

Опыт регионов / Experience of Regions

Научная статья

Original article

DOI: [10.12731/2658-6649-2026-18-3-1518](https://doi.org/10.12731/2658-6649-2026-18-3-1518)EDN: [XGRWPX](#)

UDC 338.439.4



Ecological agriculture of Tajikistan in the context of legislative novels: Analysis, challenges and prospects

D.S. Samenbetova¹, O.Yu. Patlasov¹, U.R. Karimova²¹*Omsk Humanitarian Academy, Omsk, Russian Federation*²*Tajik agrarian University named Shirinsho Shotemur,
Dushanbe, Republic of Tajikistan*

Abstract

Background. This article analyzes current issues related to the development of organic agriculture in the Republic of Tajikistan within the current legal framework. An ecological approach to economic management as a strategic direction for the development of the agricultural sector includes minimizing negative environmental impacts, preserving soil fertility, wisely using water and biological resources, and improving the country's food security. Particular attention is paid to the analysis of legislative acts, regulatory, and policy documents defining the legal framework and organizational mechanisms for ensuring the greening of agricultural production. Measures are proposed to improve the institutional environment and regulatory framework for the development of the organic agrifood market in the Republic of Tajikistan, as well as updating relevant legislation and government support programs for the industry.

In today's climate of sustainable development, organic agriculture is becoming a key element of food security and natural resource conservation strategies. For the Republic of Tajikistan, where agriculture accounts for a significant share of the national economy and provides employment for a significant portion of the population, the transition to organic production methods represents not only an economic opportunity but also a socio-ecological necessity. Organic agriculture involves eliminating synthetic pesticides and fertilizers, optimizing land use, and ensuring high product quality, which directly aligns with international standards for sustainable development and the improvement of agricultural and food systems.

Purpose. This work is aimed at solving an important scientific and practical problem – the development of sound recommendations for optimizing the legal framework that ensures the development of organic agriculture in Tajikistan, which will enhance

the competitiveness of national agri-food products, strengthen food security and ensure sustainable use of natural resources

Materials and methods. The methodological basis of the research is a systems-structural approach, an analysis of the regulatory framework, a comparative analysis of international and national standards, as well as empirical information on sustainable agricultural production practices.

Results. The research identified key achievements in the legal framework for organic agriculture, as well as limitations hindering the widespread adoption of organic technologies. It was established that despite the existence of specific regulations aimed at regulating environmental aspects of agricultural activities, significant gaps exist in the coordination of legislative initiatives, limited funding for support programs, and insufficient institutional readiness of agricultural enterprises to adapt innovative environmental practices. The identified barriers serve as the basis for formulating recommendations for improving the legislative framework, strengthening government support, updating the roles of institutions regulating the organic market, developing an incentive system for agricultural producers, and integrating international experience into national practices.

Keywords: organic agriculture; legislation; green economy; government regulation

For citation. Samenbetova, D. S., Patlasov, O. Yu., & Karimova, U. R. (2026). Ecological agriculture of Tajikistan in the context of legislative novels: Analysis, challenges and prospects. *Siberian Journal of Life Sciences and Agriculture*, 18(3), 607-626. <https://doi.org/10.12731/2658-6649-2026-18-3-1518>

Экологическое сельское хозяйство Таджикистана в контексте законодательных новелл: анализ, проблемы и перспективы

Д.С. Саменбетова¹, О.Ю. Патласов¹, У.Р. Каримова²

¹Омская гуманитарная академия, Омск, Российская Федерация

²Таджикский аграрный университет имени Шириншох Шотемур,
Душанбе, Республика Таджикистан

Аннотация

Обоснование. В статье рассматриваются актуальные вопросы развития экологического сельского хозяйства в Республике Таджикистан на фоне действующей системы правового регулирования. Экологическое сельское хозяйство рассматривается как стратегическое направление устойчивого развития аграрного сектора, обеспечивающее минимизацию негативного воздействия на окружающую среду, сохранение плодородия почв, рациональное использование водных и биологиче-

ских ресурсов, а также повышение продовольственной безопасности страны. Особое внимание уделено анализу действующих законодательных актов, стандартов и программных документов, определяющих правовые основания и организационные механизмы поддержки экологизации аграрного производства. пока отсутствует ясность в распределении ролей. Предложены меры по совершенствованию институциональной среды и нормативно-правовой базы функционирования рынка органической агропродовольственной продукции в Республике Таджикистан, а также актуализация профильного законодательства и государственных программ поддержки отрасли.

В современных условиях устойчивого развития органическое сельское хозяйство становится важным аспектом развития в рамках стратегий продовольственной безопасности и сохранения природных ресурсов. Для Республики Таджикистан, где сельское хозяйство занимает значительную долю в структуре национальной экономики и обеспечивает занятость значительной части населения, переход к органическим методам производства представляет собой не только экономическую перспективу, но и социально-экологическую необходимость. Органическое сельское хозяйство предполагает отказ от синтетических пестицидов и удобрений, оптимизацию использования земельных ресурсов и обеспечение высокого уровня качества продукции, что напрямую коррелирует с международными стандартами устойчивого развития и оздоровления агропродовольственных систем.

