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ORGANIC FARMING AS A PRIORITY DIRECTION OF SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL SPHERE OF GEORGIA

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Abstract. In the modern period, any country, including Georgia, is faced with the creation of a sustainable agricultural system that can maintain food security. Unfortunately, organic farming is still poorly developed in Georgia. The main goal of the study is to identify the transition challenges to organic farming in the agricultural sector of Georgia. As for methodologies – statistical observation, comparison and analysis were used; we have conducted a survey as well. The main finding of the study is that the lack of information and awareness among Georgian farmers about organic production is the most acute problem of the current period.

Keywords: agriculture, organic farming, organic products market, agricultural sustainability.

JEL Classification: M00, M11, D29.

Introduction

Today any country and its most important field – agricultural sector – are facing the challenge of climate change. According to the United Nations Emissions Gap Report 2022, climate change and its consequences pose a severe threat to agricultural systems and food production and it is one of the biggest challenges the humanity faces today (United Nations Environment Programme, 2022).

According to the Intergovernmental Panel on Climate Change (IPCC, 2022) Report, organic farming holds a lot of potential for protecting biodiversity and ecosystem functions. Only an urgent system-wide transformation can avert a looming climate and food security disaster. This transformation should be aimed at creating an environment in which all people, at all times, have social, physical, and economic access to sufficient, safe, and nutritious food meeting their dietary needs and food preferences for an active and healthy life (IPCC, 2022).

Georgia has a historical heritage of agricultural production spanning over several millennia. Local farmers from ancient times implemented and pursued an agricultural system free from synthetic fertilizers, growth regulators, and pesticides (Natsvlishvili et al., 2020).

Today organic food consumption is rising among consumers globally. According to the 2023 Organic Farming Report by FiBL and IFOAM, global sales of organic food and drinks reached almost 125 billion euros in 2021, which was significantly increased by the pandemic and the health problems brought to the forefront (Willer et al., 2023). The country of Georgia is similarly experiencing an increase in demand for organic produce. Recently, more and more people in Georgia have adopted a healthy lifestyle. Such individuals see organic farming as the key to improving their health and battling environmental issues. This reasoning is fully in line with the views of such authoritative organizations as FAO, WHO. According to the FAO/WHO Codex Alimentary Commission, organic agriculture is defined as an integrated system of production management that improves the health of agro-ecosystems, encompassing biological cycles, soil biological activity, and biodiversity, and emphasizing the use of natural inputs (FAO & WHO, 2007). Organic agriculture entails the reduced use of growth stimulants and control substances, such as synthetic fertilizers and pesticides. Due to general environmental contamination, organic agriculture practices cannot guarantee that farming is entirely devoid of chemical residues. Nevertheless, preventive measures can be taken to curtail pollutants in the air, soil, and water. Organic food handlers, plants and vendors adhere to specific standards to preserve the integrity of organic produce. The chief mission of organic agriculture is to enhance the health

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and efficiency of co-dependent ecosystems of soil, plants, animals, and humans.

In the modern era, both developed and developing countries have realized that organic farming is the approach that ought to be practiced for attaining the goal of sustainable agriculture. Hence, most countries today prioritize creating a sustainable organic agricultural system that can maintain food security and at the same time the biodiversity of the environment.

Unfortunately, organic farming is still poorly developed in Georgia, in contrast to the practices of not only developed but also developing countries. This circumstance creates the necessity of developing effective measures promoting the development of organic farming, which should be done with the wide interest and involvement of local scientists. Unfortunately, no scientific research is conducted aimed at identifying the existing problems and barriers in the field of organic farming. The transition to the predominantly organic development of the country's agricultural sector is significantly determined by the interest and willingness of farmers to switch to organic farming. Numerous studies suggest that small-scale farmers in developing countries play a crucial role in food security by ensuring the sustainable development of the agricultural sector (Jouzi, et al., 2017).

The mentioned circumstances became the impetus for conducting the current study. The main goal of the research is to identify the obstacles to switching to predominantly organic farming in the agricultural sector of Georgia. Additionally, to closely observe the attitudes and readiness of farmers towards switching to organic agricultural practices, and to develop concrete, effective measures for eliminating them.

