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SUSTAINABLE AGRICULTURE DEVELOPMENT PROBLEMS IN THE CONTEXT OF PROVIDING FOOD SECURITY IN GEORGIA

Abstract:

Due to the peculiarities of the natural resources of Georgia the main priority of the agriculture is the development of bio production. Production of bio products is alternative, modern system of agricultural products production, which has steadily increasing economic potential. Current research shows that the rapid increase in production of bio products could be a good alternative for agricultural development of Georgia, but the growth rate of bio production is quite low than expected. The present paper examines the situation of bio production in agricultural sector of Georgia.

The main aim of the research was to evaluate the role of bio-production in sustainable development of agriculture of Georgia and to work out some recommendations for further development. According to our goal, these problems were:

1. Evaluation of consumers interest and approach to bio-products;
2. Evaluation of Georgian producer's interest in bio-market;
3. To identify the reasons of underdevelopment of bio-products market in Georgia.
4. Improve implementation of sustainable agriculture policy.

Our research showed that despite consumers readiness to purchase bio-products, the segment of the Georgian market is developing more slowly than in other countries. The research show that for producers the most influential are the economic factors and the least influential are the social factors.

The agricultural politics of Government played a significant role in development of the market. The most important directions include: Promotion of Georgian bio-products, supporting the bio sector of agriculture and developing the local and export bio markets.

The systematic approach to the problems will help to develop the bio-farms:

Qualification: The farmers need to have enough knowledge about the bio-farming, bio-products and the perspectives of the bio-production, also how to transfer from the traditional to the bio farming.

Support: The farmers could transfer from traditional to the bio farming easily with financial and informational support.

Certification: Bio producer should have the guarantees that after all required procedures they would not have any problems with certification.

Sales: The farmer needs a serious support in organizing the problems of export and entering the international markets, they could not do it alone.

Bio-production - quality oriented, sustainable, and rapidly growing and perspective production could become the main priority for Georgian agriculture. In this regard, bio-products may be considered as a direction of developing sustainable agriculture.

Keywords:

bio production, sustainable development, agriculture, agriculture policy, bio products market

JEL Classification: O13

Introduction

The term sustainability is widely used in scientific literature basically for country's socio economic development, towards different subjects. It represents the essential term for the effective function of national economics' every sector. Sustainability is the most resonant word nowadays, which corresponds to every socio and economic problem: sustainable economic growth, sustainable development, sustainable forestry, sustainable population, sustainable urban development and etc.

Sustainability is mostly important for agriculture. The situation in agri-food sector, it's efficiency and sustainability defines country's economic security and food safety. That is why, an enforced control over agro production's sustainability represents the main subject for the countries, which consider food politics as priority and strategic.

But nowadays scientists, politicians, international organizations pay much more attention not only to sustainable development of agriculture, but also to sustainable agriculture. The great number of scientific works show the importance of the problem.

The publication analysis showed that scientist-economists consider sustainability problems from the position of production. Sustainable development of agro food Sector determines economic safety and food independence of every country, included Georgia.

Agriculture plays a crucial role in sustainable development and in hunger and poverty eradication. The challenges faced by agriculture in sustainable development is in working out ways of bringing about a society that is materially sufficient, socially equitable, and ecologically sustainable and one that is not obsessed by growth only, but motivated by satisfying human needs and equity in resource allocation and use[1].

The sustainability of agriculture in Georgia cannot be isolated from the sustainability of development in the country. The main tools towards sustainable agriculture are policy and agrarian reform, participation, income diversification, land conservation and improved management of inputs.

Agriculture is at the core of sustainable development. The agricultural sector is an area of economic activity most subject to intervention, with policy objectives ranging from food security to biodiversity to the control of diffuse pollution. Farmers' land use decisions, whilst private, have often significant public implications, generating both external costs, such as wildlife-habitat changes, deforestation, and wetland degradation, and external benefits, like the provision of recreational opportunities.

Realization of the sustainable agriculture must be based on these 3 conditions:

[1] Policy on Agriculture in Sustainable Development a discussion document, 8th Draft, www.nda.agric.za/docs/Policy/SustainableDev.pdf

- To receive economic gain;
- To receive social profit for family farmers and for the whole community;
- To ensure conservation of the environment.

