

The Needs of Agribusiness Development

Ambrolauri Municipality



1. Introduction

In September 2014, the Association of Young Economists of Georgia (AYEG) in partnership with the charitable humanitarian organization, “People in Need” conducted an assessment study of the needs of agribusiness, from which current information regarding the municipalities of the region of Racha was obtained. 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 “The Support of Cooperatives in the Region of Imereti, Georgia”, with the financial support of ENPARD Georgia and the Czech Development Agency.

2. Methodology

The agribusiness needs assessment study was conducted after having selected representatives from the Ambrolauri Municipality (individual respondents and focus group participants) who shared their views and ideas regarding the strengths, weaknesses, opportunities and risks of the local agriculture businesses. The following methods were used for research purposes:

- Desk Research;
- Focus Group Discussions;
- In-Depth Interviews;
- Priority Diagrams.

The interviewers and facilitators assisted the respondents in the analysis and categorization of their ideas. After the development of a SWOT analysis, the respondents ranked solutions in order of priority using the priority diagrams. In order to collect information, AYEG drafted guidelines for in-depth interviews and focus groups (see Appendix) which encompasses open questions and study issues.

Focus group meetings and individual interviews were conducted by AYEG’s research experts. Technical assistance, facilitation of interviews and discussions and the preparation

of transcripts, was provided to the experts 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.

In Ambrolauri, agriculture mainly comprises livestock farming (cattle, pig, bee farming), some land farming (fruit, vegetable farming) and viticulture.

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

Respondents	Focus Groups	In-depth Interviews	Priority Diagrams
Small Sized Farmers (<1 ha of land);	2 Focus Groups		Applied
Medium Sized Farmers (1 to 3 ha of land);	1 Focus Group		Applied
The main suppliers of agriculture (Seeds, chemicals, pesticides etc.) and Large Sized Farmers (>3 ha of land);		5 Interviews	

Unfortunately, there is no official data for municipalities in the area of agriculture. Nevertheless, the information used for drafting the municipality profile and other information about agriculture was mainly provided by the Ambrolauri municipality.

Focus group meetings were conducted in the Ambrolauri Municipality from September 18-20, 2014: Two meetings were with small farmers (owners of <1 ha land and livestock farmers) and one meeting was held with medium farmers (owners of 1 to 3 ha of land and livestock farmers). Each focus group meeting was attended by an average of 8-10 farmers. In addition, five in-depth interviews were conducted with medium farmers: two cattle farmers, one bee keeper and one farmer of viticulture. One interview was also conducted with the local agro store owner and another interview was held with the owner of a wine factory. A specialized questionnaire was used for focus group participants and individual interviews (provided in the appendix).

1. Profile of the Ambrolauri Municipality

General Description

The municipality of Ambrolauri is located in the center the Racha-Lechkhumi and Kvemo Svaneti region. From the Northeast, it is bordered by the Oni municipality, from the Northwest the



municipalities of Lentekhi and Tsageri, from the Southwest the Tskaltubo Municipality (Imereti region), from the South, Tkibuli municipality (Imereti region) and from the Southeast, Chiatura and Sachkhere (Imereti region). In the second half of 2014, the municipality of Ambrolauri was divided into two: the self governing city of Ambrolauri and the Ambrolauri municipality. The Ambrolauri municipality was chosen as the geographic district as the subject of our research. The distance between the self governing city of Ambrolauri and the capital city Tbilisi is 280 km. The territory of the Municipality is 1,142 km², of which 27,907 ha is agricultural land, which is 24% of the total area, while 40% of the municipal area (about 40,500 ha) is covered in forest land. The Ambrolauri Municipality is located at an altitude of approximately 500 m. above sea level. The climate is humid, with average humidity of 76% with long, warm summers and cold winters. The average daily temperature per year is 8-9 degrees. Of its 40,500 ha of forest land, Ambrolauri municipality is divided into two categories with industrial forests occupying 22,000 ha, while floodplain forests cover 18,500 ha.

Demography

According to 2014 data, the municipality has a population of 13,600 people. Out of the total population, only 20% (2800 people) live in the city, while 80% (11,300) live in villages. The population density is 16 people/km² which is significantly less than the country average of 67 people/km². The municipality has a total of 70 inhabited settlements: one city and 69 villages. The main sources of income for the population are agriculture, trade, manufacturing and social assistance.