It is noteworthy that despite the great global emphasis on organic production and the high rates of its popularity, no study of Georgian farmers' attitudes to switching to organic agricultural production has been conducted previously. A large-scale study conducted by Georgian scientists Nugzar Todua and Teona Gogitidze paints a positive picture for the prospects of transitioning to organic production in the country, showing that Georgian farmers largely have a negative view of GM crops and are strongly opposed to importing and incorporating GM seeds (Todua & Gogitidze, 2017). However, the slow development of organic farming in Georgia and the small number of farmers engaged in it expose the fact that Georgian farmers, although they refuse to produce GM products, are not in a hurry to switch to organic production and are still focused on the intensive use of pesticides and chemical fertilizers.

Based on the expert assessment, the hypothesis put forward by the authors was proved correct through quantitative research – namely, a study of economic subjects working in the agricultural sector. Based on the stated research, the article analyzes the interest and motivation of farmers in the production of organic products. The authors of the study have formulated specific recommendations based on their research findings aimed at promoting the sustainable development and significant growth of organic agricultural production in the country.

Against this background, our research on Georgian farmers is pertinent and undoubtedly represents scientific novelty. Such research is very timely and relevant. It is crucial to identify existing problems in the transition to organic production by Georgian farmers and to develop concrete measures for eliminating them.

1. The modern state of organic farming development in Georgia

Many countries worldwide pay particular attention to organic production and the development of organic agriculture as it ensures increasing competitiveness and improving productivity in the agricultural sector. As a result, the number of farmers who would like to engage in organic farming in the future is increasing every year. However, the situation in Georgia is different, where the current production of organic agriproducts is very low. Against this background, studying the ways and means of overcoming the current tribulations and developing a conceptual approach to producing predominantly organic products in agribusiness by the state is essential (Okruashvili & Paresashvili, 2020).

Organic Agriculture is vital for the ecologically viable development of Georgian agriculture. Experts consider so due to the mountainous landscape of the country and land fragmentation, the production of high-quality bioproducts is an area that will definitely make Georgian products globally competitive. However, effective mechanisms for developing organic farming have not been introduced in the country yet.

The existing reality on the world agricultural food market directly reflects on the local agricultural market conditions of individual countries, including Georgia. For decades, globalization has represented the most important characteristic feature related to the planet preservation principle – the necessity of providing food for human beings. That is why, it is urgently necessary to determine the specific ways of addressing modern global challenges and opportunities for the further benefit of the country.

All of these efforts will hasten the competitiveness of Georgian agricultural products in the global agri-food market. In modern reality, it is very important for any country to define its role in the global arena. Achieving this was very challenging for Georgia, although the country has been independent for only three decades.

In recent years, consumption of organic products has been growing rapidly. According to FiBL (Research Institute of Organic Agriculture), which provides access to the data on Organic Agriculture in the whole world collected in the framework of its annual survey on organic agriculture worldwide, the production of organic products is growing day by day. In 2020, there were 190 countries with organic practices, and organic agriculture land

reached 75 million hectares. Area growth was 2.3 million hectares, which is more than in 2019. The number of farmers engaged in organic production was reported to be 3.5 million in 2020 (Willer et al., 2022).

These figures will significantly increase given the growing demand for organic products in the EU. It increased by 2.5 times from 2009 to 2019 – from 33.5 euros to 84.2 euros per capita. A similar (2.4-fold increase) is observed everywhere across the European continent, amounting to an increase from 23.3 euros to 55.8 euros per capita. A healthy diet became a consumer priority during the COVID-19 pandemic, significantly raising the demand for organic products.