Цель – разработка обоснованных рекомендаций по оптимизации правовой базы, обеспечивающей развитие экологического сельского хозяйства в Таджикистане, что потенцирует повышение конкурентоспособности национальных агропродовольственных продуктов, укрепление продовольственной безопасности и устойчивое использование природных ресурсов.

Материалы и методы. Методологически исследование базируется на системно-структурном подходе, анализе нормативно-правовой базы, сравнительном анализе международных и национальных стандартов, а также эмпирической информации об устойчивых практиках сельскохозяйственного производства.

Результаты. В результате проведённого исследования выявлены основные достижения в правовом обеспечении экологического сельского хозяйства, а также ограничения, препятствующие широкому внедрению экологических технологий. Установлено, что несмотря на наличие отдельных нормативных актов, направленных на регулирование экологических аспектов аграрной деятельности, существуют значительные пробелы в координации законодательных инициатив, ограниченное финансирование программ поддержки и недостаточная институциональная готовность сельских хозяйств адаптировать инновационные экологические практики. Выявленные барьеры служат основанием для формулирования рекоменда-

ций по совершенствованию законодательной базы, усилению государственной поддержки, актуализации ролей институтов, регулирующих рынок органической продукции, развитию системы мотивации для сельхозтоваропроизводителей и интеграции международного опыта в национальную практику.

Ключевые слова: органическое сельское хозяйство; законодательные акты; зеленая экономика; государственное регулирование

Для цитирования. Саменбетова, Д. С., Патласов, О. Ю., & Каримова, У. Р. (2026). Экологическое сельское хозяйство Таджикистана в контексте законодательных новелл: анализ, проблемы и перспективы. *Siberian Journal of Life Sciences and Agriculture*, 18(3), 607-626. <https://doi.org/10.12731/2658-6649-2026-18-3-1518>

This article analyzes current issues related to the development of organic agriculture in the Republic of Tajikistan within the current legal framework. An ecological approach to economic management as a strategic direction for the development of the agricultural sector includes minimizing negative environmental impacts, preserving soil fertility, wisely using water and biological resources, and improving the country's food security. Particular attention is paid to the analysis of legislative acts, regulatory, and policy documents defining the legal framework and organizational mechanisms for ensuring the greening of agricultural production. Measures are proposed to improve the institutional environment and regulatory framework for the development of the organic agrifood market in the Republic of Tajikistan, as well as updating relevant legislation and government support programs for the industry.

The methodological basis of the research is a systems-structural approach, an analysis of the regulatory framework, a comparative analysis of international and national standards, as well as empirical information on sustainable agricultural production practices. Identified key achievements in the legal framework for organic agriculture, as well as limitations hindering the widespread adoption of organic technologies. It was established that despite the existence of specific regulations aimed at regulating environmental aspects of agricultural activities, significant gaps exist in the coordination of legislative initiatives, limited funding for support programs, and insufficient institutional readiness of agricultural enterprises to adapt innovative environmental practices. The identified barriers serve as the basis for formulating recommendations for improving the legislative framework, strengthening government support, updating the roles of institutions regulating the organic market, developing an incentive system for agricultural producers, and integrating international experience into national practices.

Introduction

Tajikistan is one of the Central Asian countries where agriculture plays an important role in the economy and food security. Agriculture in Tajikistan is one of the key drivers in the country's economy and is one of the main industries. In 2020, about 30% of the total work force was in this sector of the economy, with the agricultural sector also accounting for approximately 23% of GDP [1]. Major crops farmed in Tajikistan include wheat, barley, oats, rice, corn, cotton, tobacco, fruits and vegetables. It can be argued that the farming sector of Tajikistan is quite vulnerable, since the climate in the country is very volatile, with frequent floods, droughts and high temperatures forcing farmers to adapt. Water resource availability is especially relevant.

Organic agriculture in Tajikistan relies on natural resources and methods that do not harm the environment. It also helps preserve biodiversity and improve soil quality. Tajikistan has vast commercial lands that still see traditional culture of soil cultivation free of synthetic fertilizers and pesticides. This offers a huge priority for this CIS country. In this regard, the role of legal and regulatory frameworks, which define the conditions, mechanisms, and incentives for the implementation of environmentally friendly technologies in agriculture, is increasing.

The purpose of this study is to analyze the legal framework for organic agriculture in the Republic of Tajikistan, identify existing legal and institutional challenges, and substantiate prospects for the development of environmentally sustainable forms of agricultural production in the current socioeconomic conditions.

