of vaccines is often delayed and the price is not always affordable. Local veterinarians state a particular problem is the fight against brucellosis: "Brucellosis is a very fierce disease that makes the farmer forced to put down the livestock. There is a vaccine which would help prevent this disease but it has limited availability on the market and is only imported by the government. There is also a need for more veterinarians. There are 59 villages in the Zestaponi municipality and only eight veterinarians, and this is not enough."



Migration of the younger generation is also a major problem the municipality is facing and is sought to be continued until economic conditions improve. Some focus group farmers stated the following: "The younger generation is not willing to work on the land until the agriculture becomes more profitable, therefore they are leaving the villages"; "The village will be empty soon if the trend of migration does not stop."

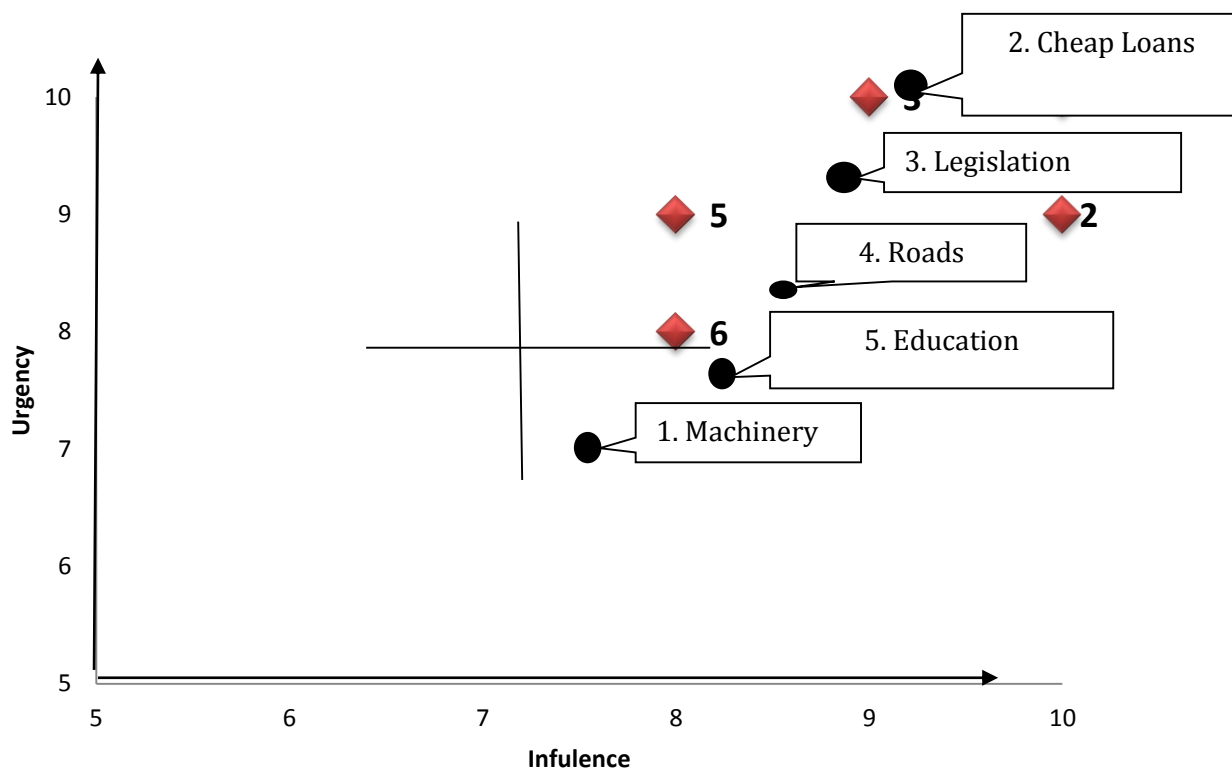
Needs of Agribusiness in the Zestaponi Municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of agriculture; • Fertile land in most of the areas; • Availability of water resources for fish farming; • Well-developed activities (viticulture, bee farming); 	<ul style="list-style-type: none"> • Limited access to high-quality agricultural machinery; • Lack of information on different programs (agricultural loans, grant competitions); • Limited access to new breeds/varieties and technologies; • Lack of storage/refrigerating facilities;
Opportunities	Threats
<ul style="list-style-type: none"> • Introduction of new varieties, especially 	

<p>in fruit farming;</p> <ul style="list-style-type: none"> • Creation of a milk processing factory; • Delivery of special training courses for farmers; • Provision of qualified veterinarian and agronomic services; • Control of animal diseases; • Provision of business consultancy for the development of business plans; • Development of beekeeping; • Development of fish farming; 	<ul style="list-style-type: none"> • Natural hazards (drought, hail, etc.); • Outmigration of the young and outflow of knowledge; • Diseases;
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The focus group participants, small- and medium-scale farmers, identified the priorities for the development of the municipality in the following way:



The needs shown on the diagram above are:

1. **Farmer oriented education** - raising the level of the qualifications of farmers and improving their level of knowledge in order to increase the efficiency of their agricultural activities. According to farmers, distribution of information booklets and materials is also effective.

2. **Machinery** - increase access to high quality agricultural machinery equipment.

3. **Qualified veterinarians and agronomists** – as farmers realize the importance of the role of veterinarians and agronomists in their activities and the level of access is limited.
4. **Long-term, low interest rate agro-loans** – increasing access to low interest rate, long-term agro-credits; availability of a specifically-defined grace period is also crucial for farmers.
5. **Processing Plants** - realization of products on a variety of domestic and regional markets is quite difficult for local farmers; therefore, they want a processing plants to operate in the municipality, which will purchase their raw products for further processing.
6. **New technologies** - Farmers generally are aware of different innovations in agriculture, but do not have the proper knowledge and access to relevant services for the actual implementation of new technologies on their farms.

Profile of Tkibuli Municipality

General description

The municipality of Tkibuli, which includes the historic area of Okriba, is located in western Georgia, in the Lower Imereti region, at an altitude of 600-800 meters. The municipality is surrounded by a mountainous territory which is covered by forests. The municipality is bordered to the north-east with Ambrolauri, in the south - Terjola, east - Chiatura, and to the west - Tskaltubo municipality and the Kutaisi municipality.



The total area of the administrative unit is 47,800 hectares, out of which 10,984 hectares is agricultural lands and 29,183 hectares is forest, which is 61% of the total area of the municipality. There are 48 settlements in the municipality, including one town. The municipal district is situated on the river Tkibula from both sides. There are various thermal and drinking mineral water sources in the municipality. The main sources of income for the population are: mining, agriculture, trade and remittances.

Demography

According to official data, the municipality has a population of 30,100 people. Out of the total population, only 14,500 (48%) live in the town, while 15,600 live in the 47 villages, which is an average of 330 people per village.

Economy

One of the main economic activity of the Tkibuli municipality is the coal industry. In 2006, coal production was restored and the coal factory was renewed. There is also a hydroelectric power plant located in the Tkibuli town. The water plant is supplied from the Shaori reservoir and has a projected capacity of 38.4 MW. and an average capacity of 28.0 MW. One of the main sources of income is agriculture (mainly livestock farming) and tourism (balneology water resources).

In addition, the opportunities for development are in the forestry sector (wood processing and furniture factories), which can become the basis for the development of other sectors of the economy.

Agriculture

Land Resources - Agricultural lands in the Tkibuli municipality occupy 23% of the total area, out of which 3,596 ha is arable, which is 33% of the total agricultural land. Fruit and perennial plant gardens cover 840 hectares (8%), while meadows cover 6,548 ha (60%).

Arable lands cover 3,596 on which the following crops are grown: maize, beans, tea, fruits and grapes. However, these products do not have high output: Corn 5-6 t /ha, beans - 0.5 t /ha, tea 4 t /ha. Grapes have a relatively better yield of 3.5-4 t /ha.



The agricultural lands do not need drainage. Most of the arable lands requires irrigation due to frequent droughts. The geographical location of the municipality makes the irrigation process complicated.

Livestock farming - meadows occupy about 60% (3,596 ha) of the agricultural land of the municipality. Livestock farming is the pre-dominant sector of agriculture, but recently the number of cattle has decreased; 8,717 cattle were accounted in 2012. According to the information provided by official sources, the number was reduced to about 1,200. The farmers in the municipality state that over the last 10 years, there has been a growth in the loss of livestock, due to an increased number of predators.

Natural Hazards

The administrative unit of Tkibuli is characterized by strong winds, landslides, drought and the erosion of river banks. Over the past 10 years the rate of landslides has increased. Landslides pose a threat to the populated areas, but the municipality does not have any statistics about the areas damaged. Recently, the landslide damaged 59 residential buildings in six villages. In addition, strong winds affected all the settlements of the municipality. The municipality does not have a stable system for accounting natural disasters. In the last 10 years no projects have been undertaken or are being planned for the prevention of natural disasters.



Agricultural Business Needs in Tkibuli Municipality

As said above, the agricultural business needs of Tkibuli municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Given that the municipality does not have large areas of arable land (3,596 ha), it is difficult to identify opportunities for e.g. plant farming. Consequently, the agricultural sector should be strengthened mainly at the expense of livestock and bee farming.

Strengths

Mining plays a leading role in the economy of the Tkibuli municipality. The relatively small area of agricultural lands and large areas of forests create certain restrictions for agriculture development.

All farmers and in-depth interview participants stated that the natural conditions in the municipality are favorable for the development of animal and bee farming. Also, the development of cattle farming is supported by an existing cooperative of with 28 member farmers and who produce cheese jointly. The cooperative consistently buys milk from farmers residing in the villages for a price ranging from 0.7 Gel to 1 GEL (the price varies depending on the season). Therefore, the farmers have the sufficient motivation to raise cattle. Some farmers have also been successfully involved in poultry. Meanwhile, pigs are considered to be profitable; however, the inability to prevent certain pig-related disease made some farmers reluctant to work on pigs' farms. "I have pig and cow farms. Pig farming is very profitable but the risk of disease is too high" - one of the farmers stated. Also, many of the farmers are working in bee farming and their biggest is the production of additional honey-based products. "Our honey is of a very high quality therefore there is a very high demand. If we had the resources we would also produce bee milk - we know that there is a high demand for these products"; "We have all the conditions needed for bee-keeping, large and good forests, but the farmers need help in order to produce more products"; "We all own bee hives and we have experience in producing the honey as well as selling it. Honey is in demand and important"- noted some of the farmers participating in the focus groups.

The farmers believe tea-production has the potential to develop. For this, it is important to note that the municipality has a tea processing factory. Despite the fact that it is old, its full capacity is not being utilized because due to the scarcity of farm outputs. According to the factory managers, 450 hectares of tea plantation are liable for restoration, which would produce 1,000 tons of tea leaves that the factory would be able to process: "We have a lack of farm outputs; realization of the products in not a problem, as we supply the local market, the army, and shops that stock our products. The main problem is the lack of farm outputs, the plantations are destroyed. It is a shame, as Tkibuli tea is from a mountainous region and very tasty"- one in-depth interview respondent, who is a representative of the tea factory, stated.

As for the traditional agriculture activities in the Tkibuli municipality the farmers feel that it would be beneficial if the government conducted additional studies and analyses about which new types of agriculture activities would be profitable. "The government should develop a plan in which it states the optimal type of agriculture activity in each region. It should conduct land analysis for each region in order to determine which crops would be most productive in the different areas" - a medium-scale farmer stated.

Weaknesses

It should be noted that similar to other municipalities, low accessibility to agricultural machinery is one of the most frequently stated problems. The farmers stated that one of the consequences with having a lack of machinery is not being able to conduct relevant activities timely. Also, small scale equipment is not available and the existing service center is not able to meet the



needs of the farmers. The in-depth interview respondents expressed similar opinions: "Access to machinery is a necessity and in a certain timeframe, which will allow us to plow and plant in the right time. There are five tractors in Tkibuli but this is not enough "; "Because of the characteristics of our place, which include small plots of land, a lack of irrigation systems, etc., we need small machinery"; "There is no plowing machinery in the municipality. We get machinery from the Zestaponi Service Center but they don't have enough resources. We are not able to receive the machinery on time and therefore." "We own some machinery but they do not work. There is lots of work to be done on the land for which we don't have the resources. Farmers don't even know how to transport the harvest to their homes."

Modest roads and related infrastructure were also stated to be major weaknesses. For farmers, the heavily damaged local roads pose a challenge for land development, as well as for the selling of the agricultural products and any other activities. In their opinion, the rehabilitation of these roads is a main necessity: "The first thing the Ancient Romans did - was to pave roads. Money and programs are good and essential but they don't hold any value if the roads are not repaired. Road and water are the two most major problems, and after resolving these issues we can talk about what else needs to be done "- one of the focus group farmers stated.

Breeds of livestock that are of low productivity is a weakness. Currently, there are few breeds available and farmers depend on luck regarding how productive the animal will turn out to be. Despite the fact that there are relatively better conditions for the development of livestock farming in the municipality, as well as working dairy cooperatives, having new breeds remain an issue. Farmers realize that it is necessary to introduce new and highly productive varieties, but they neither have knowledge nor resources to take specific steps in this direction. "I would really like more productive

cows but I know a couple of examples when farmers brought cows from Terjola but they did not turn out to be productive in this area so I am not willing to take the risk"; "Our cows do not have much milk but I am unsure about new technologies such as artificial insemination and new breeds would help"; "If farmers obtain improved breeds of cows we will be able to buy more milk and produce more cheese" - a representative from the cheese production cooperative stated.

Limited access to qualified veterinarians is one of the most frequently stated problems. Similar to other municipalities both the level of qualification level and low number of consultants are a problem.. Also, the lack of disease prevention is a major threat, especially in pigs farming. Since animal farming is the main field of agriculture in the municipality the need for qualified veterinarians is crucial. "It is very expensive to get veterinarian services. Our village is high in the mountains, therefore it would cost half the price of a cow to call a veterinarian to the village and unfortunately we don't have any veterinarians here"; "Only vaccines are not enough. We are often in need of veterinarian services but we do not have money to pay for it"; "The veterinarians who come to the village often do not have enough knowledge" - a selection of livestock farmers stated.

A lack of knowledge about modern technologies among small farmers was stated as a weakness by many respondents. This issue is especially important for bee and animal farmers. They only have limited information about some innovations. Also, they are in need of consultations and access to financial resources: "We need to learn about new methods for the production of milk. Most of the problems which we have might be because of a lack of our knowledge and skills" - one of the farmers stated. "We have been doing bee farming in our family for three generations already but the knowledge which I have is what my grandfather taught me. There are many new methods which I need to learn and I would like to have someone to teach me" - one of the bee farmers stated. Farmers also stated a lack of arable land and harsh winters in their list of weaknesses.