There is no specific data on the size of the local organic market or the consumption of organic products in Georgia. However, the popularity of organic products and the sales increase on the local market are becoming visibly apparent. As for the volume of organic production, both the official data of FiBL and IFOAM as well as the information provided by Kavkassert Ltd., a local biocertification body in Georgia, clearly show that Georgia lags far behind not only the developed economies but also the developing ones, including its immediate neighbors. This is the case despite the fact that the country of Georgia enjoys great organic farming opportunities. The country's natural environment provides a unique ground for creating organic farms. Georgia has immense potential in this field (Natsvlishvili et al., 2020).

Georgia's organic land use is one of the world's lowest, according to IFOAM. In 2019, the number of organic lands in Georgia constituted 1,570 hectares, and its share in the total number of agricultural lands was 0.1%. With this indicator, Georgia lags behind the highly developed countries and neighboring Azerbaijan, which has 38 080 hectares of organic agricultural land. Worldwide, the figure is –1.5%. Georgia has maintained a very low rate in this regard for years. The situation in the country is very unfavorable not only due to the scarcity of land, but also due to the tendency of organic agricultural lands to grow. As for the data of the last ten years, the volume of organic lands in Georgia has increased by only 51 hectares overall. From 2009 to 2019, there was a 3.6% increase in the area of organic land over ten years. During the same period, organic land growth constituted 165% in France, 146.9% in China, 95.4% in Estonia, and 76.3% in Azerbaijan. It is worth noting that the list of entrepreneurs with Kavkacert bio certification as of 2022 is represented by 131 entrepreneurs (Caucascert, 2023). Thus, a slight increase in the number of organic farmers is expressed, although the change has little effect on the area of organically cultivated land or the amount of organic agricultural products produced. This indicates the fact that the agricultural sector of Georgia cannot respond to the global challenges and demands in the agricultural field, which have been expressed in the world for the third decade. It also does not respond to the change in the buying behavior of the Georgian consumers, specifically, the fact that a healthy diet became a consumer priority in Georgia too (Todua, 2018).

2. Literature review

The modern state and trends of the development of organic farming are studied in the works and reports published by the Research Institute of Organic Agriculture FiBL and IFOAM – Organics International. They present thorough statistics covering organic management, land use, and crops, as well as the overall amount of organic farms and pertaining statistics. The book includes contributions from global agents of the organic sector and the related food market, imports, standards and regulations, Participatory Guarantee Systems (PGS), and insights into current and emerging trends in the sphere of organic produce (Willer & Lernoud, 2019; Willer et al., 2021, 2022).

"Organic Food Market: Global Opportunity Analysis and Industry Forecast (2020–2027) report" is crucial for the study of organic food market development prospects. The report was published by Meticulous Market Research Pvt. Ltd. This report provides professional expertise that is crucial for understanding and analyzing underlying/upcoming market opportunities in the organic food market space such as information on all major industry verticals by type, retail channel, packaging, process and geographical channel. The information covered in this report gives us a detailed understanding of the actual organic food market scenarios/opportunities coming across in the next 5–7 years (Meticulous Research, 2020).

Organic farming as a sustainable development of the agricultural sector of Georgia is studied in the scientific paper. Production of Organic Products, an important condition of growth of Georgia's export potential is the practical implementation of the principles of sustainable development in the agricultural sector. It harmoniously combines and develops the ecological, economic, and social spheres. The development of organic farms will enable us to produce competitive export products. This will help establish Georgia on the international market and increase export earnings, which in turn will significantly cut the country's negative trade balance. The latter, in our view, is largely responsible for Georgia's ability to establish itself as an organic produce exporting country globally (Okruashvili & Paresashvili, 2018).

Any country, including Georgia, aiming to affirm its position in the global agricultural market must treat organic produce as a priority in farming. Prioritizing organic farming is the foundation for sustainable development of agriculture and rural areas, environmental conservation and preservation, and the most critical prerequisite for improving Georgia's export potential.

The advantages of organic farming are supported by several contemporary scientific articles and studies. The excessive and improper use of chemical fertilizers, herbicides, and insecticides is a common practice in traditional agriculture and causes environmental contamination, diminished soil fertility, freshwater shortages, and climate change (Cidón et al., 2021).

Production and consumption of organic food can enhance not only economic well-being but also social and environmental well-being.