Economy

The main field of economic activity in Ambrolauri Municipality is agriculture, including viticulture and livestock farming. Fruit farming is mainly developed in the mountainous part of the municipality. Manufacturing is poorly developed in the Ambrolauri Municipality. Some small manufacturing enterprises are functioning in the administrative unit including wineries, bakeries, small fruit processing factories, cheese-butter factories, brick factories, asphalt-concrete factories and mini canning factories. Until recently, an arsenic factory was also operating in the municipality. The labor force of the Ambrolauri Municipality amounts to 9,474 people, which is 67% of the population. However, of the available workforce, 8,147 people (86%) are unemployed.

Agriculture

Agriculture is the key area of employment in the Ambrolauri Municipality. Agricultural lands make up 27,907 ha, which is 24% of the total area, including arable land of 2,060 ha, orchards covering 1,739 ha and pastures dominating with 24,108 ha. Although the municipal area of arable agricultural land is scarce and only 7% of the municipality's agricultural land, plant production is widespread.



The priority crops of the municipality are: Vines, corn, beans and wheat. The Ambrolauri Municipality has a unique species of vine, of which the yield is 3 t/ha, corn yield is 4 t/ha and grain yield is 6 t/ha. Over the past ten years, yields of all kinds have been decreasing. There are several causes for this reduction, most of which fall under inefficient farming. Specifically, low productivity seeds, inefficient ways of combating pests, diseases and weeds and disregard for the relocation of crops have been key factors in this production demise. Approximately 30-40% of arable lands are in need of irrigation which is difficult due to the municipality's deficit of irrigation water. Rain water is not collected for irrigation as the rural land of the municipality does not require drainage. Historically, windbreaks existed in the municipality, over an area of 3 ha, although these have not been properly counted for 20 years.



Livestock Farming

In total, 86% (24,108 ha) of agricultural land in the municipality of Ambrolauri is made up of pastures and livestock farming. In 2012, a total of 9,913 bovine cattle were counted in the administrative unit. In the last decade, their number has decreased by 4,000. The municipality has 900 breed sheep, but sheep farming is not traditionally carried out. Cattle are almost never brought to the Ambrolauri pastures from neighboring municipalities.



Livestock farmers do not suffer from a lack of pastures and meadows, as the pastures during the summer months are sufficient for 22,000 cattle. There is one cattle per 2.4 ha of grassland. The population faces problems in veterinarian services, which are only available in the city of Ambrolauri, and therefore difficult to access for those living in villages. In 2012, an Agricultural Development Office was created in the municipality administration, which monitors and accounts agriculture-related issues.

Natural Hazards

Strong winds, heavy rain, flooding, landslides, mudslides, avalanches, river bank erosion, drought and earthquakes are characteristic of the Ambrolauri Municipality. In the last decade, the threat of natural disasters has been present on both residential and arable land. In response, natural disaster prevention measures have been implemented by the local and central government. In particular, the following projects have been carried out jointly: work on river bank protection, gabions, storm drains and drainage



systems have been arranged. The chances of natural disasters are taken into account during the planning of land use and the spatial planning of infrastructure projects.

4. Agricultural Business Needs

The agricultural business needs of the Ambrolauri Municipality are presented in the form of a SWOT analysis (strengths, weaknesses, opportunities and threats), which include the results of the focus group meetings and in-depth interviews.

Strengths

According to the participating small and medium-sized farmers of the focus group, one of the strengths of the local agriculture sector is the local climate conditions, which promote the development of fruit farming, viticulture, beekeeping and livestock farming. In addition, another strength is the existence of local endemic species of vine.

It is the opinion of small and medium-sized farmers that the strength of the local agricultural sector is its climate in which the development of viticulture, beekeeping and livestock farming is possible. The participants of the focus group feel that the development of these areas should be supported. Small and medium-sized farmers feel 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, specifically: the Ministry of Defense, Ministry of Interior Affairs and are supplying them with honey (20-20 tons). The price is low, but it is not a guaranteed market". One of the participant farmers of the focus group stated that: "The production of 1 kilogram of honey does not cost more than 4 Lari; local farmers are selling it for 15 Lari, which is a 300% profit. Show me a business which makes a 300% profit. We also teach beekeeping in Oni, Ambrolauri, Tsageri and Lentekhi districts."

Livestock farming is also named as a priority sector, to which significant areas of pasture contribute. 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-sized farmer's 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 its 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, which increased their income."

