ENPARD: A European Union Programme supporting Agriculture and Rural Development

Agriculture Potential Assessment of Kazbegi Municipality

September 2015

Disclaimer

"This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of People in Need and Biological Farming Association Elkana and can in no way be taken to reflect the views of the European Union.

ENPARD: A European Union Programme supporting Agriculture and Rural Development

Contents

Methodology ... 3
Main characteristics of surveyed households ... 4
  Age and education levels ... 4
  Land ownership ... 5
  Livestock ownership ... 5
  Gender and youth ... 6
Sources of income ... 6
  Share of agricultural income in the area's employment ... 7
  Correlation between education level and type of income ... 7
  Agricultural income and agricultural self-sufficiency ... 8
  Harvesting wild plants (berries, herbs and grass for hay) ... 9
Agricultural inputs, services and infrastructure available in the region ... 9
Markets for local agricultural products ... 10
Limiting factors ... 10
Interesting sub-sectors and resources needed ... 11
Agricultural and economic projects ongoing in the area ... 11
Conclusions and recommendations ... 12
  Productivity and quality ... 12
  Inputs and advisory services ... 13
  Role of local authorities ... 13

Methodology

The survey was carried out in September 2015, using a combination of primary quantitative and qualitative tools based on the Rapid Rural Appraisal methodology.

The objectives of the survey were to identify the main agricultural sectors in Kazbegi, the population's land- and asset-holding patterns and engagement in agriculture, the general state of agriculture infrastructure, inputs and services, main markets and interest from local tourism-oriented businesses in local agri products.

Quantitative data was collected from 153 households in 22 villages belonging to the six municipalities of Kazbegi (a list of villages and number of households surveyed in each of them is attached as Annex 1). The questionnaire used a combination of closed and open questions; for example, questions regarding main products, limiting factors, resources needed for development of agricultural sub-sectors were left open and the data was then organized by each answer. The aim of this phase was to understand the patterns of land and agricultural resources (including livestock) ownership, access to infrastructure, services and markets, division of labor by gender and age, the share of household income held by agricultural activities, factors which limit development of agriculture in the area and the resources needed to overcome them.

While tourism is known to be one of the major economic sectors in this area, the survey did not aim to address it, as there is a separate study conducted under this project which looks at it from a perspective of seasonality and potential for growth. However, recognizing that local tourism service providers – especially restaurants, guesthouses and grocery shops – can provide an attractive market for local agricultural products, the survey focused partly on identifying the extent to which this is currently happening and the factors limiting it.

Semi-structured interviews were conducted with seven representatives of representatives of Sakrebulo*,* local government, the Regional Information and Consultation Centre of the Ministry of Agriculture and local non-governmental sector; the aim was to gain insight into the role of public institutions in developing the agricultural sector of Kazbegi, as well as to verify the information gathered from the general population.

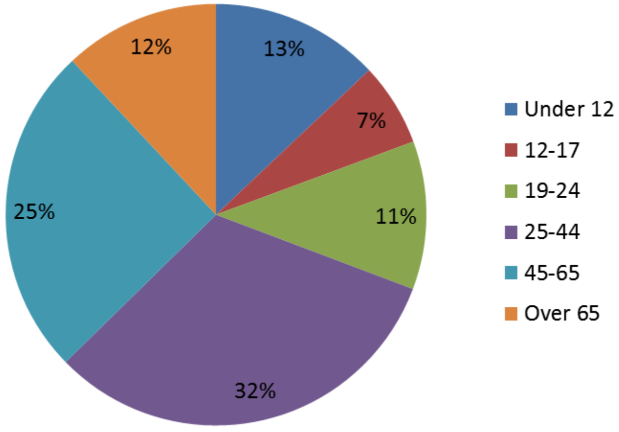
A similar approach to qualitative data collection – semi-structured interviews – was used to weigh the interest of local guesthouses, restaurants and shops in sourcing their food locally, as well as to explore the barriers they may face in doing so. Representatives of seven such establishments were interviewed.