Organic farming uses eco-friendly technologies to achieve sustainable development goals. This has advantages for the economy, the social sector, and the environment.

As organic farming is recognized as a potential strategy for developing a more sustainable food system and fostering rural development, many nations have set goals to increase the proportion of land utilized for it (Kujala et al., 2022).

Jointly addressing the challenges of sustainable food, the preservation of biodiversity and natural resources, and the fight against climate change requires a profound transition of the agricultural and food systems based on the phasing-out of pesticides and synthetic fertilizers. This would address these issues comprehensively (Poux & Aubert, 2018).

In the study of the potential for the growth of organic farming, we concur with the perspective of scientists who argue that the organic industry arises from the interactions among organic stakeholders, policymakers, conventional farming associations, advocacy groups, and participants throughout the food supply chain (Darnhofer et al., 2019). As the country's agricultural sector moves toward organic production, the researchers' discovery that organic farming has the potential to generate more job opportunities than conventional agriculture is becoming increasingly relevant (Finley et al., 2017).

The article "A Scoping Review on Incentives for Adoption of Sustainable Agricultural Practices and their Outcomes", discusses the incentives provided to farmers to encourage the use of organic agriculture practices. The authors concluded that programs with short-term economic gain are more likely to be adopted than those that are only intended to provide an ecological service. Perceived benefits for their farms, the environment, or both serve as one of the biggest incentives for farmers to embrace sustainable methods in the long run (Piñeiro et al., 2020). An extensive transition of the agricultural and food system based on the phase-out of pesticides and synthetic fertilizers would be required to jointly address the challenges of sustainable food, the preservation of biodiversity and natural resources, and the fight against climate change, according to a systematic review (Tahat et al., 2020).

The modern state of organic products market development is studied in the articles of N. Okruashvili and N. Paresashvili, in which the situation in the organic products market in Georgia and in the world is analyzed and the greatest experiences and achievements of developed countries in the field of organic agricultural production are discussed (Okruashvili & Paresashvili, 2022).

The consumption of organic products is unconditionally related to the consumption of healthy food, the growth trend of which is significantly expressed in Georgia. The said tendency is analyzed in the work published by Professor Nugzar Todua, which substantiates the said tendency based on the results of large-scale research. The paper examines how healthy nutrition can contribute to food security and the sustainable development of consumers. The central theme is consumer awareness of healthy nutrition, which is regarded as the primary concern of social marketing (Todua, 2017).

When studying the literature on organic farming, it is important to take note of the scientific publications of Indian scientists, who describe India's accomplishments and positive experiences in the growth of organic production (Babu & Karunakaran, 2021; Soni et al., 2022; Kalyani, 2021).

3. Research methodology

For the aims of conducting the current study general scientific and special research methods were used, including: abstract logical generalizations and formulation of conclusions; methods of statistical observation, comparison, and analysis. Additionally, we have conducted a survey for studying the motivation and willingness of farmers to switch to organic production. The study was executed in two phases, utilizing both qualitative and quantitative research methods. During the initial phase, which employed a qualitative approach, expert research was conducted to explore the potential for the growth of organic farming in Georgia. Professor Paata Koghuashvili, Professor Ioseb Sarjveladze, Professor Eldar Gugava, Professor Maia Meladze, Professor Tamar Kacharava, and Professor Badri Ramishvili were among the highly qualified scientists and specialists involved in the expert assessment process. Their experience is highly valued and accountable for the analysis of the agricultural potential of Georgia, for creating ways to use it effectively, and for the definition of sustainable development prospects for the country's agricultural sector. Experts were asked to give reasoned opinions and provide answers to the following important and highly relevant questions:

- Do you agree with the opinion that the production of organic agricultural products should be considered a priority of the agricultural sector of Georgia? Please indicate the reasons that determine the priority of the matter.
- What are the factors impeding the growth of organic farming in Georgia?
- What specific measures do you consider expedient to solve the existing problems in the development process of producing organic products at the state level, which could significantly promote the effective and sustainable development of the sector?