Opportunities

The farmers stated the importance of introducing new technologies and varieties in animal and plant farming as a main opportunities of agricultural development in the Tkibuli municipality. Despite the fact that the region is characterized by a lack of arable land, farmers still believe that plant farming still has the potential to use new technologies. The planting of chestnut, walnut and plum gardens among the interests of the farmers. Walnuts are one of the most expensive and demanded products, which do not need a large area to grow and the municipality's geographical-climatic conditions is favorable for the walnut production. Farmers are also interested in greenhouses and the possibility of an establishing the blueberry plantations. As for livestock, the most important issue is cattle productivity increase through the introduction of new varieties.

As for livestock farming, the farmers are in need of improvements in cattle productivity through the introduction of new varieties of cattle. But there are farmers who prefer more innovative approaches and believe that in the case of proper knowledge and information dissemination rabbit, poultry and fish farm development would have good potential: "The introduction of new technologies and seedlings are necessary as well as the creation of sample land plots; many new thing can be achieved and developed but we need knowledge, money and opportunity"; "We have a yield of very good walnuts, so if any one plants and raises improved seedlings they will see good profit"; "I know that rabbit farms are very profitable, but they require knowledge" - a selection of the farmers stated.

A prerequisite for all of the above-mentioned activities is special training courses and consultations for farmers. It should be emphasized that the majority of the farmers are aware of the need for new knowledge and skills. The farmers are generally interested in having qualified field consultations on their lands, in order for them to see exactly how they can solve specific problems. "One of the biggest problems that our population faces today is a lack of knowledge. If we do not gain more knowledge, the don't have an opportunity to exchange experiences with successful farmers, nothing will change and we will not be able to develop our businesses"; "First of all it is necessary to raise the level of knowledge in farmers, study modern technologies, while in addition, combining small lands, introducing new breeds, artificial insemination, planting new seedlings and carrying out irrigation measures and are very important"; "Consultations should be conducted from time to time on site, with veterinarians, agronomists, and professionals from other fields. Otherwise, farmers are unable to go to the service centers and therefore cannot receive new information about chemicals and drugs,"- said a some of respondents.

Increased access to agricultural loans will significantly increase the opportunities for farmers to diversify their work into new activities and further develop their existing businesses. Despite the fact that they have information about the current state support programs and have made some attempts to participate in those, they believe that the programs are not accessible for small- and medium-scale farmers, and only already-successful farmers are entitled to cheap loans. Additionally, another challenging issue is the absence of a long-term grace period which farmers believe should be taken into consideration by the state, as well as the banks and international organizations. Some of the farmers expressed the following opinions about the financial issues: "Agro-loans are not available for small farmers; the farmers do not see a big enough profit to be able to repay the loan. The only exception would be a few bee farms"; "If the state offered loans to small farmers for an interest rate of 3 percent per year for three years it would be great. In 10 years this country would be greatly developed. We are not able to do anything without money"; "The loans are given to farmers who already have functioning businesses while small farmers are not able to receive help."

Farmers in Tkibuli municipality are quite optimistic about the potential of creating new cooperatives, and, moreover, consider the engagement of small and medium farmers as very important. It could be assumed that the main reason for this is the existence of couple of cooperatives in the Tkibuli municipality which are operating successfully and from which the farmers directly benefit. It is important that both the farmers participating in the focus group, as well in-depth interviews

respondents have the same positive attitude towards cooperatives. "Today there are a couple of existing cooperatives; they received grants, equipment and the member farmers are all doing very well. I think that the cooperatives will be able to accommodate work for more people"; "The farmers realize that the future of agriculture is greatly dependent on cooperatives. This is also the case in Europe and in other countries. It is a good way to gain knowledge, for the younger generation to take an interest in agriculture and to stop migration, and to sell products. At the beginning, we all thought that a cooperative meant collective agriculture in an old Soviet way, but we now realize the real meaning" - some focus group farmers stated. The farmers also believe that if processing enterprises are created in the municipality, especially for dairy products and dried fruit production, it would increase their income and help economic development in general.

Threats

The most frequently mentioned threat was the large number of predator animals. The farmers say that in the last year they had seen a huge increase in the number of wolves and firm measures are needed to deal with this issue. "There is not even one farmer whose animals have not been killed by predators" - one of the livestock farmers stated.



The farmers of the Tkibuli municipality stated migration and accordingly the outflow of work force and knowledge as particular threat. Younger generation is trying to find jobs in cities or abroad. They stated that there are a couple of villages where only seniors live. "The only employment here are in the mines other than agricultural work; the conditions in the villages are terrible and everyone is moving to Tbilisi"; "The main problem is that there are no more people living in the villages, who will be able to take care of the tea plantations or animals? The younger generation is leaving to the cities and the older generation are getting too old"; - some of the local farmers stated.

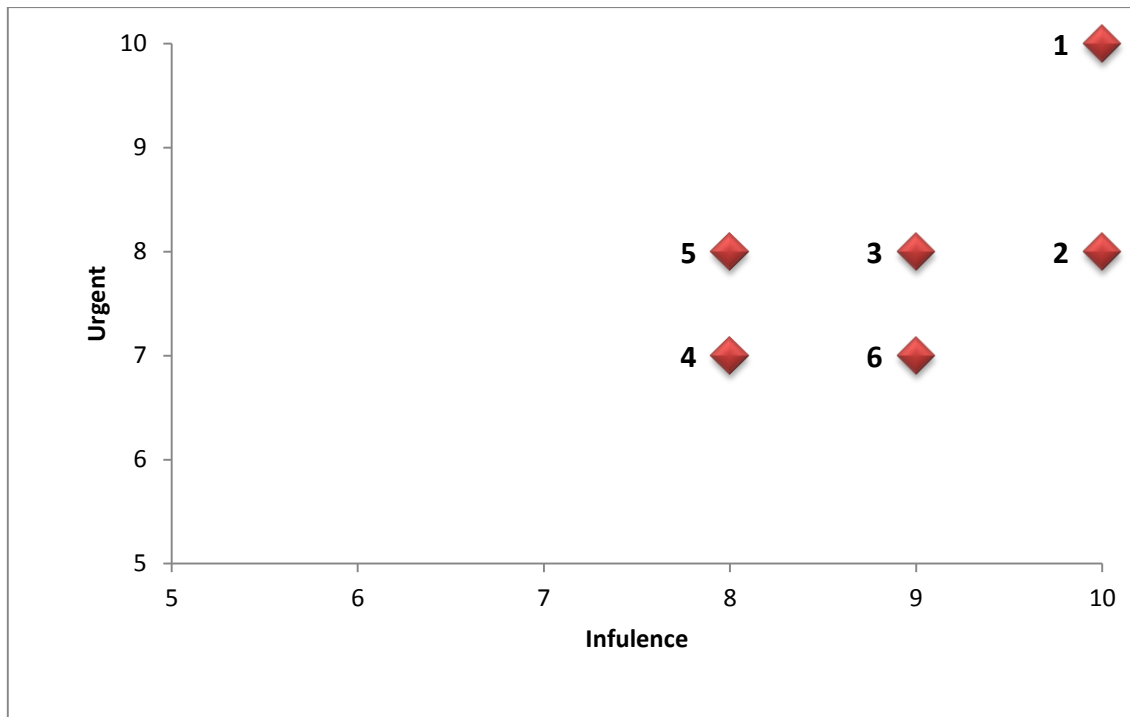
Farmers also see the depreciation of the Georgian lari and Georgia's unstable economic environment as a threat. They believe that the economy should be developing free from political attitudes. Some of the farmers expressed following opinions: "In my opinion the change of government occurs very often; I think that agriculture should be independent of politics. A lot of money is wasted, but our situation is not changing. And now, with the depreciation of GEL, they blame each other, but meanwhile it negatively affects the economy and farmers", "lately everything has become more expensive – fertilizers, food – and you are telling to development. If the economy will be volatile and unstable and I can't sell my crops then what is the purpose of my work?" Farmers also believe that natural events (such as hail, landslides, floods, and drought) and diseases (mainly those related to pigs and cows) constitute threats to their work.

Needs of Agribusiness in the Tkibuli Municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of animal and bee farming; • High quality meadows; • Stable demand on animal and honey products. 	<ul style="list-style-type: none"> • Limited access to high-quality agricultural machinery; • Modest roads and relevant infrastructure; • Low level of knowledge among farmers about modern technologies; • Low productivity breeds in animal farming; • Scarcity of agricultural land; • Harsh winters.
Opportunities	Threats
<ul style="list-style-type: none"> • Introduction of new varieties and technologies; • Support the development of: rabbit farming; Poultry and Fish farming; Tea production; Chestnut, walnut and plum orchards; • Provision of special training courses and consultation; • To maintain and attract the new workforce; • Provision of frequent informational campaigns about agricultural support programs and projects; • Establishment of cooperatives with the involvement of small and medium farmers; 	<ul style="list-style-type: none"> • High number of predators; • Outmigration of the young and outflow of knowledge; • Natural hazards; • Diseases (mainly pig and cow); • Unstable economic environment.

The focus group participants, small- and medium-scale farmers, allocated their priorities for the development of the municipality in the following way:



The needs shown on the diagram above are:

1. **Roads** - One of the most important needs of the local farmers is the rehabilitation of the local roads and infrastructure; the municipality is rich in grasslands and meadows, but the roads are modest.
2. **Economic situation** - the farmers believe that without the overall improvement of the country's economy there is no point in developing their businesses. Demand on all products has been reduced significantly due to Georgia's currency depreciation.
3. **Long-term, low-cost agro-loans** – increasing access to low interest rate , long-term agro-loans; availability of a specific grace period is also very important for farmers.
4. **Access to machinery** - increase access to high quality agricultural equipment and machinery, with small scale equipment is especially important;
5. **Qualified veterinarians and agronomists** – the farmers understand the important role of veterinarians and agronomists have in the success of their activities.
6. **Farmer oriented education** – more needs based courses are needed to develop local farmers' knowledge and skills.

Profile of Terjola Municipality

General description

Terjola municipality is located in Imereti region, in the eastern part of Kolkheti lowland. The total area of the municipality amounts 35.750 ha., out of which 21,432 ha is agricultural land constituting 60% of the total land area. The forest area occupies 10,000 ha. Terjola is located in mostly humid subtropical climate zone, which is characterized by cold winters and relatively dry and hot summer. The average annual rainfall is 1,350 mm. Terjola municipality is bordered from the west by Kutaisi, from the south-east by Zestaponi, from the north by Tkibuli, from the north-east by Chiatura and from the south by Baghdadi municipality.



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Demography

According to the official data, the population of the administrative unit amounts to 28,800 people. Out of total population, only 17% (5000 people) lives in the town, while 86% (23,800) live in the villages. The municipality is composed of 1 town and 44 villages. The population density is 126 persons/km² which is almost two times higher than the national average (67 persons/ km²).

Economy

The main field of economic activity in Terjola municipality is agriculture. A hydro power plant - "Dzevrulahesi" is located on the municipality territory. A couple of roads of national significance pass through the municipality: Terjola-Tkibuli and Kutaisi-Vartsikhe, also the highway S1 (Tbilisi - Senaki - Leselidze).

Agriculture

Agriculture is the key source of employment in Terjola municipality. Agricultural lands hold 21 432 ha, which is 60% of the total area, including arable land of 8 206 hectares (38%), orchards are on 21% of the territory (45 000 ha), and meadows - 41% (8,726 ha).

The arable land area of Terjola municipality is 8,206 hectares, which is 38% of the total agricultural land. Mainly the following crops are grown in the municipality: maize, grapes, wheat and soybeans. The average grape output is 5 t/ha, corn - 2.5 t/ha, soybean - 1.5 t/ha and wheat - 1.5 t /ha. About 50% of the arable land needs



irrigation. However, most of the land is not irrigated due to the outdated irrigation systems and water shortage. Furthermore, 20% of agricultural land needs drainage, but drainage systems are outdated.

Meadows occupy 41% (8 726 ha) of the agricultural lands of Terjola municipality. Livestock and sheep farming is the pre-dominant sector of agriculture in the municipality.

According to the data provided by the municipality in 2012, 35 000 cattle and 4 300 sheep were accounted. According to information provided, the number of cattle has increased in recent years. The established norm for grazing on municipal meadows is 1 animal per ha. Even if the municipality allocates half of its arable land for grazing, the amount of meadows for each cattle would amount to around 0.4 hectares. Therefore, we must assume that the municipality has overgrazed meadows.



Natural Hazards

As for the natural hazards Terjola municipality is characterized by heavy rain, floods, landslides, river bank erosion, drought, hail and earthquakes. Over the past 10 years drought has increased. Natural disasters are damaging both residential and arable lands and public infrastructure. In particular, in some villages landslides damaged about 127 hectares, residential area, developed lands, arable lands and meadows.

Agricultural Business Needs in Terjola Municipality

As said above, the agricultural business needs of Terjola municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strenghts

The farmers of the Terjola municipality believe that the traditionally developed activities in the region are: viticulture, animal and corn farming. They also grow wheat, beans and soybeans. "My family is engaged in agriculture. We own cattle and have two hectares of cultivated land where we are growing corn, beans and soybeans. We planted hazelnuts on over 3000 square meters and we also own a vineyard. I wanted to establish a bee farm but it is very special work and failed to manage it, although I plan to try it again in the future. We also have 100 chickens, a vegetable garden and fruits. We have everything that is available in the village" – on of the farmers stated. "The strong side of our work is viticulture-winery. We try to sell wine and not grapes since it is more profitable. It is not

cost-effective to sell only grapes so we decided to practice bio viticulture and produce wine from old Georgian grape varieties. We do not produce significant volume of the vine yet however we have no problem to sell what we produce”, one of the small farmers stated.

According to the farmers, one of the strengths of the local agriculture sector is the local climate conditions and fertile land, which provides the opportunity of developing new profitable activities, such as: hazelnut farming, bee-keeping, and walnut and berry cultivation. „We have good climate conditions for the cultivation of hazelnuts as well as walnuts. Additionally, our lands are good for berries, if we would have the opportunity to export them to Europe”, one of the focus group participants stated.