Weaknesses

One of the weaknesses noted by medium-sized farmers was the lack of workforce, which prevents them from effectively conducting their agricultural work. According to the farmers, there is a deficit of qualified workers in Racha and more specifically in Ambrolauri, which hinders production growth. One of the respondents of an in-depth interview stated: "The new generation does not want to work. If he were to have his own vineyard and work for someone else he would have an income of 500-600 Lari per month, what could be better? But they prefer to go to Tbilisi and be unemployed. I am thinking about employing the Chinese. I will 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 laborers although they are not easy to hire, 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 are the complicated procedures needed for the acquisition of loans and grants. They state that the farmers lack the qualifications and resources needed to properly prepare business projects and meet requirements.

Another significant weakness which the focus group participants cited was 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 have no resources for artificial irrigation." According to the farmers, one of the significant obstacles to the development of local agriculture is the nonexistence of soil research and relevant mineralization activities. One of the farmers of the focus group stated: "The land is in great need of laboratory testing, which has not been done in a very long time. We do not have the resources needed to check what the land is in need of."

The farmers participating in the focus group believe that stricter regulation of the trade of fertilizers and agricultural chemicals is needed to safeguard the quality of production. The respondents stated that it is difficult for farmers to distinguish high-quality chemical from those of relatively low-quality. 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 are in need of 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 extent. It is important to have the relevant knowledge in order to get a good harvest and not ruin the vineyard."

In addition, it is less of a problem for medium-sized farmers to buy high-quality chemicals. One of the medium-sized farmers said: "I and others who have a relatively large income and use "basvis" drugs, which is one of the best brands in the world as well as "Bayer" products, which are of very high quality."

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



One of the major hindering factor to the development of agriculture is the low availability of agricultural machinery and its low technical abilities. In this regard, small and medium-sized farmers actively enjoy the free cultivation state program, but they believe the technology is outdated and, for some villages, machinery is fully unavailable. 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 taking into consideration the landscape." It is also important for the municipality to have the necessary amount of machinery and for them to be suitably available. One of the farmers stated: "At first glance it is as if there is access to machinery but it still proves to be a problem since we always get access too late and also the machinery is too large for ploughing, where 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-sized farmers state that one of the problems obstructing the development of local beekeeping is the low level of knowledge 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, Tsageris and Lentekhi. 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 in regard to the development of livestock breeding and plant growing, was low access to agronomists and veterinarians as well as species of animals with low productivity.

One of the biggest problems which small and medium-sized farmers stated regarding the development of local winemaking is the existence of adulterated 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 order for the population to receive information about state/donor/international or other projects. 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: "We should not have to go to Tbilisi twice a year in order to be provided with new information. For example a new chemical might be available on the market without us having any information in regard to this. Therefore it is important that we have the opportunity to develop and receive 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 I went to Tbilisi and took some courses, before leaving I wrote down the contact information of the trainers in order for me 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, in order for us to develop our agricultural businesses."



Farmers participating in the focus group meeting

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, our quality of plums is unique; you probably have already been informed of this. It is already being sold for 3 Lari a 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 see the adoption of special legislative norms as a basis for local economic development. 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 money to expand their businesses.

Small and medium-sized farmers who participated in the focus group noted the necessity of the renewal of species for the development of local livestock breeding. One of the farmers of the focus group stated: "Our cattle species are old and in need of updating in order to satisfy the market demand for more meat and milk." In addition, one of the farmers stated during the in-depth interview: "The development of livestock farming is easier by pig farmer and also trout farms have great potential for development." Apart from trout farming, farmers frequently mention the great potential for the development of pig farms. Most small and medium-sized 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 competition. According to small and medium-sized 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-sized 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 gradually lessened. We obtained information about the work of cooperatives, established one and later applied for a grant."

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 for which they cited the example of the local infrastructure (mostly roads). The respondents stated that if the infrastructure is not improved, even if there is money for production, the realization 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 in this regard. According to one focus group participant: "The mountain people don't have the 60 Lari needed in order to gain access to the internet, so it would be good if we were provided with some incentives in order for us to learn new things and develop our business."

In addition, the locals 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 pastures. An in-depth interview respondent, a farmer working in viticulture, stated that: "Land ownership is now less likely to be extended. People have ancestral lands, which are undocumented. Undocumented land cannot be bought. This problem should be resolved soon."