It is noteworthy that each participant in the expert research, who are highly qualified scientists, considers the production of organic agricultural products a priority for the Georgian agricultural sector.

In the study of organic farming as a principle of sustainable development of the agricultural sector, based on expert assessments, we decided to study the interest

and motivation of economic entities – farmers working in the agricultural sector. For quantitative research, we compiled a questionnaire based on the following hypotheses, resulting in expert evaluation:

- **H1** – Farmers have a very low level of awareness of the importance of organic production to increase the competitiveness of agricultural products;
- **H2** – Farmers' disinterest in organic farming primarily stems from the required investments to switch to organic production, inadequate knowledge about the advantages of organic farming, or the lack of experience necessary to initiate organic farming;
- **H3** – Measures for developing farmers' interest in organic production and its practical implementation – financial support for farmers, tax and credit benefits, preferential lending to farmers, information about the benefits of organic production for farmers, and development of the necessary skills for organic production.

On the second stage, we conducted a quantitative survey of farmers. In order to identify the trends and features of organic agribusiness development and determine its future directions in the Shida Kartli region, a quantitative research study was carried out. A questionnaire was developed for the study, and farmers were selected as beneficiaries from an agribusiness database. Through the use of quantitative research, the present challenges, the underlying causes of these challenges, and the features that will dictate the future prospects of organic farming were identified. The survey was conducted according to a precompiled questionnaire. The questionnaire consisted of structured questions designed to identify farmers' attitudes toward the transition of farmers to organic farming. The research covered the territory of Shida Kartli, one of the regions with rich agricultural potential in Georgia. The confidence level of the mentioned research was defined as 95%. We accepted a 5% margin of error and the response distribution was 50%. Currently, according to the information provided by the Statistical Department of Georgia, the number of farms registered in the business register is 529 (National Statistics Office of Georgia, 2023). The sample size was calculated using Raosoft's sample size calculator[1] and the minimum number of respondents to be interviewed was 223 respondents. In order to obtain a 95% confidence level as a result of the research, we conducted a face-to-face survey of 225 farmers, which implies the mentioned confidence level. The expert research was done in 2021, and the farmers' face-to-face questionnaire survey was conducted during a 4-month period, from June to September 2022. The results obtained based on the face-to-face questionnaire were entered and processed in the Excel spreadsheet. Analyzing the results of the research gave us the opportunity to draw conclusions regarding the transition of farmers to organic farming and to develop recommendations that will help to increase the motivation of farmers to switch to organic farming.

[1] http://www.raosoft.com/samplesize.html?fbclid=IwAR2zj4W9QMk9BlBLsKP1DPNlKW5XWc3j9ejoUSpOjGINOS7JbE

4. Results

As we mentioned, the study should have revealed the general attitude of farmers toward the production of organic products, as well as the reasons for their interest and the specific measures to be taken by the government for the development of organic production. As part of the study, 225 farmers were interviewed. The Shida Kartli region was selected for quantitative research. This is due to the fact that the region has favourable natural conditions for agricultural production: the climate is moderately continental, with a moderately warm temperature and moderate humidity, which creates favourable conditions for agricultural activities. The frequent hydroxides present in the region belong to the Mtkvari River basin, the latter being the main waterway artery of the region. The temperate zone is characterized by natural zones, including vertical zoning, which is characterized by a variety of soils and is quite rich in forests, flora and fauna. Shida Kartli is one of the most important agricultural regions in Georgia. 66,237 ha (95.4% of the land fund) are used for agricultural purposes. Of this, 74% is arable, 21% is perennial, and 5% is pasture. The agricultural importance of the Shida Kartli region throughout Georgia is mainly distinguished in terms of fruit growing. According to the production of most types of fruit, the Shida Kartli region is the first in the country. For Shida Kartli, the production of grain crops – wheat and barley – is also a priority. In terms of sown area, the region ranks second in the country in terms of both crop production and grain production. The region is second in terms of walnut production and fourth in grape production. The Shida Kartli ranks second in terms of overall vegetable area, and beans traditionally rank first in terms of area. The Shida Kartli region is one of the largest vegetable producers after Kvemo Kartli and Kakheti. The following vegetable crops are produced here: potatoes, beets, cabbage, carrots, onions, garlic, asparagus, peppers, eggplant, etc. Good agroclimatic conditions and fertile soils, as well as a large area of irrigated land compared to other regions, contribute to the great potential of this field of agriculture.