Main characteristics of surveyed households

<u>Age and education levels</u>

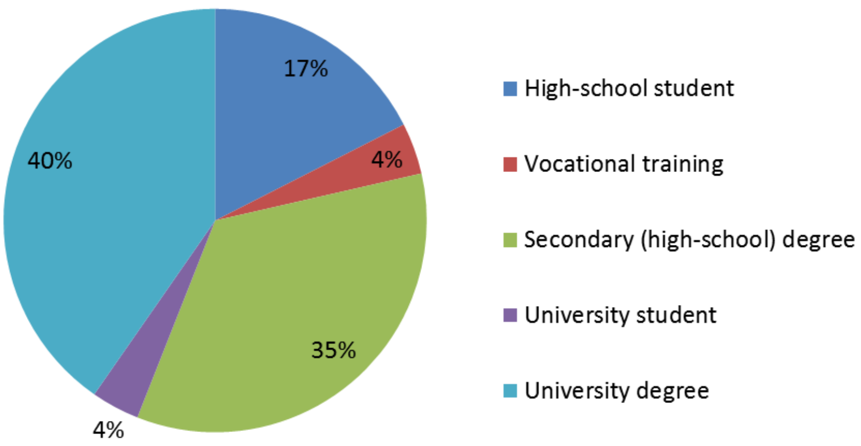
The 153 households comprise a total of 557 members, of whom 245 women and 312 men. The average age of the household members is 42 and median age is 37. A summary of the composition of surveyed households by age groups is presented in Figure 1.

Figure 1 - Age composition of surveyed households



Inquiry into the education status has revealed that approximately 40% of the adult (over 18) members of the surveyed households have university degree and a further 35% have completed secondary (high-school) education. The percentage of adults with higher education is higher among Stepantsminda residents: almost 50% compared to the area average of 40%.

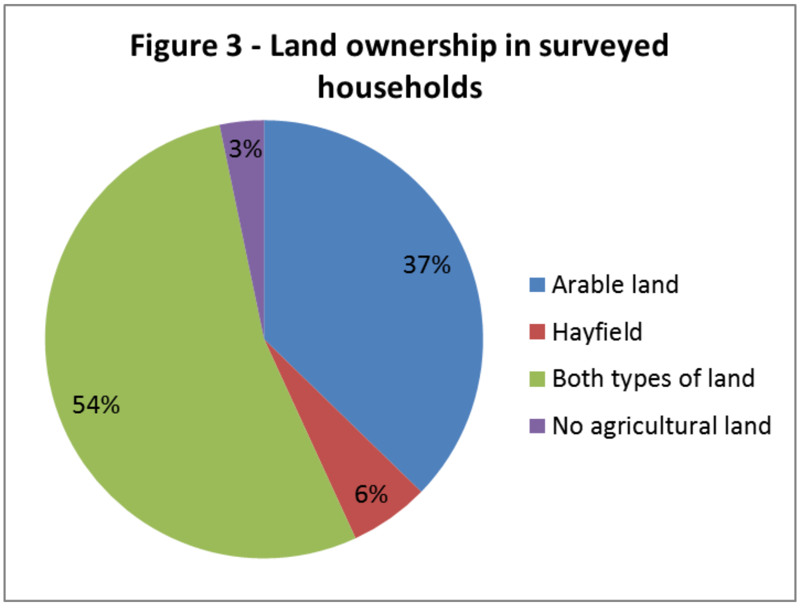
Figure 2 - Education levels in surveyed households



Almost all minors are enrolled in some form of education and 4% of adults (most falling into the 19-24 age group) are currently undergoing university studies.

Land ownership

Most households report having either arable land, pastures or both, with only 3% not owning any agricultural land.



However, when it comes to size of the plot, data collected reveals that 90% of households which own arable land and 64% of the ones which own pastures have a maximum of half a hectare of each. Only 14% of the total households surveyed have more than one hectare of either arable land or pastures.

There are few statistically significant differences between the municipalities in terms of land ownership patterns.

The official statistics also confirm the shortage of arable and pasture land in the region, according to which the arable and pasture land areas in Kazbegi Municipality total 62,340 ha and 3,274 ha, respectively. The arable land areas are completely in private ownership, while reliable statistics concerning the allocation of pasture land do not exist.