Weaknesses

According to the farmers, one of the major hindering factors for the development of agriculture is the low availability of agricultural machinery. The number of the machinery necessary for conducting agricultural works is small, which results in delay of use of the machinery. Overall, it has an impact on the amount of harvest, increases the volume of men work and decreases the quality of crop. „The unavailability of machinery is a big problem. If we are unable to plant in April we will not get any grain harvest because of the soil. Last year some farmers were unable to plant until mid-May and the entire corn output was about very low. There should be enough tractors for the farmers to be able to cultivate their lands in time. The three of us were trying to get a tractor for May”; „Experience showed that it is almost impossible to get anything done in the on time, one combine serves 5 municipalities. If one neighbor sees that another is in trouble to plant, then that lowers his/her motivation to plant himself/herself. The lack of machinery is one of the reasons why the farmers no longer plant crops”; „We are forced to do everything through handwork. This is a big waste of time and the result is much less” – the focus group participants stated similar opinions about the problem of accessibility to machinery.

The farmers believe that another major obstacle for the development of their agriculture is limited access to financial resources. They think that the bank loan terms make it impossible to get a loan. Farmers also have very general information about state support programs, and have difficulties while preparing documents and business plans due to their limited skill. „Financial resources – low interest rate loans are necessary for initiation of business activity. All banks look at our existing turnover, start-up needs preferential agro loans, which is not available for us“; „The banks tell you 16-18% interest rate in the beginning, which soon increases up to 40%, you shall pay more than you expected”; „Cheap loan is the only solution, however the banks will not issue these type of loans to the farmers since a sustainable



income is required, which farmers do not have”; „I own land and would grow vines. The loans would have to be with low interest rate, since it takes a couple of years to grow the vines”; „There are some state programs, however you need to have some knowledge about the participation procedures” – the respondents stated. Existence of certain grace period is important for the farmers, since it takes a longer time for them to receive a payback from their investment compared to other fields.

Counterfeit and low quality agricultural chemicals on the market is a big problem for the development of agriculture, according to farmers of Terjola Municipality. The farmers stated that the role of the government is quite important in finding a solution to this problem. They feel that it is the government’s responsibility to control the quality of chemicals and fertilizers. “I own a fruit garden, where I grow almost all types of fruit. I used the chemicals for my trees, followed all the instructions and my trees dried up. This occurred since the chemical was of very low quality”. “One of the farmers bought some new drugs, which damaged his whole vineyard. The person selling the products shall be held responsible. The shops should have certified retailers, especially for agricultural chemicals”; “Everyone wants to sell its products, we sometimes use them 12-13 times more chemicals than needed, which affects the taste of the wine. It is not under control and the chemicals of the land also change” – the focus group participants stated. Under their assessment, apart of the low quality of chemicals, there is lack of qualified consultants in this field.

Livestock farming is developed in the municipality although introduction of new breeds and the lack of meadows is an obstacle. “It would be nice to introduce new breeds, however this is associated with significant amounts of money and additionally we are already facing a lack of meadows”, one of the farmers noted.

The low level of agricultural knowledge and skills was named as a problematic issue by the focus



group participants. They have limited access to information about new technologies and breeds. The farmers believe that together with theoretical trainings practical teaching is required as well. A high need for consultations/teaching in nontraditional fields was revealed. “Farmers have been taking care of vines for a long time, but many of them lack basic knowledge about using the chemicals so they are in need of more information”; “It has been 10 years, since we started planting hazelnut plantations in the municipality, but

the problem is that not all varieties grow. I brought some hazelnut roots from Guria but they had difficulty to grow, it took a lot of efforts for my part. This was caused due to my lack of my knowledge. Therefore, it is important for us to be able to get consultations in order to know which plants need what type of land and care”; “I intend to grow raspberries and hybrid varieties are required for our land conditions as far as I know. I want to get information how to grow these varieties and how to care for them” – the respondents stated.

The productivity of the agriculture fields is greatly dependent on the existence and frequency of irrigation. The absence of an irrigation system is a problem in the municipality. “The climate has changed, drought decreases our outputs, it is necessary to have modern irrigation systems”; “Unless we irrigate the land then none of our work has any price. Our outputs are gradually decreasing and the main reasons is the lack of water” – the respondents stated.

Opportunities

The farmers think that the introduction of new varieties is one of the opportunities for developing animal and plant farming. The focus group participant farmers spoke about a couple of successful examples of that: “we bought new, Italian varieties of hazelnut. They have roots, which grow in a way that it produced hazelnut the same year we planted it and easily adapted to the conditions. Last year we planted our local variety and they cannot be compared, the local ones must be removed”; “Fertility specialist works in our municipality. The interested people have his contact information. He is a good specialist who successfully accomplished all attempts. I have personally used his method of the artificial insemination of pigs. There are about 100 of these types of attempts in the region, which is not a lot but is a good start. Cooperatives will probably also help in the future and the animal breeds will improve. New breeds are necessary”; “The farmers are trying to plant higher productive cultures. New cultures, varieties and technologies should be implemented and introduced in order to receive the same amount of harvest similar to the developed countries.” – the focus group participants stated.

According to the farmers, development of traditional activities is possible in the municipality such as viticulture-winery with orientation on unique varieties of grapes. The farmers stated that there is a high demand on the market and therefore it is promising and profitable to develop traditional grapes and wines. However, the level of knowledge of the farmers in these fields is not sufficient. “Titska and Tsolikauri varieties have been growing in this area for ages, they are unique varieties. Viticulture-winery has good potential, we produce wine and try to slowly approximate to European standards in order to export it, while some already export it”; “Walnut plantations are quite important. Georgia currently imports walnuts from Ukraine. The market price for the walnut amounts around 20 GEL. These areas are underdeveloped. The state program "Plant the future" allows us to do this work. Some have already initiated walnut cultivations”; “I started planting walnuts since it is profitable and requires less labor and cost, the market demand is high and it is sold well, but we need to learn how to care for it, which crops and varieties to plant in order to receive good harvest”- the respondents expressed their opinions. The farmers think that the establishment of a milk and fruit processing factory would increase their motivation to produce more products, work on increasing productivity and develop their farms. “Processing facilities are necessary, we do produce products but then we



have trouble to sell them. When one neighbor sees that another neighbor's product is perished he/she will have no desire to produce the same crops" - one of the respondents stated.

According to the farmers, the local geographical and climatic conditions are favorable for the development of tea plantations, for which the farmers need state support and access to appropriate programs. "Tea plantations can be developed, now people work on revival of tea culture. If the government supports us, the local conditions are very favorable"; "There used to be tea plantations here, which can be revived and people will be employed," - the respondents stated.

To exploit opportunities the farmers they need to attend special agricultural courses and receive consultations. The farmers acknowledge the need to update their knowledge and get consultations from specialists before making decisions. The farmers believe that it would be much more effective to receive the consultation on site, where they would be able to see firsthand what activities should be carried out for specific problem. "Serious amount of money is required to start a new business, additionally it is important to gain knowledge beforehand. In the case of hazelnut farming it is important to learn about planting, harvest and other accommodations"; "4 day trainings are not sufficient. We need practical on site trainings. There are a lot of details which should be taken into consideration, which you should study specifically for your land plot" – the respondents stated.

Threats

Natural hazards were stated as a threat by all farmers. Out of which the biggest threat for the Terjola Municipality is drought. "The natural conditions are the biggest obstacle for us. Droughts are very frequent and therefore it is very difficult to grow anything. It would be very helpful if we could



acquire insurance for our lands. We would be able to overcome the problem of drought if only we had enough access to water"; "the farmer should be insured from natural disasters. We have seen a lot of damage as a result of drought. 2 years ago we harvested only 20% of our crops due to drought. The government can help us to reduce the damages through using relevant measures" – the focus group participant farmers stated.

The farmers of Terjola municipality believe that migration, especially of youth generation, and consequently loss of labor force and knowledge is one of the threats. They believe that the younger generation should obtain new technologies and develop agriculture in the municipality, but the younger generation is oriented to move to the city or to foreign countries. "There are no jobs here and that is why migration is so high from the village. The people are trying to find work in the city. However, youth people can obtain knowledge of new technologies" - the respondent noted.

The farmers name the low quality agricultural chemicals as one of the biggest threats. They have no expertise to distinguish the quality of the chemicals and have limited access to any qualified specialists. Farmers expect the government to take relevant measures to control quality. “A quality control service should be created. All imported and locally manufactured chemicals shall be inspected. The people should be trained to study this field in order to consult us” – one of the local farmers stated. The farmers think that one of the biggest threats to animal and crop farming development is the emergence of diseases. “Diseases are threat. If a disease emerges it is very difficult for us to combat with it. We do not know how to act in case a disease spreads. We ask for advice but it still ends up with ruining our crops” - the respondent stated.

An unstable economic environment was stated as a threat by the farmers. They believe that the frequent change of the exchange rate and other economic processes especially e.g. changes in trade relations with other countries have a direct impact on agriculture. “The economic environment changes so frequently it is very hard to keep the track. This has a very big impact on our work. The prices and demand on products change. Sometimes the demand is high and at other times it is so low that we are unable to sell our crops”; “It is very difficult to take a loan in these economic conditions since you never know what will change in the following year” – the focus group participants stated.

Needs of agribusiness in Terjola Municipality - SWOT Analysis

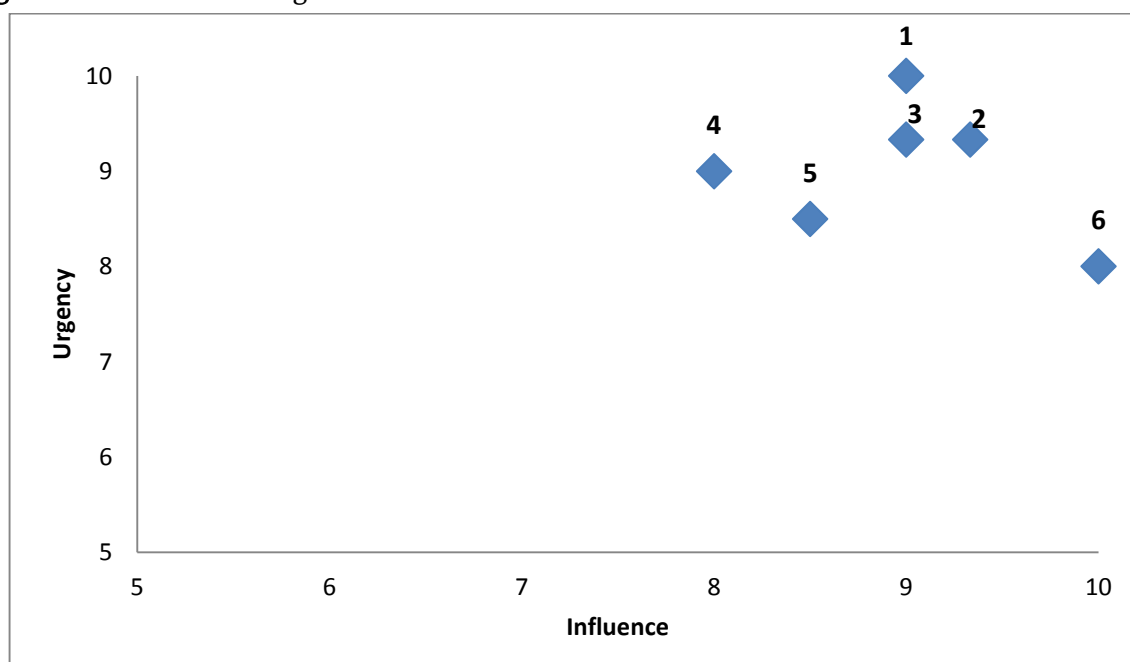
The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weakness
<ul style="list-style-type: none"> • Favorable landscape and climate conditions; • Fertile agricultural lands; • Traditional fields: Viticulture-winery, Livestock farming • High demand products (Wheat, beans, Soybeans, corn, hazelnuts, honey) 	<ul style="list-style-type: none"> • Limited access to agricultural machinery • Low level of agricultural knowledge; • Limited access to financial resources; • Low quality agricultural chemicals; • Outdated irrigation systems;
Opportunities	Threats

<ul style="list-style-type: none"> • Introduction of new varieties; • Development of viticulture (unique grape varieties - Tsitska, Tsolikauri); • Establishment of fruit and milk processing enterprises; • Provision of farmers with special training courses/consultations; • The development of beekeeping; • The development of tea plantations; • Walnut and hazelnut farming development. 	<ul style="list-style-type: none"> • Natural hazards (drought, heavy rainfall, wind); • Outmigration of the young and outflow of knowledge; • Poor quality of agricultural chemicals; • Unstable economic environment; • Diseases (crop farming, livestock farming).
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The focus group participants, small and medium scale farmers, distributed the priorities for the development of the municipality in the following way:

Diagram N1 – Priorities Diagram



The needs shown on the diagram above are:

1. **Qualified veterinarians and agronomists** – the accessibility to quality veterinary services is very low and this issue is in need of urgent attention.
2. **Irrigation systems** – one of the most urgent needs for the local farmers is the infrastructural improvements of irrigation systems and it is the only way to combat against drought.
3. **Long-term, low interest rate Agro-loans** – one of the best ways to support the farmers would be low interest rate and long-term Agro-loans. The amount of loans issued for the agriculture field constitutes about 2-3% of the total bank loan amounts, which is a very low.

4. **Machinery** - increasing access to high quality agricultural machinery is especially important. The farmers mainly use machinery with the help of the service center of Mechanizatori, however the study results showed that the farmers lack their amount and need them to be upgraded. Therefore, they are unable to carry out their work on time, which raises the production cost of the product, reduces production volume and the quality of the crops. Therefore, there is a great need for the update of the equipment and machinery and increase of its number.
5. **Farmer oriented education** - rising the level of qualification of farmers and their level of knowledge in order to increase the efficiency of their agricultural activities is critically important. Special attention should be paid to supporting to provision of the knowledge about modern technologies. The farmers believe that it would be beneficial if various informational materials were prepared/distributed by the state, non-governmental organizations and associations.
6. **Quality of chemicals** - the local farmers face a problem of low-quality chemicals. Their use reduces crop output and has a negative impact on crop quality. The problem is exacerbated by the farmer's limited knowledge of what chemicals to choose for their crops and agro-climatic conditions.

Profile of Oni Municipality

General description

The municipality of Oni is located in the north-eastern part of Western Georgia and is an administrative-territorial unit in the Racha-Lechkhumi and Kvemo Svaneti region. It is 135 thousand ha by size and agricultural lands occupy 45 thousand hectares, which make 30% of the total area of the municipality. From the east the municipality of Oni is situated near Java municipality, from the west Ambrolauri and Lentekhi, from the south the municipalities of Sachkhere and in the



north the republics of Kabardino-Balkaria and North Ossetia. There is one town and 64 villages in the municipality. The town of Oni is the administrative center of the municipality. It is located on the left bank of the Rioni River, deep in the valley, at an altitude of 830 meters above sea level.