Regardless of the above-mentioned, there is a significant downward trend in the number of agricultural crops in the region, both in terms of sown area and yield. In 2021 Compared to 2020, the cultivated areas have decreased. In 2021, compared to 2020, the production of beans has halved. In the same period, the cultivated area of vegetables decreased from 4.2 thousand hectares to 40 thousand hectares, and the production of vegetables decreased from 66.4 thousand tons to 57.3 thousand tons. The traditional apple production of the region plummeted from 74.4 thousand tons in 2020 to 58.7 thousand tons in 2021. The downward trend is evident in almost

all fruit species. Fruit production in the region decreased from 97.1 thousand tons in 2020 to 87.2 thousand tons in 2021. During the same period, the number of cattle significantly decreased from 52.9 thousand to 51.6 thousand. These indicators exacerbate the problem of food self-sufficiency in a region rich in natural resources. Such an unfavourable situation naturally makes it urgent to study the competitiveness of farms and, consequently, the effective ways of further developing production. The evident alternative is switching to the production of organic products. Considering organic farming as a quality-driven, expanding, and sustainable agricultural system should be a top strategic priority for the agricultural sector of the entire country and its individual regions, including Shida Kartli.

The results of the research conducted to study the motivation of farmers to produce organic products are as follows:

Most of the respondents mainly adhere to crofting, where they employ less than 20 people. The joint income from economic activities for one calendar year for the majority of interviewed farmers (43%) is from 50 000 to 100 000 GEL; from 100,000 to 500,000 GEL – 17%, from 500,000 to 1,000,000 GEL – 14% and only 1% – has an income of more than 1,000,000 GEL (see Figure 1).

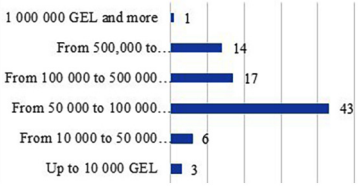

Figure 1. Gross income from the economic activity for one calendar year

As for the organizational-legal form of the interviewed farmers, the vast majority of them belong to the private sector. The majority (42%) is a limited liability company (LLC), 33% is a cooperative, and a particular part (25%) is an individual entrepreneur (see Figure 2).

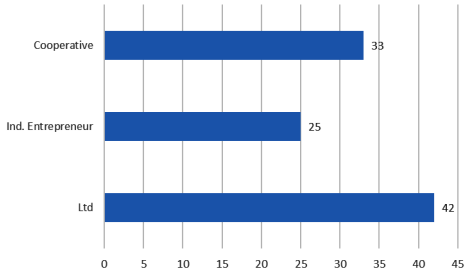

Figure 2. Organizational-legal form of farming

The study surveyed farms operating in various sectors of the agricultural sector. Most of them are farms that follow fruit-growing (71%), production of vegetables and horticulture – 18%, and the remaining 11% are engaged in grain cultivation, viticulture, animal husbandry, and fishing (trout farming) (see Figure 3).

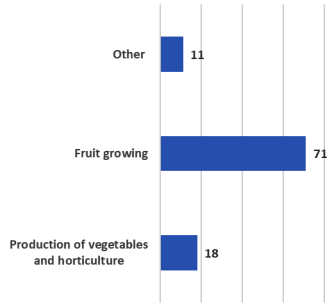

Figure 3. Field of business activity

One of the critical issues for the research was related to the study of farmers' levels of awareness. It revealed that farmers have a very low level of awareness on the importance of organic production to increase the competitiveness of Georgian agricultural products on the world market; In particular, only a small part of farmers (only 10%) are aware of its particular importance, the majority (45%) consider the transition to organic production as more or less important, 19% do not realize its importance at all, and 21% of surveyed farmers find it difficult to answer, which indicates a very low level of awareness and understanding about the essence of organic products and its growing role and importance in modern conditions (see Figure 4).