Biological agriculture answers to the demands where organic production takes place. It must fit local farming, social, geographic and climate factors. Scientists define Sustainable agriculture differently - organic, biological, ecological. These definitions are used as synonyms.

The European form of Organic agriculture, especially its modern marketing oriented style, may not be the best system for other countries. The principles of the organic agriculture must fit every concrete location, for example there is always a place, where some kind of crop can't be cultivated considering sustainability principles in terms of organic methods.

Organic agriculture is widely recognized as an accepted alternative for traditional agriculture and represents a source of ideas and approaches. Conditions of sustainable development can be accomplished with its help.

According to the UN forecast, a drastic increase in the world population is expected. It will total 9 billion instead of the present 7 billion. Simultaneously, political developments in the world, as well as global climate changes, create additional challenges to provision of enough food of acceptable quality to the global population. These problems are becoming even more acute given current global economic and financial crises[2].

It is apparent that Georgia being a part of the global economy cannot be left untouched by the current developments. Despite some transformational dynamics of the economy, the issue of the poverty and provision of food to the population is still very severe. Therefore, the key objective for the upcoming years is to create a developmental model for the country's agricultural sector that will ensure provision of affordable and quality food to the Georgian population, as well as maximizing the use of its export potential in commodities where the country has a competitive advantage[3].

Many experts consider that small countries have good chances to get competitive position if they move toward the sustainable agriculture. The market of bio-products is unique due to the fact that in the whole world the demand on those products is still greater than the supply.

Georgia is rich in agricultural tradition, which is an integral part of its history, mentality and cultural heritage. Agriculture played an important role in formation of the Georgian statehood and contributed much to its economic development.

[2] Ministry of Agriculture of Georgia, Strategy for Agriculture Development in Georgia 2015-2020, www.moa.gov.ge/fileman/Uploads/STRATEGIA_ENG_print.pdf

[3] Ministry of Agriculture of Georgia, Strategy for Agriculture Development in Georgia 2015-2020, www.moa.gov.ge/fileman/Uploads/STRATEGIA_ENG_print.pdf

In Georgia most farmers don't have initial money to start their own business, but they can use cheap working power (in many cases their own family members), Unique natural recourses of country increases their chances to become competitive producer and exporter of bio products to Europe.

There is no real support from Georgian government - the law "Biological Agriculture" defining the main principles of organic production was planned to take effect in 2012, but it has not joined into force until now.Georgian bio-production should play a much more profound role as a driver of economic growth and social stability.

Due to the peculiarities of the natural resources of Georgia the main priority of the agriculture is the development of bio production. Production of bio products is alternative, modern system of agricultural products production, which has increasing economic potential.

The main aim of research was to evaluate the role of bio-production in sustainable development of agriculture of Georgia and to work out some recommendations for further development. According to our goal, these problems were:

1. Evaluation of consumers interest and approach to bio-products;
2. Evaluation of Georgian producer's interest in bio-market;
3. To identify the reasons of underdevelopment of bio-products market in Georgia.
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Evaluation of consumer's interest and approach to bio-products

Two times, first In In 2006-2009 and then 2012-2013 was made face-to face survey of random 170 and 60 consumers.
Were studied the issues such as:

- Role of bio-production in sustainable development of agriculture;
- Consumers approach to bio-products and their willingness to pay in Tbilisi, capital city of Georgia.

Methods

For economic analysis were used following methods: standard (structural) and nonstandard (open interview, narration) questioning. For the quantitative evaluation were used data of Department of Statistics and research publications data base. There were conducted comparative analysis between analytic and statistic data. The statistical analysis was performed by SPSS.