Demography

According to the official data (1 January, 2014), the municipality has a population of 8,100 people, out of which 3150 live in the town Oni, while 60% live in the villages. The population density is 6 persons/km², which is 10 times less than the national average: 67 persons/km². Also, 60% of the population is more than 65 years old, with the issue of migration still remaining.

Economy

In the past, the main sources of income for Oni municipality were processing of mineral water, barite production, manufacturing businesses, transportation services, agriculture (livestock farms) and a garment factory. The main source of income however has changed, corresponding country's social and economic situation. The municipal budget is mainly consisting of equalization transfers from central government. The population is mainly engaged in agricultural work: such as livestock farming and beekeeping. As the municipality is rich with water resources the development of fish and trout farming is possible.

Agriculture

Agriculture is the key source of employment in Oni municipality. It is largely oriented on the supply of basic food for the households. The municipal landscape makes the expansion of agricultural lands difficult. In addition, most of the families own less



than 1.25 ha of land, while 80% or more of the agricultural land is not registered officially.

Agricultural land plots cover a total of 45 thousand ha, including 16 thousand hectares of grassland, 27 thousand ha of meadows, 257 ha of perennial crops, and 2,000 ha of arable land, which is only 2% of the total area, with 68 thousand ha located in forest area. The main annual cultures are maize, beans and potatoes. 70% of this area is used for potatoes. The average total output does not exceed 10 tons per hectare. Viticulture is also a widespread in more or less mountainous villages, which has the output 3 tons per hectare.



Livestock Farming

Livestock farming is one of the leading activities in the municipality. The livestock is mainly comprised of cattle; therefore, the main purpose of livestock farming is the production of meat and dairy products. There are 14 livestock farms and five processing factories. In the 1990s, cattle numbered 15,000, but today the number has dropped to 4,000. The municipality has the expansion potential for livestock farming. For this, it is necessary to solve some problems, including the rehabilitation of roads to access meadows. A Georgian-Swiss farm "Blaunstein-Georgia" is functioning in the region and has been successfully improving the local breed through artificial insemination. As a result, a meat and dairy breed of cattle is produced, which is perfectly adapted to the local climatic and terrain conditions. The same company also opened a meat processing factory and slaughterhouse.

Pig farming is underdeveloped in the municipality although Racha region is traditionally famous with pigs farming. It is necessary that the government deals with problems for pig farms and improves the access to the veterinary services. Beekeeping is developed in the municipality. At the moment, 2400 bee farms are located for in the area. Due to the local climate conditions, the honey is exceptionally tasty and has medical purposes, however selling the honey on various markets is challenging for the farmers.

Natural Hazards

The municipality of Oni is located in a mountainous area; therefore, certain natural hazards are common: floods, landslides, mudslides, avalanches, rockslides, river bank erosion and earthquakes. In



the last decade, natural hazards become more common, particularly, earthquakes. Earthquakes intensified landslides, which pose a threat to houses and agricultural lands. Almost all villages located in mountainous areas in Oni municipality are at risk of landslides. The public

infrastructure: roads, bridges, tourist recreational facilities are also in the landslide risk zone.

Oni municipality is characterized by snowy winters. Avalanches frequently damage the Oni-Shovi road at the paved sections of Glola and Utseri. There is no disaster alert system in Oni municipality. Together, the central and local government carried out the following activities in order to fight against the consequences of natural disasters: works on river bank protection, rehabilitation of dams and gabions, cleaning of the Rioni river, and fixing damaged bridges. However, nothing is done in the municipality of Oni for the prevention of natural disasters; also natural disasters are not taken into account during land use and the spatial planning of municipal infrastructure projects.

Agricultural Business Needs in Oni Municipality

As said above, the agricultural business needs of Oni municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

According to the participating small and medium farmers of the focus group one of the strengths of the local agriculture sector is the ecologically-clean environment and favorable climate conditions, which give opportunities to the development of beekeeping and livestock farming. Alpine meadows provide significant strength for livestock farming. One of the focus group farmers stated: "Oni has natural treasures - we have truly unique meadows. We have the biggest area and best quality of meadows in Georgia". Forest resources is also one of the major strengths of the municipality. Another participant of the focus group stated: "Forest resources should be used since there is already a base for beekeeping and livestock farming. The development of the forest activity is inexhaustible; it is a very rich resource".

Livestock farming, bee farming and potato cultivation have been named by small and medium scale farmers as the agricultural activities that have opportunities for development. Most small- and medium-scale farmers are traditionally involved in livestock farming and their concerns are mostly in this field. Additionally, Oni is rich in hydro resources, which gives the possibility of the construction of small hydropower plants. Also, the unique nature together with mineral waters creates a good environment for the development of tourism, especially agro-tourism. The owner of the hotel in Shovi stated: "Shovi is a resort area, but besides this, we also produce agriculture products. Although the infrastructure need to be improved, many tourists don't like our conditions and want more comfort. There could be tourists in the winter but I don't have heating".

Weaknesses

The focus group participants as well as the respondents of individual interviews believe that the limited availability of agricultural machinery and equipment is a major weakness. One of the participants stated: "If we forget the fact that there is a general lack of machinery, there is also no plowing equipment in Oni. After the land is plowed it needs harrowing, which takes about one or two weeks since the necessary machinery is almost always unavailable, and this is a reason why the crops are planted late.

Also, another problem is the absence of small machinery, which is important because of the specifications of Oni's landscape. One of the focus group participants stated: "In Ambrolauri there is a company, "Mechanizator", which serves the entire region. It is 25 kilometers from Oni to Ambrolauri and 55 kilometers from Oni to Gheba, and because of the distance the cost for service is very high.

For example, this year the government offered free plowing, but this did not work out so well because of insufficient machinery. The tractors were too big for the landscape of Ghebi and because of the fragmented land plots the tractors were not able to plow. Small tractors are needed for our landscape". As mentioned before, machinery is a major problem in the municipality. One of the respondents, who works as a livestock farmer, stated that accessibility to mowing machinery has a direct impact on the outcome of his work: "We do not have the machinery needed to mow and to transport this hay later. The livestock are in the mountains during the summer and therefore this is not an issue but the hay is necessary for the winter - if you can't transport the hay then it is impossible to have livestock". The farmers believe that if the issue of machinery is resolved then many problems regarding livestock farming and land farming will be solved.

Focus group participants reported that the production of ham and pork was the main source of income for Oni, while raising pigs was also very cheap. Almost all farmer who are engaged in livestock farming stated access to veterinary services as a main problem, meaning that there is a lack of veterinarians. This issue has become particularly important after most of the farmers lost their pigs due to some kind of diseases. One of the farmers stated: "There is a severe problem with pigs dying, there is no doctor and when there is no doctor there is no medicine and consequently the whole village lose their pigs. Also: "Many things are changing in the field of veterinary; new diseases are evolving, new medicines are being introduced, therefore even though the veterinarians have knowledge they must have regular trainings to update their knowledge. District veterinarians should be also required to come to the farms and provide consultations".

The absence of a slaughterhouse is one of the obstacles for small and medium scale farmers and for the population of Oni in general. One of the farmers from the focus group stated: "We do not have a meat grinder, we are told to take the cow to the Ambroaluri slaughterhouse, but that would require about 200 GEL to get there from Skhmer. Therefore, almost no one is able to do this and we do not have the resources needed to build one." The farmers are informed that a Swiss-Georgian company is planning to open additional slaughterhouse, although one farmer stated: "this does not resolve the problem since it is far and transportation costs are very high".

Selling of agricultural products is also problematic for local farmers. A focus group participant, who has been a beekeeper for many years, stated that: "I've been told many times to develop and expand my business. I have 10 bee hives and I am having difficulty with selling of the honey. If I were to be assisted in the marketing of my product, then I would think about developing my business". One of the small farmers said that "we want to develop our businesses and would work harder even to harvest the land using cattle and our hands, but we are having difficulty with the selling our products." The farmers believe that the problem of selling is caused by the distance between the cities and villages: "If better transport routes would to be developed, life would radically change for us for the better". Also, several focus group participants stated that the development of tourism would also help with selling of local products.

Additionally, one of the named weaknesses was limited access to different programs; for example agro-loans, grant programs of international organizations, etc. According to a local farmer, “two farmers took advantage of some programs, for which they mortgaged all their property for a 5000-7500 GEL loan. Also, there are no credit officers in the district; a credit officer has to come from Kutaisi for this service”. A respondent, the owner of a guesthouse, stated: “There are some state programs aimed at the development of agriculture but they are chained to commercial banks. It is impossible to receive a low-interest loan with state programs”.

Some respondents claimed that the official registration process of their land is problematic, which is linked to additional financial costs and complex procedures; due to this, many are not able to apply for loans. The participants also mentioned “Produce in Georgia Program”. In the framework of “Produce in Georgia Program” 20 million GEL is allocated for Racha-Lechkhumi and Kvemo Svaneti, making it possible for 50-60 people to start small businesses with 15000 GEL each in agricultural and other fields; however, there is a with migration. Even with such financial means, if there are not enough people on the local markets to buy the products.

Opportunities

The following priorities were identified for the agricultural development of the municipality of Oni: cattle farming, pig farming and beekeeping. In addition, the climate and mineral water resources provide an opportunity for tourism development. In addition, it should be noted that fishing farms and trout farms



have opportunities to develop due to the natural conditions of the area. Some small- and medium-scale focus group participant farmers stated: "Beekeeping is very successful in our region"; "There are good conditions for livestock farming, we have unique meadows"; "Cattle farming is profitable although pig farming gives a greater level of profit in a shorter period of time and does not cost as much".

In addition, it is interesting that some focus group participants mentioned activities which are not so common but have good potential for developing profitable work in the future. One of these activities is the production of walnuts, as one of the farmers stated, the land in Oni is perfect for the growth of walnuts. Another unique opportunity is fir seedlings and the development of a fir tree farm: “Fir tree seedlings from the municipality of Ambrolauri have been sold across the global market; there are countries in Europe where they are not able to produce these for themselves with some villages in Ambrolauri making a large profit from this. Although our trees are not as good as the ones in Ambrolauri we still shouldn’t cut them down; rather we should be saving their roots over a period of 2-3 years and if processed well, they can be sold for a good profit”.

The farmers stated that access to machinery and road rehabilitation are ways in which all the aforementioned activities can be developed. One participant said that "a road leading through the forest is needed. We are unable to use agricultural land since there is no road leading to it ". Also, the farmers believe that alternative, shorter roads from the villages to the city will help them in selling of their products. A lack of machinery is an issue which is relevant for all farmers. There are two main aspects to the problem: first of all, Oni does not have its own necessary equipment and machinery, which means that the farmers must wait for the machinery to arrive from Ambrolauri; and second, that the machinery is large and therefore is frequently unsuitable for the local landscape. There is a large amount of hay lands although farmers are unable to mow such areas because of the large-scale machinery and also because transportation of hay is very difficult. Hay, however, is needed for the development of livestock farming: "If we are provided with access to the right type of machinery at the right time, then many activities will be able to be developed", one of the small farmers noted.

It is also important that qualified agronomists and veterinarians are available in the municipality. In addition, the farmers' think that access to appropriate laboratories is necessary. One of the respondents stated that, "land research is not being conducted; there is no laboratory for this purpose. There is also no veterinary laboratory. One has opened in Ambrolauri although this too far for us". The local veterinarian believes that periodic trainings are important for them to receive information about new diseases and methods of fighting them. He also stated that: "local veterinary stations should be opened because farmers are not able to get to the veterinarian in time. If local veterinary stations were available, the veterinarian would be able to evaluate the animals locally. Also, it is important that state programs are available to fight against some diseases."

Small- and medium-scale farmers are more or less informed about governmental and international support programs, but many have experienced problems while trying to participate in them. Such programs would assist farmers in the development of their agricultural businesses or give them the opportunity to implement new initiatives. The focus group participants identified the need to be better informed about these programs. Business consultations is also important in order for small- and medium-scale farmers to be able to develop business plans. According to one of the farmers: "there have been opportunities to participate in many good programs although the local farmers almost never did, due to the of a lack of skills and knowledge. They must be taught how to prepare a business plan. For example, a person who wishes to open a honey processing factory needs all kinds of training and knowledge. We know the product is natural and environmentally healthy, but it would require a variety of skills and training to prepare this product for sale". The majority of focus group participants agree that proper knowledge and skills are necessary to write business plans and to manage their business. One of the farmers stated that: "First of all the farmers should be provided with the relevant knowledge to be able to receive grants and later to successfully run their businesses; but no one is thinking about assisting them".

Threats

Agricultural threats in the municipality of Oni are mainly related to natural hazards, with one of the respondents stating that: "Natural hazards are one of the main threats, since we frequently experience very extreme weather; for instance, in the summer we had flooded rivers, which are situated next to our property. Also, the winter is snowy and often the roads are blocked. I hope more attention is paid to road cleaning issues in winter". Focus group participants also listed earthquakes as threats, and specified that if buildings are not built to withstand 8-9 magnitude earthquakes then they are at high-risk of collapsing.



The farmers who are engaged in crop production see drought as one of the biggest problems: "This year there was drought and our crops were destroyed; basically, we have this problem almost every year". In addition, floods cause sufficient damage to the land. One such respondent explained: "Floods often take our agricultural lands, and it is therefore necessary to build a protection infrastructure. Also, in many villages, landslides take away land." Small- and medium-scale farmers also stated the threat of natural hazards: mudflow, hail storms and landslides.

Migration is an issue, particularly relevant to the municipality. The majority of the population is seniors. "What could be a greater threat than if no one remained in Oni? Everyone wants to move out of here. There are almost no more young people. Everyone who made 20 GEL got on a bus and has never returned," said one of the focus group participants. One participant said that, "In the first place, the population must be employed. Even with financial support and sufficient machinery there must be people who are willing and able to work. That's why young people need to come back. There are not enough workers anymore", while another small farmer stated that "I will do everything for my child not to come back here, and even though he deeply loves Racha, I don't want him to live in the same conditions in which I do."