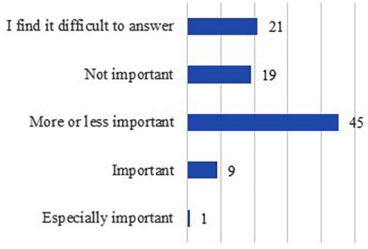

Figure 4. Level of awareness of the importance of organic production for increasing the competitiveness of Georgian agricultural products on the world market

We inquired about the willingness and readiness of the surveyed farmers to start producing organic products. This issue is important, as our study aimed to identify farmers' attitudes towards organic production. The survey revealed a very unenviable situation, as the vast majority of respondents (83) do not plan to switch to organic production in the near future and only 17% of respondents intend to start producing organic products (see Figure 5).

As part of the research, we were interested in learning what the main reasons were behind farmers' positive

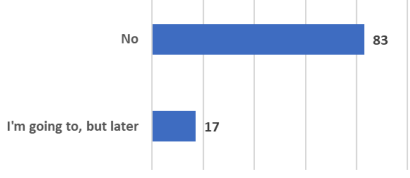

Figure 5. Farmers' decision to switch to organic farming in the future

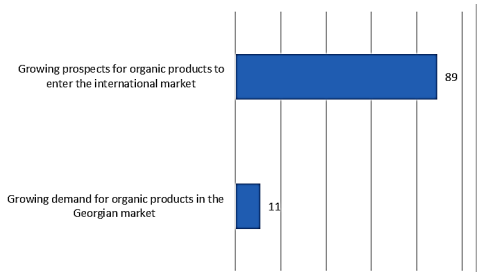

Figure 6. The main reasons for the interest in the production of organic products

attitude toward transitioning to organic production. As mentioned, only a small percentage of surveyed farmers (17%) plan to grow organic produce in the near future. As the results showed, for such farmers, the prospect of organic products entering the international market is important (89%) and a small part (11%), named the growing demand for organic products in the Georgian market as the reason for this decision (see Figure 6).

The study showed that the vast majority of farmers will not become producers of organic products. A large part of why farmers refrain from producing similar products are as follows:

Lack of investment needed to switch to organic production (43%); Lack of information on the benefits of organic product production (27%); Experience required to begin producing an organic product (21%) for a variety of reasons, including low purchasing power of Georgian consumers and correspondingly low demand for organic products (see Figure 7).

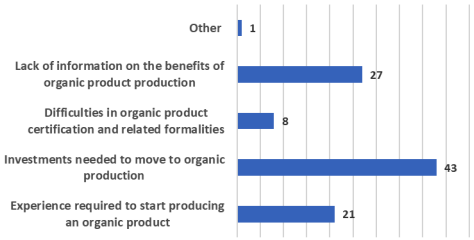

Figure 7. The main reasons for the lack of interest in the production of organic products

One of the most important aspects of our research was identifying measures considered necessary for increasing interest in producing organic products and their practical implementation. In this regard, farmers could indicate two or three of the most important events. The majority of survey participants (51%) indicated that the most effective measures to increase and promote their interest in organic products were financial support for farmers, tax and credit benefits, and preferential lending to farmers. Also, there is a high share of farmers (44%) who consider it appropriate to partially or fully subsidize the certification of agricultural land; 39% of farmers consider it very important to be informed about the benefits of producing organic products, to promote the development of the necessary skills. 33% of the surveyed farmers indicate an increase in farmers' interest and motivation in producing organic products, professional training of farmers interested in organic agricultural products, and consulting services. These views are fully presented in the diagram (see Figure 8).