Results

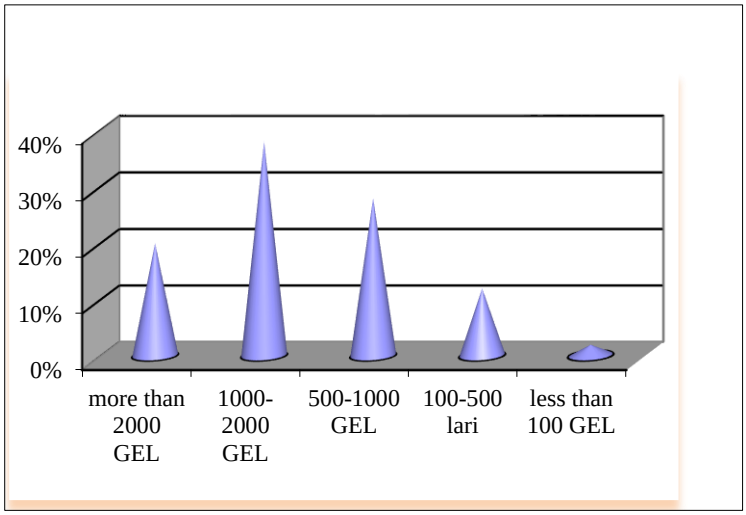
Research shows that the rapid increase in production of bio products could be a good alternative for agricultural development of Georgia, but the growth rate of bio production is quite low than expected.
Our research showed that despite consumers' readiness to purchase bio-products, the segment of the Georgian market is developing more slowly than in other countries. That's why we still continue researches, in order to study perspectives and characteristics of Georgian bio-production market development. Every member of the market will receive information and recommendations on possibilities and dangers proceeding from research results.

It takes time to create effective bioporduct market and its expansion in Georgia. We mean that consumers' and suppliers' behavior should be changed according to the guaranteed wellbeing and indefinite but attractive future incomes. In the long term perspective the main motivations for developing bio-production is lower costs of production and higher market prices.

One of the most important factors is the change of consumers' taste in favor of these products. Also we have to add that it is possible to produce bioproducts not only in small and medium scale and also in case of agricultural cooperation.

On the figures one can see the results of our survey.

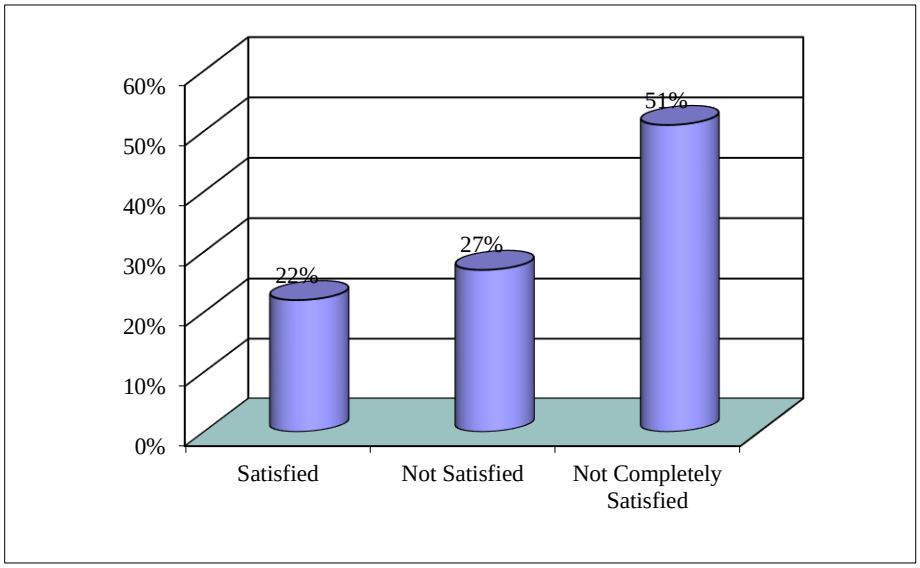
Figure1: Structure of respondents according to incomes



- The average monthly family income of 38% of the examinees was between 1,000 and 2,000 GEL;
- 2% had less than 100 Gel, 12% from 100 to 500 GEL;
- 28% had from 500-1000 GEL;