Livestock ownership

The most frequent domestic animals are sheep, typical for mountainous areas such as Kazbegi. Nearly 20% of the households surveyed report owning sheep, almost half of them in flocks of up to ten animals and less than 3% of all households owning more than 100 sheep.

While fewer in number than the sheep, cows are owned by almost 72% of the households surveyed; more than half of these own three or fewer cows and merely 6 out of the 110 households which have cows report 20 or more heads.

Less than 14% of households own poultry – mainly chicken – and more than half of these own 10 or less; none of the surveyed households own more than 40. The products are almost exclusively consumed in the households.

A similar percentage – just under 14% – of households own beehives, most of them around 20 hives/ household.

Gender and youth

The labor distribution in agricultural activities has the following pattern:

- Men prevail in the sectors associated with hard physical labor: production of feed, agricultural machinery, carrying and storing the yield; beekeeping is also among the activities almost exclusively done by men.
- Women's labor dominates in the sectors associated with daily labor: milking and milk processing, everyday care of animals, vegetable cultivation.
- Activities such as sowing, harvesting and care of livestock, are split, though with more prevalence among men.
- Involvement of the youth (from 12 to 25 years of age) is observed only in the activities where the whole family resource is traditionally used. Only about 37% of the surveyed households report that their younger members take active part in this type of work.

Sources of income

With regards to the main sources of income, 27% of the households surveyed rely on only one source of income; for most of these, the source is agriculture (76%) and for some it is welfare or pensions (19%) or salary (5%). A further 52% derive income from two sources, one of which is, in all cases, agriculture. Business is one of the least common sources of income, with less than 14% of all households reporting income from such a source and less than 10% of these relying on it as a single source of income; in all cases, business activities are combined with agriculture (all households deriving income from business also report income from agriculture).

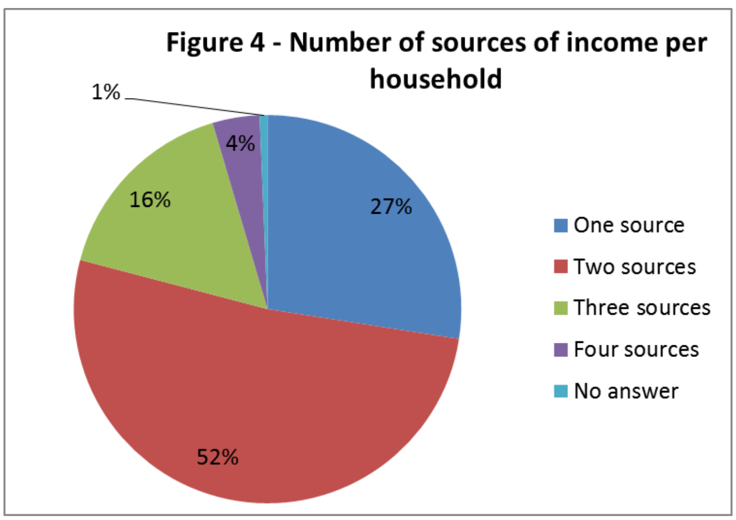


Table 1: Sources of income in surveyed households	
Source	**% of HHs using it**
Agriculture	92.8%
Welfare and/or pension	50.3%
Salaried employment	38.6%
Business	13.7%
Other	11.8%
Remittances	0.0%

Table 1 provides a ranking of the sources of income in the surveyed households. More than two thirds of the households surveyed derive some form of income from agriculture. Half of all households rely on welfare support or pensions, with salaried employment (mostly in the public or tourism sectors) bringing income to just over one third of households.

Share of agricultural income in the area's employment

Discussions with representatives of government and civil society have revealed that agriculture accounts for about two thirds of employment in Kazbegi. These officials generally agree that agriculture is mostly practiced for self-consumption or small-scale income generation. Gudauri is specifically noted as a low-production municipality, unsurprising given its almost exclusively touristic focus.

Correlation between education level and type of income

Almost 78% of households which report some form of salaried employment have at least one member with higher education. However, less than 23% of households which do not have at least one higher-educated member derive income from salaried employment.

Households with at least one member having higher education are more likely to report income from business: three quarters of households with business income have at least one member with higher education; furthermore, two thirds of the adult members of these households either hold a university degree or are enrolled in higher education courses.