Figure 8. Measures to be taken to arouse interest in the production of your organic products and their practical implementation

Conclusions

Based on the research, it can be concluded that the state of organic agribusiness in Georgia does not respond to the trends and challenges of the modern world. Its growth rate is not sufficient to ensure sustainable food security, on the one hand, and sustainable and irreversible growth of the country's agricultural sector in the long run, on the other hand. The development of organic farming should be unequivocally seen as a boost to the population's health and an opportunity to maintain a healthy environment for the future generations of Georgia and protect its natural resources. That is why it is necessary to transform the country's agricultural sector into a predominantly organic one and implement a state policy ensuring it as crucial for sustainable and irreversible agricultural growth.

The land area for organic farming in Georgia is still highly limited compared to that of EU countries and neighboring states. Therefore, supporting Georgians in their organic food consumption is crucial for promoting the production of organic produce and expanding the local market.

This research analyzed the awareness of Georgian farmers about the benefits, role and importance of

switching to organic production, as well as the prospects of switching to organic farming. The researchers empirically investigated the survey data collected from 225 farmers in the Shida Kartli region to test the general attitudes of Georgian farmers towards organic farming and their future decisions regarding the transition from pesticide-based farming to organic production.

According to the study findings, farmers in Shida Kartli exhibit a relatively low level of awareness regarding the advantages of organic farming. The results of the research revealed a very unfavorable situation – only a small percentage of farmers (10%) are aware of its special importance, which indicates a very low level of awareness and understanding about the essence of organic products and their growing role and importance in the modern era. Due to the prevailing lack of information and awareness among Georgian farmers about organic production, a significant majority of them do not have any immediate plans for engaging in organic farming.

Our study aimed to identify farmers' attitudes toward organic production. The survey revealed a very undesirable situation: most respondents (83%) plan to wait to switch to organic production, and only 17% intend to start producing organic products. Based on empirical analysis, the main obstacles for farmers to switch to organic production are the lack of required financial investments, lack of information on the benefits of organic production, and lack of experience needed to grow organic produce.

That is why we consider the country's government, which has policy-wise chosen the sustainable development course for the agricultural sector, should practically implement such measures as financial support for farmers, tax and credit benefits, preferential lending to farmers, information provision about the benefits of organic production for farmers and the development of the necessary skills for organic production. These measures will help develop the interest of farmers in organic production and its practical implementation.

Our survey of farmers confirmed the hypotheses we put forward. In particular:

Farmers have a very low level of awareness of the importance of organic production to increase the competitiveness of agricultural products;

The main reasons for farmers' lack of interest in organic production are the investments needed to switch to organic production, the lack of information about the benefits of organic production, or the lack of experience necessary to start organic production;

Financial support for farmers, tax and credit benefits, preferential lending to farmers, information about the benefits of organic production for farmers and development of the necessary skills for organic production, will help develop the interest of farmers to switch to organic farming.

The government has taken small steps in this direction and has already started implementing an agricultural policy supporting organic farming. Still, these measures are insufficient and unsuitable for overcoming challenges of a modern farmer. Additionally, the limited level of awareness among Georgian farmers underlines the necessity for more comprehensive information regarding the benefits of organic production, as well as for a supportive government policy on organic farming. The government's policy for the development of the agricultural sector must respond to the requirement of maintaining the food security of the country's population and the biodiversity of the environment, which is recognized by the civilized world and represents the most pressing challenge of the agricultural sector.

A survey of farmers conducted in one region of the country is insufficient to draw general conclusions about the development of the agricultural sector throughout the country. That is why it is necessary to study the aptitude and readiness, and attitude of farmers toward the transition to organic agricultural production throughout the country. This will make it possible to identify more thoroughly and comprehensively the existing problems in the transition of the country's agricultural sector to predominantly organic production and develop concrete, practical measures to eliminate them.

Scientists in Georgia will be more interested in studying organic farming as a substitute for conventional methods of preserving the environment's biodiversity and the population's food security due to our study on the subject. The given research raises public awareness of the risks associated with farming practices based on the overuse of pesticides, improves public knowledge of those risks, encourages societal reactions, and modifies people's behavior and way of life. The findings of the farmer survey reported in this study will assist the relevant governmental and non-governmental organizations in creating an appropriate vision and strategy for the growth of the organic agricultural sector.

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