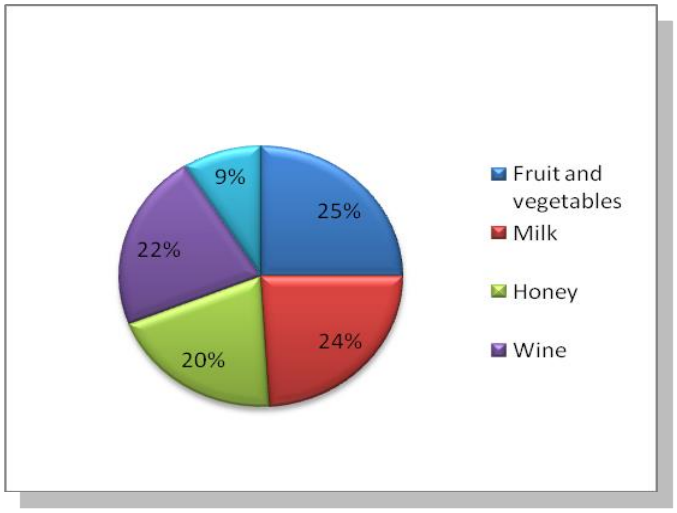
- 20% had monthly income more than 2000GEL.

Figure 2: Satisfaction by the quality of local bio-products



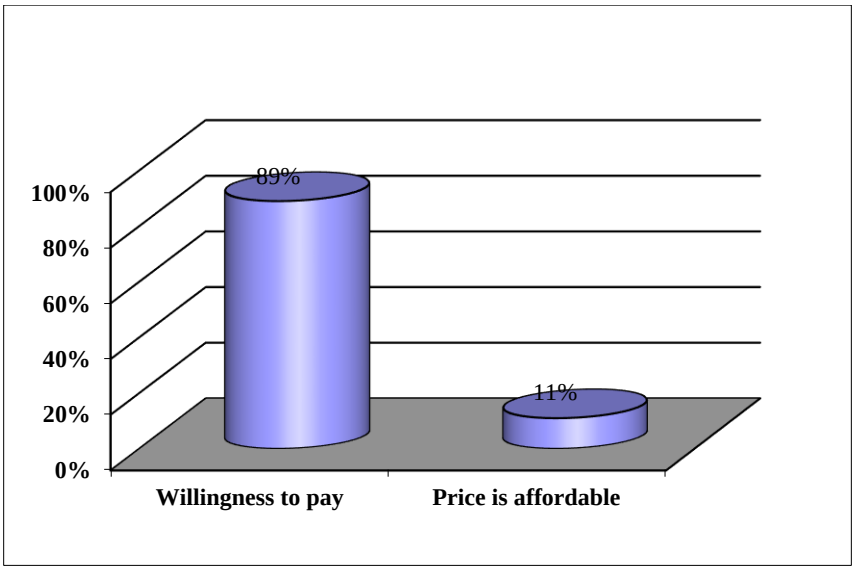
- Around 22% of respondents claim that they are satisfied of quality of local bio-products;
- 27% are not satisfied;
- less than 51% are not completely satisifed.

Figure 3: Most frequently consumed bio-products



- 23% of respodents prefer to pruchas bioporducts directly from producer;
- The most frequently bought bioporducts are fruits and vegetables (25%), milk and dairy products (24%), honey (20%) wine (22%), tea(9%).

Figure 4: Willingness to pay for bio-products



Respondents were asked to indicate if they were willing to pay a higher price for ecologically-grown food compared to conventional foods, and how much extra they were willing to pay.

- 14 % definitely would not pay more money;
- 21 % would not have an opportunity to pay more for bio-product;
- 65 % willing to pay more and would pay the 10 % extra;
- 9 % would pay 50 % extra;
- 7 % of respondents were willing to pay 100 % extra for bio-products.

Conclusion

For the future growth of sustainable agriculture it is essential to develop biological agriculture based on innovations. Georgia can develop competitive agriculture and has a perspective of finding its unique place in the world market. Georgian agricultural products have always been distinguished with its highest quality and delightful taste. But because of its complicated landscape and other many reasons, it will be very difficult for Georgia to compete in prices, but Georgia can appear as an effective competitor in the world market when it comes to the quality of bioproducts.

Evaluation of Georgian producer's interest in bio-market

As first part of research show, the rapid increase in production of organic products could be a good alternative for agricultural development of Georgia, but the growth rate of bio production is quite low than expected.

The second part of research was to find the main socio economic, factors which predetermine low interest of producer's and low growth rate of bio production. The questions of the second part of research were: what farmers think about the social, economic and environmental aspects of sustainable development of agriculture.