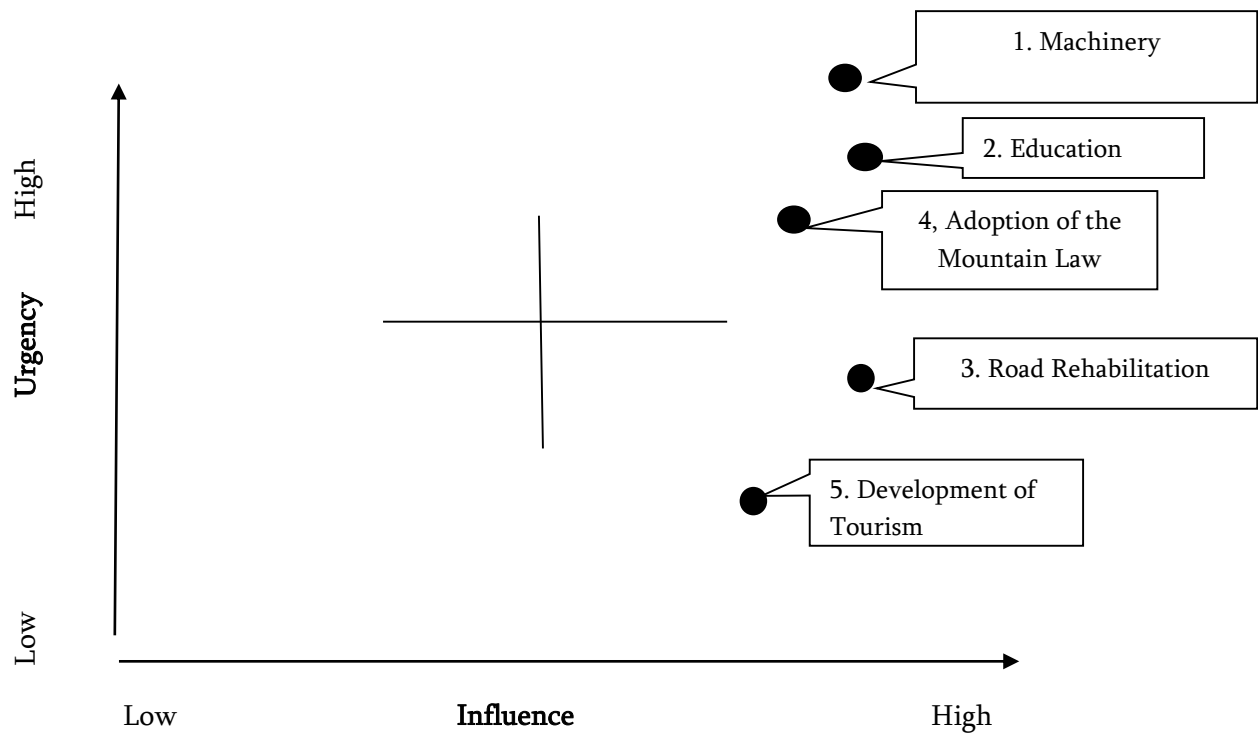
Small and medium livestock farmers stated diseases as one of the biggest threats and that many new diseases have been introduced, for which the veterinarians is either unavailable or do not have relevant knowledge. Individuals who were actively engaged in pig farming were desperately waiting for an answer regarding which disease caused the mass death of their pigs and what can be done to avoid this disease in the future." Oni is a border region to breakaway region, which poses a threat according to the farmers' and they believe that political measures must be taken.

Needs of agribusiness in the Oni Municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Clean environment; • Large amount of forest lands; • Rich water resources; mineral water. • Large area of mowing lands and meadows; 	<ul style="list-style-type: none"> • Limited access to agricultural machinery; • Limited availability of qualified veterinarians and agronomist's services; • Absence of slaughterhouses; • Difficulty of selling of the agricultural products; • Limited access to different programs (agro loans, grants, etc.)
Opportunities	Threats
<ul style="list-style-type: none"> • Development of infrastructure: roads leading to meadows. • Development of livestock farming: cattle and pig farming; • Delivery of special training courses for farmers in the agricultural sector; • Provision of the access to qualified veterinarian and agronomists' services; • Control of animal diseases; • Development of plant farming (potatoes, corn, beans, barley, wheat); • Provision of the information about agricultural support programs; • Provision of the business consultancy; • Development of beekeeping; • Upgrade of agricultural machinery, increase access to machinery; • Development of tourism, particularly, agro tourism; • Development of fish farming; 	<ul style="list-style-type: none"> • Natural hazards (drought, earthquakes, etc.); • Outmigration of the young and outflow of knowledge; • Diseases (pig and cattle); • Close location to the border;

The focus group participants, small- and medium-scale farmers, distributed the priorities for the development of the municipality in the following way:



The needs shown on the diagram above are:

- (1) **Machinery** - increase access to high quality agricultural equipment, particularly small scale machinery;
- (2) **Farmer oriented education** - increasing qualification of farmers and improving their level of knowledge.
- (3) **Roads** - one of the most important needs of local farmers is the development of local roads and road infrastructure; the municipality is rich in meadows and meadows, but there are no roads in order to reach the lands
- (4) **Legislation** –which will impose certain benefits for the population living in mountains regions.
- (5) **Development of Tourism** - unique nature together with mineral waters creates a good environment for the development of tourism in Oni, which will have a direct effect on the stimulation of agriculture activities.

Profile of Khoni Municipality

General description

Khoni municipality is the extension of the northeast area of Kolkheti lowland. It is located on the left bank of the river Tskhenistskali to the right bank of the river Gubistskali. The river Tskhenistskali divides its mountainous zone into two parts. Khoni municipality is bordered from the west by Martvili, from south-west - Abasha, from south - Samtredia, from east - Tskaltubo and Tsageri municipality



from the northeast. The total area of Khoni is 429.5 square kilometers. The lowest area is the village Kutiri - at an altitude of 62 meters, the highest is the Lekhi peak - 2436.7 meters above sea level. The forests occupy 20,000 hectares, which is 47% of the total area of Khoni. The municipality consists of 11 villages and 1 town. Khoni has a humid, subtropical climate. The population of Khoni municipality has four main sources of income: agriculture, remittances, social assistance (pensions, social assistance) and small business (e.g. furniture production). According to the 2014 data, the municipality population amounts 23 570 people, out of which 10,100 people live in the town, which is 43% of the entire population.

Economy

The following activities are considered as priority of the local economy: agriculture, tourism, wood processing and furniture production. The natural monuments and historical sightseeing of Khoni municipality create good potential for the development of different types of tourism. The most interesting example is the River Okatse Canyon. Forestry sector (in particular, the processing of wood or furniture industry) has good opportunity for development. The manufacturing remains weak in the municipality. Some polymer container, mini furniture factories and food industry facilities operate in the municipality.

Agriculture

Agricultural lands occupy 18042 hectares of Khoni municipality territory from which arable land area amounts - 8020 hectares, perennial plants - 2251.33 hectares, meadows - -



7666 hectares. As a result of erosion processes, 600 ha of arable land and 300 hectares of meadows are degraded.

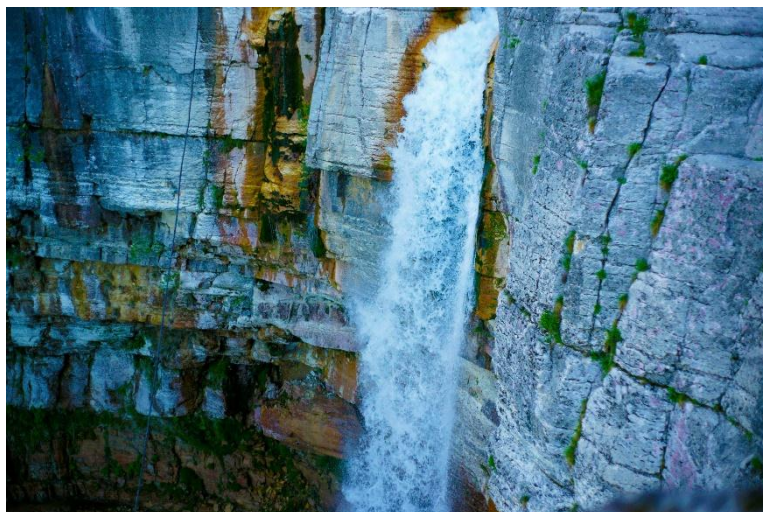
Plant farming

Crop land plots constitute 42% of the total area of agricultural land of Khoni municipality. The following are priority and main products: maize, vegetables, hazelnuts. Corn output is 3 t/ha, and this rate has increased in recent years by 0.6-0.7 t/ha, vegetable output is 8 t/ha and the yield of vegetable crops has slightly increased in recent years. Hazelnut output is unchanged and amounts to 1 t/ha. Increase of labor and other production resources is named as the reason for the increase of crop output.

78% of the agriculture lands of the municipality require irrigation. However, the lack of irrigation and their poor conditions complicates the irrigation process. At the moment, the municipality uses a channel irrigation method. In addition, the remaining 22% of agricultural lands are in need of drainage. Some of the main challenges related to plant growing, is arable land degradation as a result of land erosion, lack of irrigation systems, as well as drainage system malfunctions.

Live-stock farming

Meadows cover 7 769 hectares of land, which is 43% of the total area of agricultural land. In 2012, there were approximately 23 000 cattle. Sheep farming is a not traditional activity in the municipality. In 2014, total number of sheep and goats constituted 1 600. Only 0.33 hectare of meadows is allocated per cattle. Due to the lack of meadows and erosion, this field fails to be developed rapidly. 300 ha of meadows are degraded due to erosion processes.



Natural Hazards

According to the municipal government data, the municipality of Khoni is characterized by the following natural threats: strong winds, heavy rain, floods, landslides, drought, and the erosion of riverbanks. In particular, in recent years landslides damaged about 2 hectares of arable land, 1 residential house, roads and the school in various parts of the Khoni town. Strong winds damaged school buildings and houses. In addition, 13 ha of agricultural land and a couple of bridges were damaged due to the erosion of riverbanks. Some prevention measures are periodically conducted:

riverbanks stabilization, cleaning of irrigation channels, deepening of the river Sukhchela, rehabilitation of various reservoirs and irrigation systems.

Agricultural Business Needs in Khoni Municipality

As said above, the agricultural business needs of Khoni municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

Agriculture plays a leading role in the municipality economy. Relatively small agricultural lands and large amount forest areas create certain restrictions to development of agriculture. Almost all farmers and in depth interview participants state that the local climate conditions are favorable for the development of poultry, plant and hazelnut farming. One of the farmers stated: “planting of corn is very productive here. The climate conditions are also very good for planting hazelnuts and some vegetables”. Additionally, the local farmers stated that livestock farming (mainly the production of milk) is also one of the strengths of the municipality.

The farmers believe that the production of hazelnuts, corn, lemons, various vegetables and honey are developed, which have potential for growth. “I produce honey and successfully sell it in Kutaisi. Many farmers are in honey businesses and this is one of the strengths of our place”- one of the farmers stated. Furthermore, some of the farmers talk about the advantages of the local lemon production: “many farmers grow lemons and it makes strong competition against lemons harvested in Samegrelo region. Some of the farmers even bring their lemons to sell in Tbilisi. Last year one of my neighbors exported his lemons to Russia and earned good profit. Lemon farming has good potential to growth”. “Many farmers do crop farming. They have their own greenhouses. For example, I plant beans and each year I increase my output as the price is also increasing”. „Greenhouse farms are very successful and popular here. Many farmers have their own greenhouses”. “Furthermore, livestock farming and the production of milk products are very profitable. Although there are not many livestock here the farmers are still able to sell milk”.

Farmers believe that hazelnut farming also has good potential for growth. There already are many farmers in the municipality, who are engaged in this activity. “Hazelnut farming has become increasingly popular over last period. It would be a very profitable activity if the problems related to its selling were resolved. In comparison to vine, it needs less labor and financial resources and gives greater results” - one of the farmers stated.

When discussing the potentials for development, a group of farmers stated that besides the traditional crops it would be effective to plant new cultures: “Someone should study the potential of Khoni municipality. Many foreigners have visited and conducted trainings for us. They all advised us to look for new opportunities. Our municipality might have some strengths, which we are not even aware of. It might be possible to plant new crops and maybe some crops that are not available in Georgia yet. We should also consider the market. Frequently, restaurants are in need of some products that are not available in Georgia and we might be able to grow them here” - one of the farmers stated.

Weaknessess

Similar to other municipalities, one of the major obstacles of the development of agriculture is the limited availability to agricultural machinery. Farmers note that this results in various difficulties, including inability conduct the work on time. Another problem is the absence of small machinery. The in-depth interview respondents named the same issues of concern: “the issues related to machinery are very important. We have very big tractors, which are unable to work on small agricultural land plots”; “the lack of machinery is one of the biggest problems of the village. There are lots of different types of machinery on the market, but the farmers do not have the financial resources (2000-3000 GEL) needed to buy those machinery. The government should ensure that all farmers have access to small machinery”; “we do not have access to machinery, since the prices are too high. Some machinery should be provided for free to carry out our work”; „There is not enough plowing machinery in the municipality. We should have our own service center. We are unable to conduct the works on time due to the lack of machinery”.

Low productive varieties of livestock and plant and the lack of feed for the livestock are the weak points. As one of the farmers stated: “large resources are needed in order to feed the livestock and this is impossible in the small land conditions. The territory where we grow corn is an approximate of 0.2-0.25 ha. Therefore, the land area is not enough”.

Although crop farming is in a relatively better condition in Khoni municipality, farmers are still concerned about crop care and the need to increase the output. The farmers mentioned the low quality of agricultural chemicals on the market as weakness. Some farmers stated: “none of the chemicals, which I bought, worked. I know how to use them and therefore, it is not my fault that it failed to give results. The government should control the quality of these agricultural chemicals. Almost all of our crops might be ruined due to diseases and insects”; “it is very important that sellers give us information regarding the specifics agricultural chemicals. Not all of the chemicals can be used in the same way and for the same crops. The sellers are unable to provide us with the relevant information and the farmers are using the chemicals wrongly”; “I want to say that chemicals are not the sole problem. The beans or onion, that we seed, are not suitable for our conditions and climate, therefore we need more information regarding what would be better grown here. Maybe we should go abroad and buy new varieties, which we adapt to our climate. Therefore, we will increase the

harvest volume and make more profit”; “We have to make an investment in new varieties and technologies in order to see a bigger profit in the future”.

Limited availability of qualified veterinarian and agronomic services is a frequently stated problem. Similar to other municipalities, level of qualification of the veterinarians and agronomists, is a significant problem. In addition, disease prevention is difficult. This problem is especially widespread regarding crop and grain cultures in Khoni municipality. The opinions of different farmers are the following: “it is very difficult to receive veterinarian and agronomic services here. There are not enough specialists, it is very hard to find one who has the time”; “It is very important for us the veterinarians and the agronomists to have knowledge about modern methodologies, despite the fact that they graduated from the universities, they still lack knowledge and the farmers are still rely on each other’s advice”; “It is also problematic that the farmers do not have sufficient financial resources to hire qualified agronomists. Frequently farmers offer their products to agronomists in exchange for consultations, but they need money not crops. Therefore, they no longer want to do business with us”.