Threats

Migration is foreseen as one of the threats of local agriculture, which affect the flow 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 exodus of young people, which makes the development of the local economy and agriculture more difficult every year.

Medium-sized farmers state the instability of the export market as being one of the biggest threats. One farmer stated: "Before wine, which was developed with the use of our grapes, was exported to Russia. Now it seems as though some wine is still exported although 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 a new market. This instability is very damaging for the wine industry."

Small and medium-sized farmers all mentioned the threats associated with the use of chemicals, as they see these as 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 distinguished by local environmental conditions and of course measures must be taken in order for it to be preserved. 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-sized farmers consider epidemic diseases as one of the biggest threats to their livestock. The farmers feel 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, livestock frequently die because of a lack of medical attention. Also, one of the respondents of the in-depth interviews responded: "Ambrolauri has very conditions for pig farming and livestock 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 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-sized farmers. One of the participant farmers of the focus group stated: "This year my neighbors planted beans and because of the drought they withered and consequently no profit was seen. This is a very common problem."

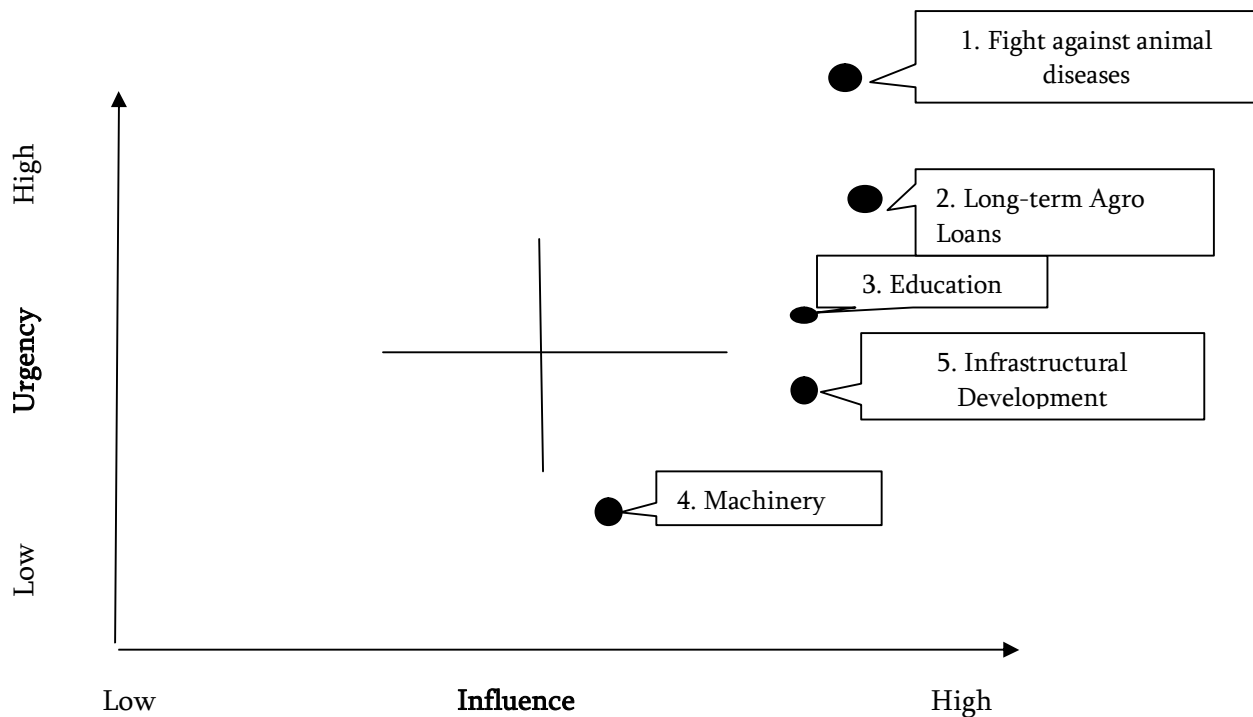
Needs of Agribusiness in the Ambrolauri Municipality - SWOT Analysis

The opinions of small and medium-sized farmers are more or less the same; therefore for the purposes of the Ambrolauri Municipality agribusiness SWOT analysis they will be shown together:

Strengths	Weaknesses
<ul style="list-style-type: none"> • Favorable landscape and climate conditions for the development of livestock farming, beekeeping and winemaking; • More or less fertile land; • Availability of water resources for irrigation; • Large amount of pastures; • Existence of endemic species of wine; • Tradition and knowledge in the field of agriculture; 	<ul style="list-style-type: none"> • Low accessibility to high-quality agricultural machinery; • Lack of information on different programs (agricultural loans, grant competitions); • Lack of work force; • Low level of knowledge among small farmers on modern technologies; • Low level of knowledge among small farmers on the formation of business plans; • Low-productivity species in livestock; • Lack of programs for business loans and business grants for small farmers; • Irrigation system problems; • Limited availability of quality agricultural chemicals and fertilizers; • The existence of counterfeit products (mostly wine) on the market; • Low qualification in human resources;

	<ul style="list-style-type: none"> • 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 in the field of agricultural sector; • The development of fish farming (trout farms) and bird farming; • Attract and maintain workforce; • Provide accessibility to qualified veterinarian and agronomic services; • Control of animal diseases; • Providing business consultancy in the development of business plans; • Implementation of business loan and grant programs aimed at small-sized farmers; • Improvement of livestock species; • Fight against counterfeit products (wine); • Arrangement of irrigation systems; • Conduct of frequent informational meetings in regard to agricultural support programs and projects; • Creation of cooperative with the involvement of small and medium-sized 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 documentation of agricultural lands; • Reduce damage from natural hazards. 	<ul style="list-style-type: none"> • Natural hazards (drought, hail, etc.); • Migration and outflow of knowledge; • Environmental pollution; • Epidemic diseases; • Instability of the export market.

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



The needs shown on the Diagram:

(1) Fight against animal diseases (livestock) - It is difficult for local farmers to prevent the spread of disease among their livestock and to reduce harm caused.

(2) Long-term Agro Loans - Raise accessibility to low interest rate and long-term Agro loans;

(3) Education - raising of the level of qualification of farmers and their level of knowledge in order to increase the efficiency of their agricultural activities. This also includes access to modern technology;

(4) Equipment - Increase access to high-quality agricultural equipment;

(5) Development of Infrastructure - One of the biggest necessities for local farmers is the construction of roads and road infrastructure.

5. Conclusions and Recommendations

Agriculture is the leading economic field in the Ambrolauri Municipality. Agricultural work is carried out using traditional methods. The following crops are considered a priority in the municipality: vines, beans and wheat. Ineffective management and the nonexistence of irrigation systems are among the major challenges in the field of agricultural farming.

The conditions of the municipality are most favorable for livestock farming, although the lack of veterinary services poses a significant problem. Moreover, high productivity species are needed for the development of livestock farming.

The following main needs were revealed as a result of the study:

- Implementation of Business Loan and Grant programs designed for small farmers – There is almost no access to affordable loans for agriculture. Small farmers find it difficult to participate in programs where cofinancing or a property mortgage is necessary in order to get a loan. Therefore, in conditions where loans are more or less accessible for larger farmers, small farmers are unable to compete.
- Development of fish farming, pig farming, bird farming as well as berry farming – It is the opinion of local farmers that more investments should be made in the four mentioned areas. They believe that there is big potential for the development of these fields in the municipality.
- Increase of the availability of qualified agronomists and, more essentially, veterinarians - Farmers do not have enough access to qualified agronomists and veterinarians. Only a few individuals are able to provide qualified agricultural/veterinary services in the municipality, who lack the sufficient resources to meet high demand. As a result, farmers face problems in the production and storage processes (eg. livestock often suffer from diseases). Accessibility to qualified veterinarians will have a positive effect on cattle reproduction, as well as milk and meat yields.
- Development of agricultural land legalization process – The agricultural land legalization process remains a problem for local farmers. The farmers believe that the legalization of ancestral land is very difficult due to the lack of documentation. There are frequent disputes between farmers in this area. Medium-sized farmers stated that the registration/legalization of their land would help them to expand their businesses.
- The use of high productivity breeds of livestock in the Ambrolauri Municipality – The main field of agriculture in the Ambrolauri Municipality is livestock farming. The breeds which are used are mostly of low productivity and therefore must be replaced with high-yielding breeds.
- Animal disease control – The frequency of animal diseases is one of the main obstacles for local livestock development. Consequently, it is important to carry out disease prevention and control activities in the municipality.
- The fight against counterfeit products - Farmers, especially winemakers, have difficulty selling their products because, frequently, adulterated products are sold on the market.
- Lack of work force – Medium-sized farmers have difficulty finding a workforce in the Ambrolauri Municipality. Therefore, they are in need of a workers database of people who are interested in working in the field of agriculture.
- Arrangement/creation of an irrigation system - Due to frequent drought, approximately 30-40% of the land is in need of irrigation. An irrigation system is arranged for only one part of the land of the municipality, therefore its development is needed.
- The delivery of special training courses for farmers - Farmers often lack the skills and knowledge to use modern technologies. The farmers also have difficulty buying high-quality fertilizers and chemicals, because they do not have sufficient knowledge of these industrial

facilities. In addition, farmers lack knowledge particularly in the fields of livestock farming and beekeeping.