The problems impeding the farmers to start bio agriculture are quite many; the number of bio farms is not increasing and the initial interest was lost. So our attempt was to find reasons and factors putting obstacles in the way of bio production.

For this case was conducted the survey of 55 farmers in Kakheti, the biggest agricultural province of Georgia.

The objectives were:

- To find out the perceptions of farmers about the factors affecting the bio farming using the questionnaire;
- To find out the environmental, socio and economic factors affecting the bio production;
- To evaluate the socio economic factors affecting the bio production and work out the recommendations.

Methods

The choice of respondents was made by the "snowball sampling". the data was collected through the interviews. The focus was set on the statistical conclusion - defining the factors. We have use the descriptive analysis.

The data was obtained through the structured questionnaires. The questionnaire include a range of semantic-differential (with good/bad options) and Likert items (ranging from 1 as absolutely disagree to 5 as absolutely agree). The variables include the factors affecting the ecological, economic and social aspects, also the educational, political and farming means.

Results

In the current survey the natural environment¸ socio and economic factors of the sustainable agriculture were the dependent variables measured by the perceptions of respondents, and the independent variables were the knowledge about the farming and social, economic and education factors.

The descriptive study showed that the respondents were male, with average age of 60 years old, and 90% had no university diploma. Majority of farmers had more than 25 years working experience. The questionnaire also had the following items: working experience, type of product, the total area of the land plot (Figure 5 and Figure 6).

Figure 5: Age of owners

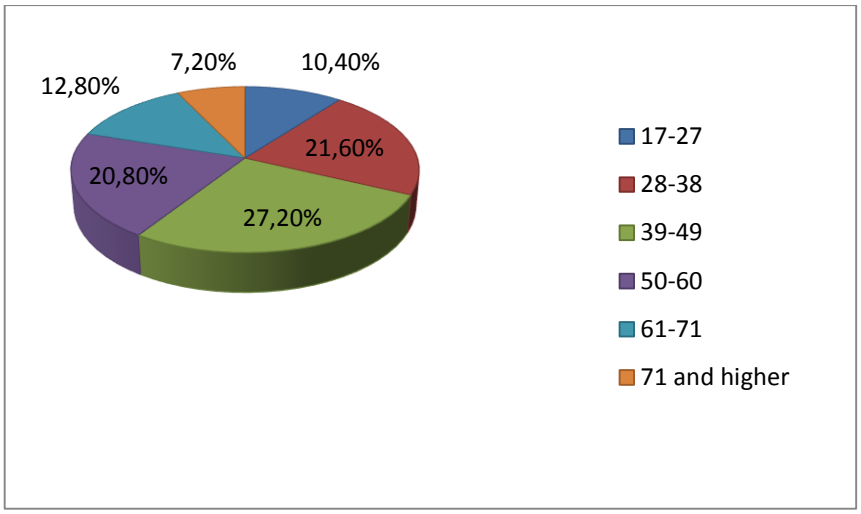
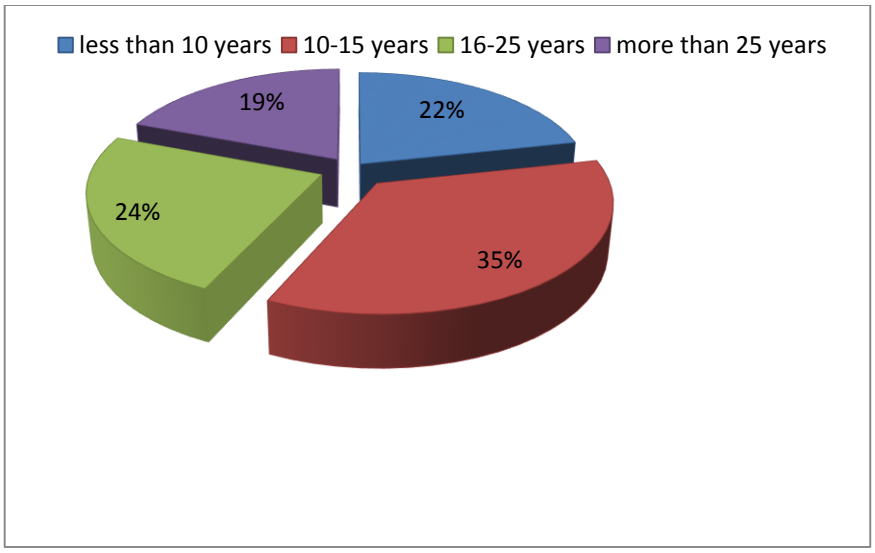
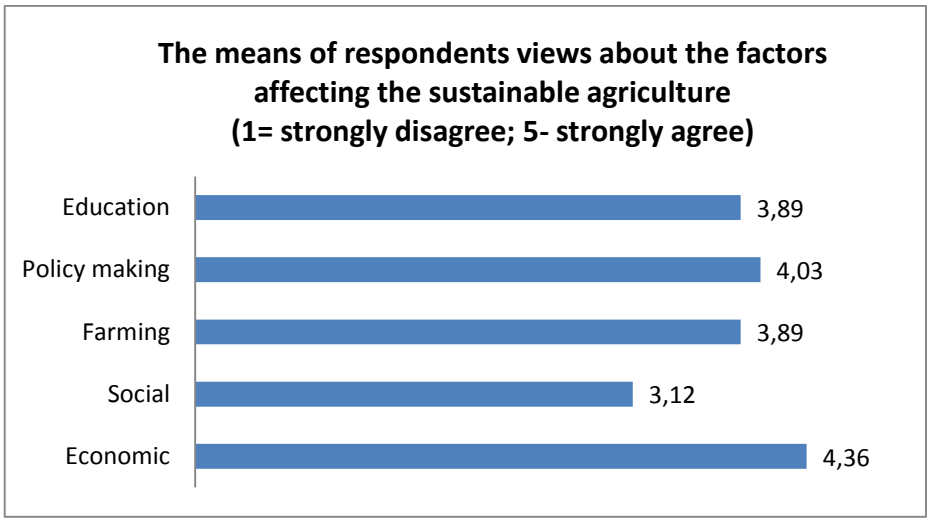