Apart of limited accessibility to veterinarian and agronomic services, the farmers named the need for the laboratory analysis of the soil as a priority issue. As some farmers stated: “the soil needs laboratory analysis in order to determine which land is good for certain crops or what type of organic fertilizers should be used”; “laboratories should be established, where the soil analysis is carried out and the results are accessible for everyone. Otherwise, we take big risks”; “large financial resources are needed in order to conduct a soil analysis. On the basis of this, we could determine what crops will grow successfully on certain land”; “the biggest problem is that land studies are not conducted. When I started building of my hazelnut plantation I did not conduct a study, but I got lucky and picked the right spot”.

A group of respondents stated low level of knowledge among small farmers about modern technologies as one of the weaknesses. This issue is especially relevant for poultry and crop farmers. They have only heard about certain innovations. However, they fully acknowledge that they will not be able to implement such innovations in practice without gaining specific knowledge beforehand, and they need special courses, as well as on site consultations. “We need to know how to feed the livestock at different times of the year in order to receive better results” – one of the farmers stated. In addition, one of the farmers expressed concern: “there are farmers living in high mountainous areas and have 100 cows, it was achieved through artificial insemination. It is very hard to explain the reason understand for the farmers why they should use these modern methods. The farmers lack information, knowledge and access to consultations. They also have no trust”. “A Dutch farmer visited Khoni, conducted a lecture and spoke about his experience. I remember his words that they worked a lot, but failed to achieve relevant results despite all of their hard work. He said that ever since his daughter graduated from school for agronomy his work has become much easier. These types of trainings are very beneficial for us” – one of the farmers noted. Additionally, the farmers also

named the need for business education: “it is important for the farmers to have knowledge not only about modern technologies, but about management of a farm. The farmer should be able to calculate costs and be able to make a forecast of profit” – one of the large farmers stated, who owns a hazelnut farm.” Supply of the information about modern technologies is necessary. This should be done through trainings conducted in the villages by professionals” – One of the farmers stated. “It is very difficult for us to write business plans and submit it to the bank. All of our business plans are denied and therefore we are unable to prove the effectiveness of our work” – one of the medium scale farmers stated.

One of the frequently stated problems is land registration: “this is a problem for not only our region, but generally in the whole country. Many encountered problems in the process of registering their land”; “Everyone wants to have their land registered and it would be much easier if legal procedures could have simplified. They say that the parliament will discuss this issue and we are waiting for results”. The farmers also listed lack of arable land and harsh winters as weaknesses.

The large scale farmers stated that one of the biggest problems for them is the lack of irrigation system. ” Last year we could not even receive half of an output of the corn, which we planted. We constructed water channels from river Tskhenistskali, but the channels must also be cleaned, the irrigation systems must have proper maintenance” – one of the farmers stated. As farmers stated: “we planted corn on 10 ha, but we had no normal access to water. There used to be an excellent irrigation system in Khoni. irrigation system should be renewed. This system is necessary in order to develop our farms. This issue is very important for us”. “Construction and rehabilitation of the irrigation system are most important issues for the farmers to succeed and receive relevant output. Mostly, the village is dependent on the corn harvest”. Additionally, the farmers are open to cover costs for the irrigation systems. For example, one of the farmers stated that “unless the irrigation system exists, the plant cannot be grown. We agree to co-pay 20-30 GEL or even more for rehabilitation works and get better harvest. Last year I spent 500 GEL and was not able to receive any profit since the drought ruined everything”; “the irrigation systems is a very serious problem. It seemed like government started working on fixing it, but actually nothing has been done yet. There are very serious droughts here in August. If we do not water the plants everything will be ruined”.

Opportunities

The farmers believe that one of the priority opportunities for developing agriculture in Khoni municipality is to introduce new varieties and technologies in poultry and crop farming. Despite the fact that the region is characterized with lack of arable lands, the farmers think that crop farming (tea, lemons, vegetables) is still a potentially good activity. Tea is an expensive and highly demanded product and at the same time, the climate conditions are favorable for its cultivation. As for livestock/poultry farming – first of all the farmers need to increase productivity by using modern breeds of animals. “A state program is in the process of implementation for development of tea

plantations, in which cooperatives, as well as limited liability companies can participate. Rehabilitation work will be conducted on 57 ha of land. 10 ha land has already been finished. In 3 years, we will collect tea from the whole territory. We will sell the products in Kutaisi where it is packaged and sold at the local market and in Tbilisi as well. The Chinese were very interested in our tea and bought about 70 packages, but we were unable to fully meet their requirements. Therefore, tea plantations have great potential, which is profitable field” – the farmers stated.

Provision of the special education courses and consultation services to the farmers are necessary preconditions for exploiting the opportunities. The majority of the farmers and all of the in-depth interview respondents agree with this opinion. It should be underlined that as the farmers acknowledge the need for additional knowledge it is a progressive step forward. The farmers mainly ask to receive on-site qualified consultation in order to find out what can be done to improve their farming activity. “Our biggest problem is lack of education and the fact that we do not want to admit that we have a lot to study. The consultation centers do help, but this is not enough. There should be professionals working at the centers, which would be able to give us consultations about combatting and prevention of the diseases. The hazelnut is drying up and we are unable to do anything and have no knowledge what chemical-pesticides to use. The sellers at the stores are unable to help. They do not know what chemicals should be used and at what time, thus they may mislead you”; “The village governor promised us that they would use tractors and special chemical-pesticides to cure the hazelnut disease but nothing has been done yet. We only rely on ourselves and we can provide consultations to each other”; “The people do not know who they should trust, who the field expert is and who is not. For example, I go to Partskhanakanebi and buy pesticide from professionals and trust their recommendations” – the respondents stated.

An increase of the access to agro-loans will also increase the farmers’ opportunities for developing their farms or diversifying their work. Although they have knowledge about existing state support programs and have attempted to participate in them, farmers still think that these programs are not accessible for small and medium scale farmers. Additionally, absence of a long-term grace period is problematic for all farmers. They believe that this issue should be taken into consideration by the state, banks and international organizations when sponsoring the agricultural sector. The farmers generally have the following opinions: “the state only gives low interest rate loans to existing businesses. However, if the farmer starts up new business, he/she is unable to participate in state programs and has no other way but to go to private organizations, such as micro-finance organizations, interest rate of which amounts up to approximately 40-45%. In this case the level of the risk is very high. New businesses need lots of support by offering low interest rates”; “If the state gave start-up farmers loans in low interest rates, the village would develop rapidly. Now they are giving priority to other new innovative and modern businesses and no longer see agriculture as interesting. Innovations and new technologies can also be developed in agriculture if we receive sufficient funds. The government is now interested in sponsoring young people”. Additionally, the majority of farmers have a positive outlook about the programs of the Ministry of Agriculture. For

example, one of the farmers stated: “all of the programs of the Ministry is very good. At the beginning, everyone was very skeptical towards them and that is why there was really low participation rate. The participation rate doubled during the second phases. As far as I know, there are in total 18 projects sponsored in Khoni”. Despite, many agricultural vouchers remain unused and it is important for the programs to be working for longer periods. The farmers also named the need for program assessment as important. For example, one of the farmers stated: “these programs should be designed for a long-term period. Every year 885 thousand is spent in Khoni on this project and at this time, 800 vouchers were returned to the Khoni Gamgeoba. A state program analysis should be conducted: what was the result after the first phase and subsequent years and whether it meets the expectations”.

Khoni municipality farmers are optimistic about the establishment of cooperatives and believe that establishment of cooperatives with involvement of small, medium and large scale farmers will be significant opportunity. It can be assumed that the main reason for this is that the people in Khoni municipality are aware of the benefit received by the farmers engaged in the cooperatives. Opinions of both the focus group participant farmers and the in-depth interview respondents are the same and their attitude regarding cooperation is quite positive. “We should persuade all farmers to participate in cooperatives. In Imereti, which lacks agricultural lands, in order to have a successful business, receive money and buy machinery you have to be part of a cooperative”; “the government should be very active in disseminating information about the benefits of cooperatives. The farmers should see other successful cooperatives, to better understand the benefits. As a result, we think that all farmers will have desire to participate in cooperation. A cooperative, in the village Jihaishi received 47 thousand GEL grant, which produces dairy products and bought equipment with this money. This is a good example for becoming a member of a cooperative. These types of examples will support the creation of new cooperatives”; “2 years ago we had no planting machinery in the village and the cooperative bought one, which made the farmers labor much easier. A cooperative will strengthen the village”; “Recently a person came from Zestaponi who spoke about the importance of cooperatives and we received a lot of information, all of his arguments were very realistic” – the focus group participant farmers stated.

Threats

Farmers stated epiphytotic diseases as one of the biggest threats (mainly for crop, hazelnut and poultry farming); In addition, the farmers stated that the number of new diseases increased in the last years and strict measures should be carried to combat them. “There are some new diseases, which we are encountering for the first time. We need help in combating them and understanding what they are” – one of the greenhouse farmers stated. The instability of the prices on hazelnuts market and the significant decrease of prices over the last period was also named among other threats. One of the farmers stated: “the price of hazelnuts decreased from 9 GEL to 3 GEL this year, which caused serious damage to the farmers. It is difficult to develop in these conditions”.

Drought has been stated as one of the biggest threats by the majority of the farmers. For example, one of the farmers stated: “Khoni region is one of the driest. It might be raining in nearby villages but still be dry here that is why this is such a big issue. Our village is located very high from sea level the water resource are low and therefore, water does not reach the arable lands”. Furthermore, the farmers spoke about the importance and a need for insurance against drought. One of the farmers stated: “we are not informed about insurance products and where it can be done. We are not aware of insurance company, which provides this service. Insurance is necessary for all regions. Trust me the farmers will do everything in their power to insure their land. I will pay any amount of insurance premiums to be confident that any damage will be compensated in case of a natural disaster”. The farmers feel that other natural disasters are also threat for their business (such as landslides, floods).

The farmers of Khoni municipality believe that migration is one of the threats. Most of the younger generation tries to move to the cities or to foreign countries to be employed. The farmers stated that there are already a couple of villages where only seniors live. “There is a very large number of young people migrating inside and outside of the country. The reason for this is that there is absolutely no opportunity for them in the villages. You will not be able to find even one young person here in May for the tea season. 90% of them are living in Turkey. Everyone has financial struggles and the village is not able to meet their needs. This concern should be resolved, since the future of this country depends upon the younger generation”; “one of the biggest problems is that there are no more people in the villages. The elders are already unable to take care of the crops and animals, but the younger generation has left the village. If they saw the possibility of making a profit perhaps they would reconsider coming back to the villages”; “Migration is one of the biggest problems affecting our work, there are no more young people living in the villages. They have moved to the city or to foreign countries where they mostly work in very hard conditions” – local farmers stated.

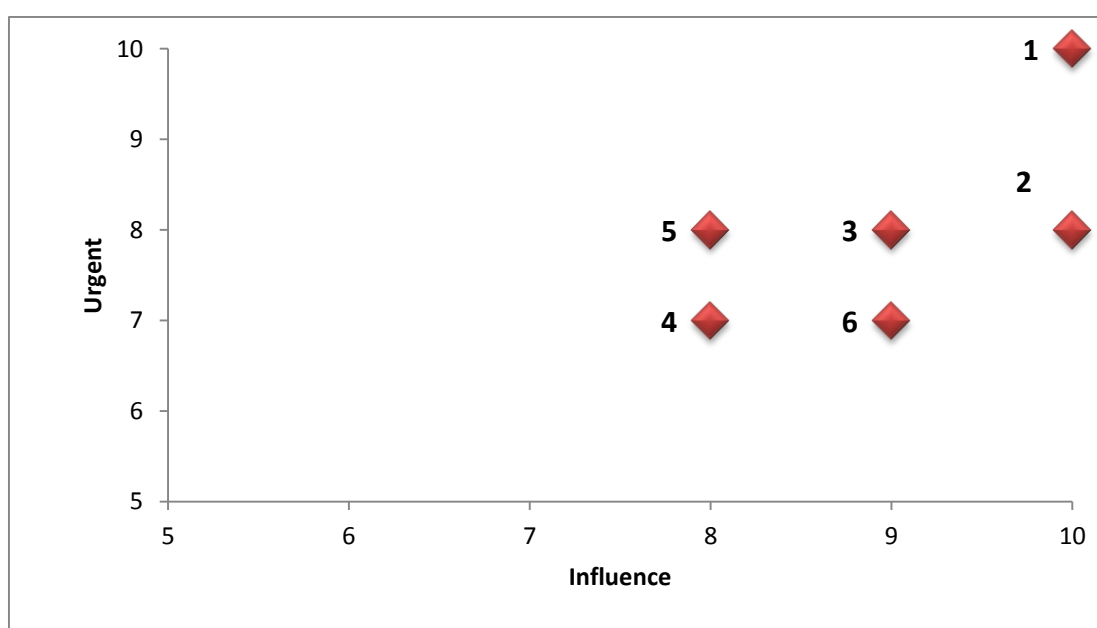
Needs of agribusiness in Khoni municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weakness
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of livestock farming and crop production; • Demand for/profitable products on the market (hazelnuts/honey); • Demand for grain products on the market as well as citrus (beans, corn and lemon); • Existing greenhouses; 	<ul style="list-style-type: none"> • Limited access to high-quality agricultural machinery; • Modest internal roads and related infrastructure; • Low level of knowledge among small farmers about modern technologies (hazelnut and crop farming) and limited accessibility to educational courses; • Plant diseases;

<ul style="list-style-type: none"> • Existence of a milk production facility; • High and stable demand for poultry products on the market. 	<ul style="list-style-type: none"> • Lack of meadows; • Inadequate irrigation systems; • Challenges regarding land registration; • Limited access to qualified veterinarian services;
Opportunities	Threats
<ul style="list-style-type: none"> • Introduction of new varieties and technologies; • Potential for the development of greenhouse farming (strawberries; vegetables); • Development of tea culture; • Provision of special courses and consultations; • Provision of frequent informational campaigns about agricultural support programs and projects; • Establishment of cooperatives with the participation of small and medium scale farmers; • Establishment of processing factories in different fields: milk products; fruit processing. 	<ul style="list-style-type: none"> • Outmigration of the young and outflow of knowledge; • Natural hazards (drought); • Diseases (Mainly plant, hazelnut and poultry farming); • Unstable economic environment;

In addition, the focus group participants, small and medium scale farmers, distributed the priorities for the development of the municipality in the following way:



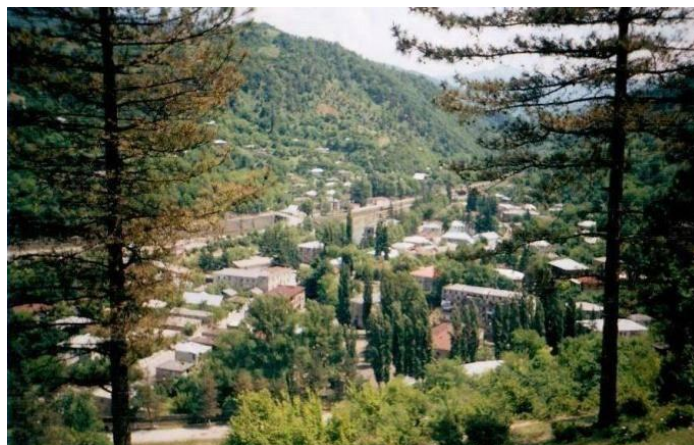
The needs shown on the diagram above are:

1. **Irrigation systems** – one of the most urgent needs for the local farmers is the rehabilitation of irrigation systems;
2. **Economic situation** – the farmers think that there is no point in further development of their work unless the general economic situation in the country is improved. Mainly the frequent change of prices has a negative effect on the selling of their product (e.g. price of hazelnuts), as well as the increase of the prices on production means.
3. **Long-term cheap Agro-loans** – increasing access to low interest rate and long term agro-loans; existence of a certain grace period is also important for the farmers.
4. **Machinery** - increase of access to high quality agricultural machinery, particularly small machinery, which can work on difficult landscapes.
5. **Qualified veterinarian services** – the access to quality veterinary services is very low and this issue is in need of urgent attention.
6. **Farmer oriented education** - raising the level of qualification of farmers and their level of knowledge to increase the efficiency of their agricultural activities. This also includes access to modern technology.