- Business consultation and development of business plans - Local farmers find it difficult to prepare business plans needed for participating in different state, donor/international organizations or others' competitions. Therefore farmers need access to qualified business services. Through business consultations, farmers will be able to not only design sufficient business plans, but these services will also help to increase the effectiveness of their work.
- Conduct frequent campaigns of agricultural support programs and projects – Receiving accurate and comprehensive information regarding various support programs and projects is often difficult for local farmers, therefore special informational campaigns should be conducted periodically in Ambrolauri for the residents to receive information regarding state/donor/international and other organizations' projects.
- The creation of cooperatives with the participation of small and medium-sized farmers - The creation of cooperatives on the market with joint resources is an important opportunity in which small and medium-sized farmers believe would be able to expand their work. Therefore, the support of farmers in this direction is important from the central and local governments, as well as donor/international organizations.
- The upgrade of agricultural equipment, increase of access to technology and implementation of new technologies of production - One of the major hindering factors of the development of agriculture is the low availability of agricultural machinery. In this regard, small and medium-sized farmers actively enjoy the free cultivation state program, but they believe the technology is outdated and in most cases inefficient for the conditions of Ambrolauri, for some villages machinery is completely unavailable. It is also important for the municipality to have the necessary machinery and for their availability to be in accordance with agro terms. In addition, local farmers need to use new technologies for the production of different crops.
- Reduction of damage caused by natural hazards - Natural hazards such as drought, hail, landslides, avalanches and floods have negative effects for local agriculture. Hence, there is a need to take appropriate measures to reduce the damage of natural disasters, which will ensure the maintenance of agricultural assets.
- The protection of hayfields and pastures from erosion - Several methods can be used. First of all, it is desirable to establish and implement specific standards for cattle grazing in specific pastures. In addition, it is desirable to introduce rotational grazing.
- Increase accessibility to the internet - Access to the internet is one of the priority issues for the farmers of the Ambrolauri Municipality. Internet connection is not available for most villages, also farmers do not have enough financial resources to purchase an internet service. The farmers believe that access to the internet will help them to gain knowledge for the development of their agricultural work.
- The restoration of windbreaks - These will reduce the potential for soil erosion and contribute to the regulation of temperature during periods of hot weather.

Appendix 1 - Guidelines for the in-depth interviews and focus groups

- I. **The main task: assess the performance of the participants in regard to the strengths of their work.**

1. In your opinion, what are the strengths of your work and what way are they portrayed?
 2. In your opinion what is the reason for which these strengths exist? Which factors contribute to their existence?
 3. By your observation what factors contribute (might contribute) to the maintenance/development of your strengths and what factors have a negative effect on these strengths?
- II. The main task: assess the performance of the participants in regard to the weaknesses of their work.**
1. In your opinion, what are the weaknesses of your work and what way are they portrayed?
 2. In your opinion what is the reason for which these weaknesses exist? Which factors contribute to their existence?
 3. By your observation what factors contribute (might contribute) to the elimination of your strengths and what factors have a negative effect on the already existing weaknesses?
- III. The main task: assess the performance of the participants in regard to the possibilities of their work.**
1. In your opinion, what are the possibilities which will help you in the development/enhancement of your work?
 4. In your opinion what is the reason for which these possibilities exist? Which factors contribute to their existence?
 2. In your opinion what is needed in order for these possibilities to be realized?
 3. In your opinion who should be responsible for the realization of these possibilities?
- IV. The main task: assess the performance of the participants in regard to the possibilities of their work.**
1. In your opinion what are the risk which might hinder your work in the future?
 2. In your opinion what is the reason for which these risks exist? Which factors contribute to their existence?
 3. In your opinion who should be responsible for the reduction/elimination of these risks?
1. Generally what needs do you see for the development of your field?