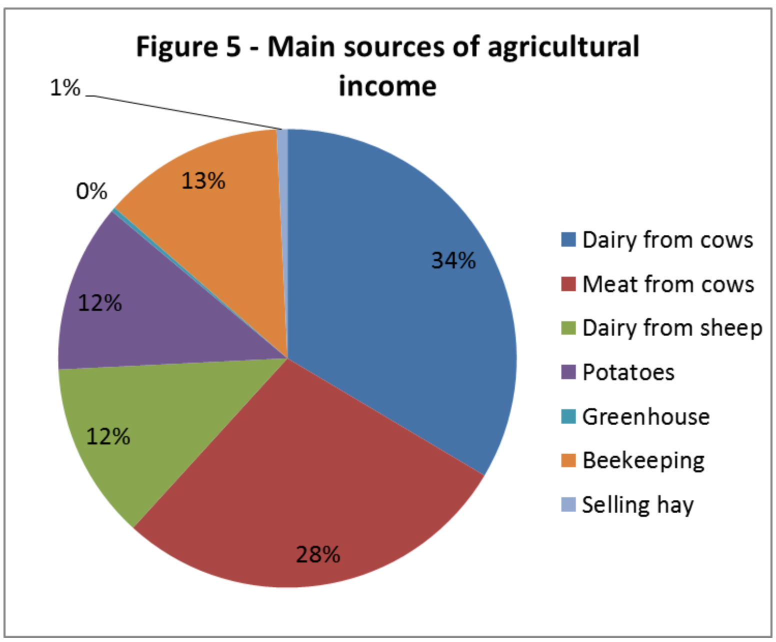
When it comes to agriculture, however, level of education seems to make little difference; for example, agriculture is a source of income for 74% of households which have at least one member with higher education and for 61% of households which do not.

Agricultural income and agricultural self-sufficiency

Among households which report agriculture as a source of income, potatoes are the most popular product (again, not surprising in this climate and geography), followed by cow dairy (mostly cheese and *matsoni* – homemade yoghurt) and meat. The survey includes products grown for consumption in the household.

Table 2: Main sources of agricultural income in surveyed households

Source	% of HHs using it
Potato	69.7%
Dairy from cows	64.8%
Meat from cows	26.8%
Beekeeping	12.7%
Dairy from sheep	6.3%
Selling hay	4.2%
Greenhouse	1.4%



However, looking at the income reported by the respondents, we can see that, even though the potato is the prevalent crop, it only accounts for about 12% of the agricultural income of these households. Cow-derived products (dairy and meat) account for 62% of the total agricultural income of the surveyed households. This is confirmed by interviews with government and civil society representatives, who also largely point to sheep and cattle, followed by potato and honey as the main products of the area.

Though greenhouses have been included in the chart presented in Figure 5, it is worth mentioning that only two households reported such activities, with minimal profits (500 and 1,500 GEL/year respectively).

Interviews with government and civil society representatives have revealed that the demand for potatoes is mostly (90%) met through local production, but that in other products, such as meat, dairy, vegetables and honey, this percentage hovers around 50%.

<u>Harvesting wild plants (berries, herbs and grass for hay)</u>

A separate section was dedicated to exploring the main types and quantities of wild plants harvested by the local population, as well as the purpose of collection. Our research has shown that approximately two thirds of the surveyed households collect wild plants, most of them preferring grass for hay, followed by herbs for tea infusions, blueberries and sea-buckthorn. Regarding quantities, an average of 222 kg of grass/household is usually collected every year and about 73 kg of sea-buckthorn and 10 kg of blueberries and raspberries each per household. Cumin, rosehip, herbs for tea infusions, barberries and Caucasian pears are also collected, though in smaller amounts (between 2 and 5 kg/household).

About two thirds of the households which collect wild plants report applying some form of standards or techniques, with most of them referring to ancestral practices. About 20% of these households take care not to damage the plant when collecting its fruit and a further 20% are not aware of any modern standards in harvesting wild plants; a small minority (around 6%) do not see the need for any specific standards or techniques. Interviews with local government and civil society representatives have also revealed a lack of knowledge or interest in applying standards to collection of wild plants.