Profile of Kharagauli Municipality

General description

The Kharagauli municipality is located in the Southeast of Imereti. From the West it is bordered with the municipalities of Zestaphoni and Baghdadi, from the south, Borjomi, in the east, Khashuri municipality and to the north, Chiatura and Sachkhere municipalities. Kharagauli municipality is located at an altitude of 285-2,642 m. (mean. 420 m) above sea level. The municipality's



total area is 91,390 ha, of which 73,390 ha of land is mountainous and 18,000 ha is valley. The municipality consists of one town and 78 villages. The town of Kharagauli is 198 km away from the capital city Tbilisi and 65 km from Kutaisi. The municipality is rich with water resources, with mineral and thermal water deposits. Kharagauli is also rich in forest resources; forest land occupies 68% of the total municipal area.

Demography

According to the data of 2014, the municipality has a population of 27,100 people. Out of the total population, 20% live in the town of Kharagauli, while the rest live in villages. An average of 296 people lives in each settlement. The population density is 31 persons/km² which is significantly less than the national average of 67 persons/km². There are five main sources of income for the population: agriculture, micro-enterprises (mainly for timber production/processing), trade and social assistance.

Economy

Manufacturing is poorly developed in the Kharagauli municipality. There are some small food manufacturing factories, bakeries, construction and paving stone mining/processing factories, as well as alcoholic beverage production enterprises. The population of the municipality is actively involved in timber production and retail. The municipality also produces the mineral water “Zvare”.

Agriculture

Agriculture is one of the key source of employment in the Kharagauli municipality. The municipality has agricultural lands of 13,784 ha, which is 15% of the total area of the municipality. From this land, 4,512 ha is arable land (33% of



which is agricultural land), 1,301 ha is orchards (9%) and meadows make up 7,970 ha (58%).

The priority crops are maize, vegetables, beans, and vineyards. The corn output is 1.8 t/ha, and 2.8 t/ha for grapes. Over the past ten years, agriculture output have been steadily decreasing. The primary causes are: inefficient farming, low productivity seeds, challenges with combating pests, diseases and weeds. Unfavorable weather conditions (drought, flood, hail) may also be seen as one of the causes of output reduction. Approximately 40% of arable lands are in need of irrigation due to frequent drought, and this poses a problem due to the lack of irrigation systems. In addition, rain water is not collected for irrigation. Besides, about 30% of agricultural land needs drainage, however there are no drainage systems in the territorial unit.⁴

Livestock Farming

Overall, 58% of agricultural land in the municipality of Kharagauli are meadows. This figure is high compared to the area of arable land. However, several villages are still suffering from grassland shortages. During the Soviet period, the breeding of livestock was widespread. However, since then, the number of cattle and sheep has reduced by approximately 40-50%. Currently, the municipal government has counted about 9,000 cattle and 1,300 sheep. Cattle from neighboring territorial units are almost never brought to the Kharagauli meadows. There are 1.1 cattle and 0.2 sheep per hectare of pasture⁵. As for the beekeeping, one bee hive provides an average of 23.9-23.7 kg of honey. In 2012, an Agricultural Development Office was created in the municipality administration, which monitors agriculture-related issues.

Natural Hazards

Strong storms, floods, landslides, avalanches, riverbank erosion, earthquakes and drought are characteristic of the Kharagauli municipality. In the last decade, the threat of natural disasters has been present for both residential and arable land. For example, in almost every village, residential areas as well as agricultural lands (both arable and pasture) have been damaged by landslides. To date, 28 villages are located in a landslide risk zone. Moreover, floods are a frequently occurring, which significantly affects the local infrastructure (mainly roads and bridges) and the agricultural production process. The municipality does not have a master plan for spatial arrangement, which would consider natural hazards.

⁴ Source: Administration of the Kharagauli Municipality

⁵ Source: Administration of the Kharagauli Municipality

Agricultural Business Needs in Kharagauli Municipality

As said above, the agricultural business needs of Kharagauli municipality were learnt through facilitation of SWOT (strengths, weaknesses, opportunities and threats) analysis for agricultural sector done by individual respondents during in-depth interviews and members of focus groups during group discussions.

Strengths

According to the focus group participant small and medium-scale farmers, one of the strengths of the municipality is its tradition of agriculture activity. Families have a long tradition of agricultural work and therefore significant knowledge which helps them effectively fulfill their tasks. Along with tradition, the strong motivation of the local population to succeed in their work is named as another important strength. One of the participants of the focus group stated: “The main strong point is tradition and the will to take care of the village and participate in rural development.”

Furthermore, small and medium-scale farmers name beekeeping as one of the strengths and focus group participants believe that this should be supported through the maintenance of environmental conditions. Livestock farming is also named as a priority sector. A farmer who was a participant of the focus group stated: “Kharagauli provides a good environment for beekeeping and livestock farming.”

An in-depth interview respondent stated: “Because of the location of Kharagauli, beekeeping is successful; there are large chestnut and linden forests.” In addition, farmers state that local fertile soils and climate conditions are also strengths.



Local Beekeeper Lasha Gurgenidze

Local small and medium-scale farmers note the existence of state programs as an important strength in the development of agriculture. Focus group participants brought up the example of the distribution of agro-vouchers and underlined their importance for them. One of the farmers stated: “The agro-vouchers have been distributed for two years which has guaranteed that everyone has fertilizer. This is very important.”

Weaknesses

One of the biggest weaknesses pointed out by respondents is the low qualification level of small and medium-scale farmers, which prevents them from effectively carrying out agricultural work, as well as participating in various grant and loan programs. One of the biggest difficulties which the farmers reported is the complicated procedures needed to acquire loans and grants. They believe that the farmers

lack the qualification and resources needed to properly prepare business plans and meet loan requirements.

The farmers participating in the focus group believe that stricter regulation of the trade by fertilizers and agricultural chemicals is needed in order for the quality of products to be ensured. The respondents stated that it is difficult for farmers to distinguish high-quality chemical from the relatively low-quality alternatives. During one of the in-depth interviews, one of the farmers stated: “The lack of consultation regarding the use of chemicals is a very serious problem in Kharagauli.” The owner of the pharmacy also confirmed that “a consultation on the use of chemicals is needed for local farmers.”



Farmers Participating in the Focus Group

In addition, low availability of agricultural machinery is named as a weak point. In this regard, small and medium-scale farmers are actively engaged in the free delivery of agricultural machinery (state program), but in their opinion the machinery is out of date and in many cases not suitable for the conditions of Kharagauli. Most of the machinery is unavailable for some of the villages. One of the concerned farmers stated: “Why do they bring the wheeled tractors to our village? Chain tractor barley gets the job done so it is logical that the wheeled ones will be useless.” Furthermore, the small-scale farmers stated that there should be an appropriate amount of machinery and they should be suitably available. One of the farmers stated: “Due of the lack of equipment the land cannot be processed on time. Therefore, we frequently use old methods such as bulls for land cultivation or mini-tractors, which not everyone has the opportunity to purchase.”

One of the biggest problems which small and medium-scale farmers reported regarding development of local beekeeping is the existence of counterfeit honey on the market, which makes it difficult to sell natural honey. Meanwhile, another obstacle which small and medium-scale farmers stated regarding the development of livestock breeding and plant growing is low access to agronomists and veterinarians. Farmers participating in the focus groups stated that it is difficult to gain access to full and exact information regarding different support projects and programs, therefore informational campaigns should be conducted periodically in Kharagauli, for the population to receive information about state, international or other projects. It was also stated by the farmers that, because of their low income, local farmers are not engaged exclusively in agricultural work but also in different activities, mainly timber extraction, processing and sales. Another the weakness named was the lack of agro-insurance. Focus group participants believe that there should be special state programs for farmers to get cheap insurance. As for the livestock farming, low availability to slaughterhouses was stated as a weak point, since it raises the price of meat and makes it non-competitive in comparison to farmers of other municipalities.

Opportunities

Vocational training was named as an opportunity for the development of beekeeping. One of the participant farmers of the focus group stated: “The reality is that there are 2-3 people who hold the knowledge needed for beekeeping, I do not mean to offend anyone, but these people are monopolists, meaning that they are good specialists and therefore they are always the ones which are consulted and hired. This should not be like this; these people should also be the ones who are teaching the village farmers.” Meanwhile, another participant added:



Farmers Participating in the Focus Group

“We could buy American corn but we would not be able to take care of it.” In addition, one of the respondent farmers of the in-depth interviews stated that the production of berry crop has great potential in Kharagauli: “In my opinion, the development of raspberries and other similar berry crops might be justified, it is not as difficult and produces a good income, the demand is high, this year the sales were good. In the case of corn, ploughing and fertilizer costs are high so there is not much profit. Corn is cultivated for the purpose of food for the farmers and livestock. It is not possible to quit working as a livestock farmer since it is a major source of income but it is also impossible to have any savings in order to start up anything new. For example, I sincerely believe that berry crop cultivation is very promising.”

The creation of processing enterprises (mostly dairy and fruit) was also named as a necessity at the focus group meetings. One of the focus group participants stated: “If the government were to set up a dairy processing enterprise farmers would think about owning 10 cows instead of 5 and producing milk.” In addition, small and medium-scale farmers believe that more attention should be paid to the development of greenhouses in Kharagauli, since the location of the municipality makes the distribution of greenhouse production easy in both West Georgia and in the neighboring municipalities to the East.

Small and medium-scale farmers who participated in the focus group noted the necessity of the replacement of varieties for the development of local livestock breeding. One of the farmers of the focus group stated: “We own animals with the capacity of 6 liters; therefore we are hardly making any profit. We need new varieties of livestock.” Moreover, a respondent of one of the in-depth interviews stated: “The development of livestock farming is much easier as for pigs and also the development of trout farming has big potential, I am planning on building a trout farm.” Along with trout farming, farmers spoke about the potential of owning pigs and tree nurseries.

In addition to funding, the participants of the focus group stressed the need for the improvement of their skills and qualifications. One of the farmers stated: “If we don’t teach farmers how to write a simple project plan, no one will get funding.” Most small and medium-scale farmers agree that, in addition to funding, the government should provide farmers with consultation services, which will ensure that they develop high-quality project proposals for grants and other competitions. According to small and medium-scale farmers, by providing training and consultations, farmers will be able to develop their farms by achieving more accessibility to loans and increasing the efficiency of



In-Depth Interview Respondent – Owner of the Local Phyto Pharmacy

agricultural work. The focus group participants also stated that it is very difficult for them to find co-financing or mortgages to participate in business project competitions, therefore they see a need for the state to support farmers in this direction.

The creation and operation of cooperatives on the market with joint resources is an important opportunity for small and medium-scale farmers to be able to expand their activities.

In addition, other than increasing opportunities for financing, the participants of the focus group spoke about the importance of cooperation between farmers and the government, in which they cited the specific example of the bad conditions of the local infrastructure. The respondents stated that if infrastructure is not improved the realization of products will be difficult, even if financing is available.

Threats

Migration is foreseen as one of the threats to local agriculture, which affects the flow of knowledge. One of the farmers of the focus group stated: “From what I’ve observed no one ever returns to the village, farmers with high qualification leave the villages to work elsewhere and therefore it is really difficult to speak about the revival of agriculture if this process is not stopped.” The participants of the focus group stated that young people leaving the villages is the greatest threat, which makes it even more difficult to develop local economy and agriculture each year.

All small and medium-scale farmers claimed, there were threats associated with the use of chemicals, saying that they have a significant environmental impact and complicate the production of high-quality products. The farmers believe that environmental pollution is particularly damaging to beekeeping.

In addition, small and medium-scale farmers feel that one of the drawbacks associated with the government is the implementation of projects which do not or cannot consider the specifics of

Kharagauli. Small-scale farmers gave the project “Small Farmers 2014 Spring Promotion” as an example of this. The agro-machinery provided under the project was not fully functional because local specifications were not taken into consideration. One of the small-scale farmers stated in a focus group: “Programs and projects should not be written out in only work offices, the opinions of the farmers should be taken into consideration. What may be good for Kartli or Kakheti may not be suitable for Kharagauli, every region needs to be evaluated individually. Meetings with the farmers should be conducted and needs should be assessed in this way.”

Small and medium-scale farmers consider epizootic diseases as one of the biggest threats to their livestock. The farmers feel that there is low availability of veterinarian, since there are only private veterinarian clinics and they often cannot find time for all of their clients. Therefore, livestock frequently die because of a lack of medical attention. One of the respondents of the in-depth interviews responded: “In the past there were much fewer diseases, the reason there are more now is the lack of quality medicine.”