Figure 6: Working experience



From all factors affecting the sustainable agriculture the most significant were the following 5: Economic, Social, Farming, Policy making and education factors. The highest mean number refers to economic factors (4.36) and the lowest mean to social factors (3.12).

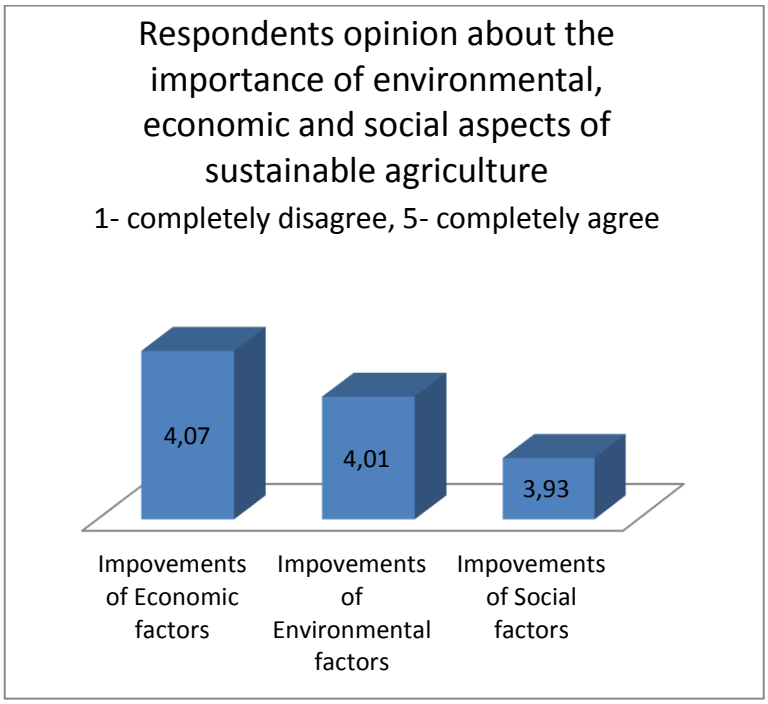
Figure 7: The means of respondent's views about the factors affecting the sustainable agriculture



The results show that farmers consider the implementation of new farming methods an essential step due to economic factors, while the social factors are not so important element for sustainable agriculture.