Agricultural inputs, services and infrastructure available in the region

Most households surveyed agree that veterinary services and natural fertilizer (manure) are generally available in the area; half of them name seeds and about a third agricultural machinery among the inputs which can be found here. However, the situation is different when it comes to mineral fertilizers, plant protection agents, veterinary medicine and general agricultural advice are among the inputs and services which farmers cannot easily access.

With regards to infrastructure, almost all of the households indicated that they have access to natural gas, electricity and roads leading to their agricultural plots. Only around 10% mentioned irrigation systems among the infrastructure from which they could benefit. The respondents unanimously pointed out to a lack of collection and processing enterprises for agricultural products, which would enable farmers to sell more.

Markets for local agricultural products

A little more than half of the surveyed households are able to sell any of their agricultural products. Almost 70% of these sell directly from their houses, mostly to their neighbors, about 36% sell in Stepantsminda and very few manage to sell in Tbilisi or in other areas.

About 22% of all households surveyed reported selling agricultural products to local hotels, guesthouses and restaurants. Among the main reasons cited by local producers for not selling to these local tourism service providers are: insufficient quantity (most is consumed in the household), inability to guarantee steady supply throughout the touristic season (even in summer) and the fact that they cannot meet the required quality standards. The same reasons were cited by the businesses interviewed, with the addition of lack of documentation (most producers are unable to provide invoices). This reveals a generally good understanding from both sides of the limitations.

The picture is confirmed by interviews with local government and civil society representatives, who indicate that most of the area's agricultural products (such as potatoes, dairy, meat and honey) are consumed in the household or sold locally. There is no slaughterhouse in Kazbegi, so livestock owners mostly sell live animals to dealers from other regions, at low prices.

The seven representatives of restaurants, guesthouses/hotels and shops who were interviewed in Stepantsminda provided more insight into what products they are currently procuring locally and the reasons why they continue to rely mostly on products brought in from other parts of Georgia. For example, Rooms Hotel (the area's largest private employer and tax contributor) claims to buy some of its cheese, fish, honey and lettuce locally. Meat and cheese are also relatively high on the list of local products preferred by most of these businesses, though the amounts purchased are quite low. Four of the seven businesses interviewed source less than 10% of their food products locally, two indicated a percentage between 50 and 80 and another places this share at around 30-50%.

In general, local businesses have a good impression of the taste and eco-friendliness of local agricultural products. When asked what products would be most interesting to source locally, should the limitations discussed above be overcome, most businesses referred to vegetables (especially cucumbers and tomatoes), fruits (especially berries), herbs, meat and cheese. Interestingly, none of these seven businesses expressed interest in honey.

Limiting factors

About 92% of surveyed households indicated access to finance as one of the main limiting factors, almost half pointed towards lack of knowledge (both technical and business management), and around

17-19% referred to lack of irrigation and quality of roads, respectively. Although the Ministry of Agriculture is managing a preferential agro-credit program, farmers in Kazbegi have little access to it, due to remoteness of the region, land registration issues, requirements for collateral and small landholding patterns.

Access to quality seeds was not particularly noted by most of the households, though in many cases the research team observed that, in the case of potatoes, what respondents referred to as “highly accessible” seeds are actually home-grown, lacking any form of certification or quality control. Only a few farmers bring good quality seeds, mostly from Samtskhe-Javakheti.

With regards to cow dairy, it must be noted that the largest share of dairy products sales is made up by cheese and *matsoni* (homemade yogurt). They are produced using traditional practices which do not correspond to the standards of the Law on Food Safety that has been in force since August 2015. As a result, they can only be consumed in the household; even businesses which used to buy some of these products locally until 2015 will not be able to do so in the future, or risk legal consequences.

Interesting sub-sectors and resources needed

Almost three quarters of the surveyed households indicated that they would be interested in developing a business around cattle – either meat, dairy or both; most of this interest is coming from households which already own some cows and have observed the income-generating potential.

About 27% indicated beekeeping as an activity with potential and 18% referred to potato cultivation. There is some sporadic interest in fish farming, fruits, vegetables and production of wild herbs. Particularly with regards to production of lettuce and berries, the NEO project funded by USAID established several demonstration plots in 2014, encouraging farmers to consider these products for the future.