Natural events such as drought, hail and flood are also stated as some of the biggest threats to their industry by small and medium-scale farmers. One of the participating farmers of the focus group stated: “This year my neighbors planted beans and because of the drought they withered and consequently could not make a profit. This is a very frequent problem.”

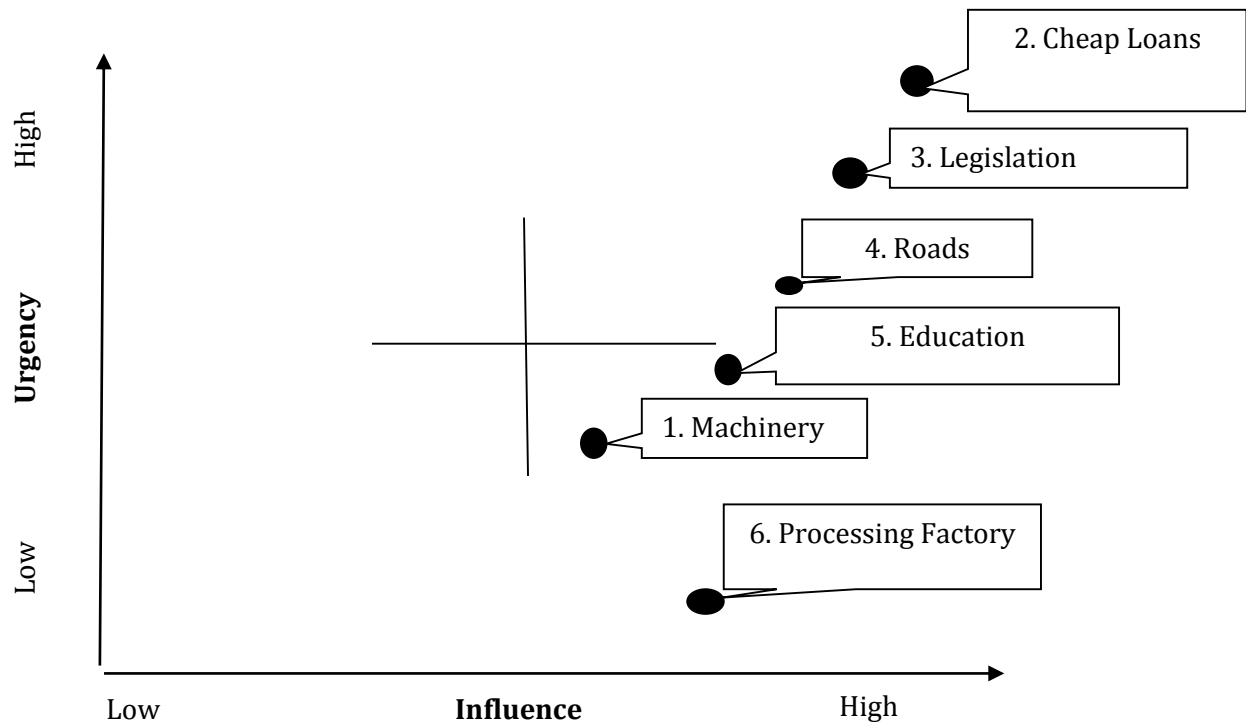
Needs of Agribusiness in the Kharagauli municipality - SWOT Analysis

The opinions of small- and medium-scale farmers are more or less the same; therefore they are combined together in SWOT analysis:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of livestock farming and beekeeping; • Fertile land in most of the areas; • Availability of water resources; • Tradition and knowledge in the field of agriculture; 	<ul style="list-style-type: none"> • Limited access to high-quality agricultural machinery; • Lack of information on different programs (agricultural loans, grant competitions); • Limited access to slaughterhouses; • Low level of knowledge among small farmers on modern technologies and business plans; • Low-productivity varieties in livestock; • Lack of programs for business loans and business grants for small farmers; • The absence of drainage and irrigation system problems; • Limited availability of quality agricultural chemicals and fertilizers; • The existence of counterfeit products on the market; • Limited availability of qualified

	veterinarian and agronomic services; <ul style="list-style-type: none"> • Frequent change of climate conditions; • Lack of agro-insurance;
Opportunities	Threats
<ul style="list-style-type: none"> • Delivery of special training courses for farmers in the agricultural sector; • Creation of a new enterprise (dairy and fruit processing); • Providing business consultancy in the development of business plans; • Implementation of business loan and grant programs aimed at small farmers; • Development of pig and trout farming; • Provision of the access to qualified veterinarian and agronomic services; • Arrangement of a slaughterhouse in the Kharagauli municipality; • Development of greenhouses; • Control of animal diseases; • Improvement of livestock breeds; • Fight against counterfeit products; • Rehabilitation of drainage and irrigation systems; • Establishment of cooperatives with the involvement of small and medium-scale farmers; • Upgrading of agricultural machinery, increased accessibility and the implementation of new technologies for production; • Development of tree nurseries; • Production of berry crops; • Development of local agro insurance for local farmers; • Reduce damage from natural hazards. 	<ul style="list-style-type: none"> • Natural hazards (drought, hail etc.); • Outmigration of the young and outflow of knowledge; • Environmental pollution; • Diseases;

The focus group participants, small and medium-scale farmers, identified the priorities for the development of the municipality in the following way:



The needs shown on the diagram above are:

- (1) **Machinery** - Increase access to high-quality agricultural machinery;
- (2) **Cheap Loans** - Increase access to low interest rate agro loans;
- (3) **Roads** - One of the most important needs of local farmers is the development of local roads and road infrastructure;
- (4) **Farmer oriented education** - Raising of the level of skills and qualification of farmers.
- (5) **Processing Factories** - It is difficult for local farmers to sell their products on domestic and regional markets, therefore it is their wish for the municipality to have various processing factories, which will take in their primary products for further processing.

Key Findings

The following major findings were made through the discussions and interviews in the target municipalities:

1. **There is a lack of qualified agronomists and veterinarians in all target municipalities.** Only a few individuals in every municipality are able to provide agronomic and veterinary services in a professional way. As a result, farmers have limited access to technical advice on crop production or cattle husbandry that are critical for ensuring high productivity of farms plus the quality of farm output. The recently established Information and Consultation Centres of the Ministry of Agriculture have so far insufficient capacity to meet even a part of the knowledge needs of farmers. Farmers also have lack appreciation of the value of services.
2. **Poor genetics appears to be the first of the reasons of low productivity of cattle** owned by farmers. The breeding facilities are virtually non-existent across the country and there is a little supply of and a little demand for artificial insemination services.
3. **Most of the pastures and hayland have been deteriorating due to their extensive utilization.** The overgrazing and poor pasture / meadow management has a number of negative agricultural and environmental effects of which poor feed-base for livestock is seen as the most important one.
4. **Insufficient availability of agricultural machinery causes inadequate timing and quality of agricultural operations.** Despite the government's massive investments in development of machinery services in the municipalities in the recent 5-6 years, the existing tractors and tractor implements are outdated and amortized and can't meet all needs of farmers that grow crops for sale. The deficit of machines is particularly acute during the peaks of spring and autumn agricultural activities. This results in the reduced productivity of crops and increased costs of production.

Other important problems are:

- **The measures to control crop pests are insufficient.** As a result, the productivity of crops at farms is significantly lower than it could be given the existing agro-climatic conditions and plant genotypes. This problem has several causes including lack of necessary knowledge and skills at the farmers' side, limited availability of agronomist or plant protectionist services, use of inadequate chemicals for pest control, etc.
- **Farmers not only lack regular and reliable support from agronomists and veterinarians but also do not possess the most basic knowledge and skills for their daily operations.** This is caused by limited service capacity of vocational education and training facilities in the target areas, plus, in some instances, the farmers' insufficient understanding of the importance of proper knowledge.
- **For some farmers it is difficult to get engaged in various support initiatives** sponsored by the government or international donors. They lack experience of working with documents and often can't fill even simple registration/application forms.

- **Access to capital is limited for small farmers** Their poor ability to provide co-financing to grants or offer required property encumbrance to creditors are the main reasons why they are often ignored by government support programs and lending institutions. .
- **Local farmers find it difficult to prepare business plans** needed for effective participation in various state- or donor- sponsored funding programs. The farmers also lack knowledge necessary for monitoring and evaluation of performance of their farms and processing/support facilities.
- **Farmers have difficulty selling products at local and regional markets** -They often have a feeling that wholesalers cheat them and the existing processing enterprises pay inadequately little price for the farm outputs they buy,
- **Small- and medium-scale farmers believe that joining their resources in cooperative may help** to decrease high cost of inputs and services, strengthen power at the markets, increase resilience towards natural disasters, etc.
- **Droughts that became quite frequent in the last decade are seen as one of the most serious contributors to the reduction of crop yields.** The majority of farmers are unprepared to prevent or reduce the crop losses associated with droughts.

Key Recommendations

The following major recommendations to government and private sector were jointly developed by the respondents in target municipalities with facilitation from AYESG's assessors:

- *To increase availability of qualified agronomists and, more essentially, veterinarians.*

Although the increased availability of specialist services is a multi-year endeavor that requires massive and long-term investments in agricultural education at various levels, establishment of service systems and standards, increased farmers' appreciation of the service benefits, etc., the recommended change should be a paramount task for the Government of Georgia if it intends to see the Georgian agriculture competitive both at the local and international markets. There will be no improvements in the agricultural outcomes if farmers do not receive reliable and qualified support services. The respondents suggested several service delivery models including sponsorship by input suppliers, subsidization by the government, group contracts, abonnements for client association members, etc.

- *To support introduction of high productivity breeds of cattle*– As the current genotypes of cattle in Georgia are degenerated and inefficient, an effort should be made to gradually improve breeds across the country. This can be achieved through promotion of artificial insemination that the government and private sector can undertake jointly. The joint Georgian-Swiss venture farm in village Shardometi of Oni municipality can serve as a good example of how the herd genetics can be significantly improved in four[-five years through artificial insemination.

- ***To prevent hayfields and meadows from erosion.*** Quality animal feed, together with availability of qualified veterinary services and improvement of cattle genotypes, represents an irreplaceable factor of high productivity of cattle farms. The government should work with academia, ICCs and community leaders to explain the farming communities what are the negative long-term environmental and commercial effects of overgrazing and resultant soil erosion. This should be done in parallel with introduction of holistic management and permaculture methods in the areas prone to erosion. The communities should be also shown the advantages of rotational grazing.
- ***To improve the control of crop pests and diseases.*** It is important to carry out coordinated pest and disease prevention and control activities that would be supported by all stakeholders – the Ministry of Agriculture, its Information and Consultation Centres, local authorities, input suppliers and farming communities. The effects of the effort will be limited if farmers are not actively engaged in protection of their crops. Also, private sector (e.g. input suppliers) should be engaged in control of diseases.
- ***To improve agricultural machinery services*** – The government (with the planned privatization of “Mekhanizatori” LLC) and the private sector should make new financial injections into the service - properly repair the old machines and acquire new units.
- ***To set a system for delivery of trainings and consultations to farmers in the field of agronomy and livestock breeding.*** Special training programmes (not only on technical subjects but also agribusiness management, farm finance and accounting, marketing, etc.) should be designed specifically for farmers and delivered through vocational education and training institutions to all interested. This should be done in parallel with improving capacities of ICCS to deliver various advisory services.
- ***To invest in awareness raising campaigns that should precede every new farmer and agribusiness support initiative.*** It is of critical importance that the main targets of the initiatives not only receive complete information about the procedures and opportunities associated with new initiatives but also enjoy support in preparation of documents required for participation in such projects and programmes. .
- ***To improve farmers’ access to capital through increased investment in targeted grant programmes and subsidization of agricultural loans.*** It is important that both the grants and the loans are used not for covering operational costs, but for supporting capitalization of farms and enterprises through acquisition of critical assets such as machinery and equipment, and, in certain contexts, of buildings and land.
- ***To support a system for provision of business consultations.*** Such a system could help farmers not only in the development of their applications for grants and business loans, but also support their strategic, emergency and regular planning, analyze business performance, link farmers to services and markets.
- ***To support establishment of new food processing and marketing enterprises.*** Such facilities should ideally exist in every municipality and buy farm output at conditions and prices

convenient for farmers. This vision of the farmers is a good manifestation of their inadequate understanding of the very basics of market relations.

- ***To continue supporting creation of cooperatives of small- and medium-scale farmers.*** It is important that the government and donors support farmers willing to pool together their resources and establish cooperatives. This support should include awareness raising, capacity building in organizational development and technical aspects of production, processing and marketing, and capitalization of farms and associated enterprises.
- ***To invest more resources in reduction of risks and impacts of natural hazards.*** Given the climatic context of the region, the majority of its municipalities are in the need of development of effective irrigation systems. Some other DRR measures are also necessary such as building gabions along river banks, building tranches for quick evacuation of excessive water from precipitations, establishing pasture management systems, etc. A number of respondents have also discussed the value of agricultural insurance system that would be fitting farmers' needs and capacities.

Appendix 1 - Guidelines for the in-depth interviews and focus group discussions

- I. **The main tasks: to reveal the interviewees' and FG members' perceptions of the strengths of their activities:**
 1. In your opinion, what are the strengths of your activities and what are their practical appearances?
 2. By your observation what factors contribute (might contribute) to the keeping / development of your strengths and what factors have a negative effect on these?
 3. In your opinion what are the reasons of existence of such strengths? Which factors contribute to the existence of strengths?
- II. **The main tasks: to access the interviewees' and FG members' perceptions of the weaknesses of their activities:**
 1. In your opinion, what are weaknesses of your activities and what are their practical appearances?
 2. 2. In your opinion what are the reasons of existence of such weaknesses? Which factors contribute to the existence of weaknesses? By your observation what factors contribute (might contribute) to the reduction of your strengths and what factors have a negative effect on the already existing weaknesses? And which factors exacerbate your weaknesses?
- III. **The main task: assess the performance of the participants in regard to the opportunities of their work.**
 1. In your opinion, what are the opportunities which will help you in the development/enhancement of your work?
 3. In your opinion what is the reason for which these opportunities exist? Which factors contribute to their existence?
 2. In your opinion what is needed in order for these opportunities to be realized?
 3. In your opinion who should be responsible for the realization of these opportunities?
- IV. **The main task: assess the performance of the participants in regard to the threats of their work.**
 1. In your opinion what are the threats which might hinder your work in the future?
 2. In your opinion what is the reason for which these threats exist? Which factors contribute to their existence?
 3. In your opinion who should be responsible for the reduction of these threats?
1. Generally, what needs do you have for the development?