The perception of respondents about sustainable agriculture considering environmental, economical and social aspect of sustainable agriculture was displayed in Figure 8.

Figure 8: Respondents opinion about the importance of environmental, Economic and Social aspects of sustainable agriculture



The research shows that the most influential are the economic factors and the least are the social factors. Amongst the environmental factors the highest priority was defined for the improving the quality of soil and the lower priority for the improving the quality of water.

The utmost priority is to decrease the economic risks and the lesser to improve the social conditions. The survey of environmental and social factors shows that the higher priority is given to the environment and the lowest to social.

Conclusion

Our research showed that despite consumers' readiness to purchase bio-products, the segment of the Georgian market is developing more slowly than in other countries. That's why we still continue researches, in order to study perspectives and characteristics of Georgian bio-production market development.

It takes time to create effective bio product market in Georgia. In our opinion consumers' and suppliers' behavior should be changed in favor of these products. In the long term perspective the main motivations for developing bio-production is lower costs of production and higher market prices.

The analysis showed that the reasons of underdevelopment of bio-products market in Georgia are the following:

- Bio-products are considered to be very expensive;
- The low Demand of bio-products;
- Massive production orientation of Georgian producers;
- Lack of information on bio-products;
- very risky for Producers;
- low trust of customers in labeling;
- Irrelevant and insufficient government policy for bio-market;
- Very difficult and expensive certification process.

Several incentives have arisen:

- High price on bio-products;
- Free niche for bio-products in the market;
- High potential of production bio-products because of Georgian natural resources;
- Low costs needed to start bio-production;
- Future demand growth on bio-products.

Bio production could be developed only if the following problems will be solved systematically:

1.Qualification: The knowledge about the bio production, bio products, problems connected with the transfer to the green farming and corresponding qualification;

2. Support: In the transition period from regular to green farming farmers should have the sufficient financial aid;

3.Certification: The guarantees of recognizing production as bio products, if they are produced according to all requirements of green farming;

4. Sales: Providing help in finding the potential markets for bio products.

Bio production has the chance to flourish only in case of the strong support from the government and the Ministry of Agriculture.Three main ways of improving the current situation:

1. Organizing help for the small farmers, pheasants in finding markets for bio products - this will change the attitude of population toward the green farming.

2. Yield insurance – important for the encouraging the farmers to switch on the green farming feeling safe.

3. Education and information spreading - to give the pheasants and farmers information about newest technologies in green farming.

Regarding the policy making - Government should explore ways to increase the participation of farmers in planning, implementing and evaluating programs related to sustainable agriculture. This could speed up the adoption of new methods of sustainable agriculture and facilitate the exchange of ideas among various stakeholders.

The agriculutural politics of Government played a significant role in development of the market. In developed countries bioproduction is promoted by subsidies. After studying their data we found out that there is an economy to scale. In addition to govermnet support programs, there area huge advertisment and informational campaigns.

There are some positive legislative changes in georgian agricultural sphere. Ministry of agriculture is interested in creating a lagislative base for bioporduction and appropriate market environment.

It takes time to create effective bioporduct market and its expansion in Georgia. We mean that consumers' and suppliers' behavior should be changed according to the guaranteed wellbeing and indefinite but attractive future incomes. In the lognterm perspective the main motivations for developing bioporduction is lower costs of production and higher market prices.

One of the most important factors is the change of consumers' taste in favour of these products. Also we have to add that it is possible to produce bioproducts not only in small and medium scale and also in case of agricultrual cooperation.

European experts consider that Georgian bioproducts have good perspectives of entering in European markets.

Georgia could not surprise the world with the volume of production but can produce high quality food. Georgia can offer traditional high quality wines made with endemic grape varieties; there still exists the niche for these products on world market.

Bioproduction - quality oriented, sustainable, and rapidly growing and perspective production could become the main priority for Georgian agriculture.

Georgia, as a country of rich agricultural traditions has a huge potential of developing bioproduction and of becoming a part of world market.

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