Most respondents (approximately 85%) stated that tools and mechanized equipment are the most important resource needed to develop the sub-sectors indicated. Almost half referred to the need for more productive breeds of cows and sheep.

Agricultural and economic projects ongoing in the area

The following projects in promotion of the agricultural sector development are being implemented in Kazbegi Municipality:

- SPPA-Georgia (KfW, WWF), within the framework of which both the community development as well as individual economic development and infrastructure projects will be implemented in the villages bordering the protected areas of Kazbegi region;
- Project “Produced in Georgia”, within the framework of which grant tenders for financing individual and joint economic development projects are being implemented (the implementing partner is the Georgian Organization of Scout Movement);
- Preferential Agro-Credit Project being implemented by the Ministry of Agriculture of Georgia in cooperation with commercial banks.

Conclusions and recommendations

Productivity and quality

While a vast majority of households in Kazbegi are involved in some form or another in agricultural activities, most of the local production is small-scale, using low productivity inputs and with insufficient access to technical advice; the vast majority of households treat agriculture activities as secondary, mostly consumption-oriented rather than as a business. This makes it difficult for local products to be competitive, even on local markets.

With the exception of meat and cheese, there seems to be a mismatch between the demands of local businesses for agri products and the interest or capacity of local farmers to supply these products. Correlated with the fact that most producers seem to be aware of the fact that their products do not meet the quality standards of most local businesses, but few have been able to take steps towards correcting this.

There is ample scope for increased production of vegetables (especially in the winter season, in greenhouses, to supply the tourism industry), meat and cheese. However, food safety standards have to be taken into consideration for the last two groups of products.

With regards to meat, the absence of a slaughterhouse which operates at national standards is limiting the development of the sector; livestock is currently taken out of the area for slaughter, then returned as frozen meat, adding to the costs and making it uncompetitive. Businesses cannot legally purchase meat which has not been processed according to standards. However, slaughterhouse equipment which complies with regulations is extremely expensive and may not be feasible under the ongoing ENPARD project.

The new food safety standards brought into force in 2015 may have had a limited impact on dairy producers, as they came towards the end of the tourist and agricultural seasons. However, their effects may be felt more strongly in 2016, further reducing the market for such products beyond the informal, neighbor-to-neighbor sales; given that dairy constitutes a sizeable share of agricultural income, measures may need to be taken to overcome this barrier. For example, raising awareness of producers as to the new standards and supporting projects which promote modern production techniques which fulfil the requirements.

Given its remote, mountainous character, Kazbegi provides excellent opportunities for collecting wild plants such as berries and herbs which are in high demand both locally and in the rest of Georgia. These are products which can be sold fresh, dried for storage or turned into preserves. While the research has shown that about two thirds of households do collect such plants, it is worrisome that few of them have any understanding of modern collection techniques and standards; if the market for these products continues to grow, making them more appealing, there is a risk of environmental damage if awareness of conservation is not increased, along with authorities' oversight.

Inputs and advisory services

Access to quality inputs, tools and mechanized equipment, as well as technical advice needs to be improved in order for the sector to become competitive. Suppliers of quality seeds, fertilizers and pesticides who wish to establish or expand such businesses in the area should be among the types of enterprises supported through the grants planned under the project. Demonstration plots attached to these suppliers can help build confidence of the farmers in the quality of these inputs.

Experience of PIN in other parts of Georgia and abroad has shown that agricultural cooperatives can be very effective when it comes to purchasing and using machinery. While mechanized equipment can be prohibitively expensive for most individual farmers, given the small landholding patterns, groups of farmers are better positioned to access it.

Role of local authorities

There is little official data available at the moment regarding how many people are actively involved in agriculture in Kazbegi, what are the main products and in what amounts, what specialized skills are required to develop each sub-sector, what input suppliers operate and what types of inputs they offer. The project can develop the capacity of relevant local authorities to collect and process such data and to actively reach out to farmers on matters related to food safety standards, environmental protection, resilience building etc.

Strategic development plans should be drawn up with the co-participation of specialists and encompass both the main traditional directions (cattle breeding, potato growing, beekeeping) as well as new promising directions (harvesting of berries, lettuce growing etc.).