The research herein puts forward the following hypotheses:

1. With their limited financial capabilities, Tajik agricultural producers cannot afford themselves excessive use of mineral fertilizers and chemical plant protection products, which has created a natural favorable background for organic agriculture.
2. Because there is clear pressure from foreign food imports in local food commerce in capital Dushanbe, the development of organic agriculture without appropriate processing, packaging, transport logistics, storage and sales does not warrant the quality of food even with organic raw materials.
3. Food quality can be improved by the multiplier effect of halal requirements and organic agriculture.

Materials and methods

The methodological basis of the research is a systems-structural approach, an analysis of the regulatory framework, a comparative analysis of international

and national standards, as well as empirical information on sustainable agricultural production practices.

Many scientists of Tajikistan, such as A. Safarov, A. Vazirov, I. Samandarov, J. Piriye, R. Shokirov, are interested in studying the factors of development of organic agriculture in the Republic of Tajikistan. In his thesis work, with the help of a social survey and expert assessments of farm representatives, A. Vazirov was able to project an economic and statistical model of key factors behind eco-friendly agriculture in mountainous regions. These results were used by the authors to analyze the legislative framework of the agro-industrial complex [1].

During the research, the authors delved into the regulatory framework from the standpoint of organic farming in the Republic of Tajikistan. The main instrument governing the organic farming market is the Law of the Republic of Tajikistan on Biological Economic Management and Production No. 1592 dated April 4, 2019 [3]. The authors also took a detailed look at the following provisions: the Law on State Regulation of Maintaining the Fertility of Agricultural Lands, the Law on Soil Protection, the Law on Food Security, the Law on Food Products Safety and other regulatory documents [3,4,-5]. They reviewed measures of state support for organic farming and issued recommendations on how to improve the regulatory framework governing the market for organic products as part of the sustainable development of the region in the context of green entrepreneurship.

Results

According to FiBL statistics, the area of land under organic farming and number of organic farmers in 2020 is presented in Table 1 and Table 2 [21].

Table 1.

Area of land under organic farming in 2020

Country	Russia	Kazakhstan	Azerbaijan	Tajikistan	Uzbekistan	Kyrgyzstan
Area in ha	615188	114886	38080	11818	3781	30259

Table 2.

Organic farmers in 2020

Country	Russia	Kazakhstan	Azerbaijan	Tajikistan	Uzbekistan	Kyrgyzstan
Number	48	15	446	166	26	30259

Source: Willer, Helga, Jan Trávníček, Claudia Meier and Bernhard Schlatter (Eds.) (2022): The World of Organic Agriculture. Statistics and Emerging Trends 2022. Research Institute of Organic Agriculture FiBL, Frick, and IFOAM [291]

Mineral fertilizers are widely used in agriculture in Tajikistan to increase crop yield and quality. They make it possible to compensate for the lack of

nutrients in soils, which is especially important in high mountain areas. According to the research by international organizations [14], official statistics in the Republic reflect only about 20% of mineral fertilizers and pesticides used nationwide. No studies have been conducted in Tajikistan to learn about the content of pesticides in soil or plants over the past 30 years. However, there is a legislative framework for use of pesticides. According to the List of Chemical and Biological Substances Approved for Use in the Republic of Tajikistan (2004), about 472 types of chemical and biological substances may be used in the country. These include 184 formulations of pesticides and agrochemicals, and plant protection products [14]. An analysis of local regulatory framework for chemical safety showed that there is no definition of “highly hazardous pesticides” (HHPs) in Tajikistan.

The government does not implement actions to reduce the use of HHPs in farming. Like many Central Asian states, Tajikistan actively pursues the efforts to reduce pesticide use and shift to more eco-friendly farming methods. The only action undertaken at the governmental level that somehow helps reduce pesticide use is the introduction of organic farming. Organic farming is based on the principles of crop rotation and use of green manures, which helps maintain soil fertility and prevent the buildup of harmful substances. Elimination of synthetic pesticides and chemical fertilizers enables the natural balance of microorganisms in the soil to be maintained, which contributes to soil fertility and resistance to erosion and degradation.

The main purpose of organic farming in Tajikistan is to improve the welfare of rural communities through higher farmer incomes, and better marketing of organic produce in compliance with international organic farming standards, quality standards, international environmental and social regulation. In this regard, focus is placed on organic agriculture as one of the components of sustainable agricultural development as part of the green economy development agenda.

In Tajikistan, the Center for Development of Organic Products – Sugdagroserv Organic (SAS Organic CDOP) – became the first initiator of organic farming in 2002. SAS Organic was set up with the assistance of the “Partnership for the Development of Private Enterprise” project of the International Finance Corporation and the Swiss State Secretariat for Economic Affairs. The introduction of organic farming began in the Sughd region with the harvesting of biocotton [11].

In those years, SAS Organic’s partners in organic farming were local state authorities, and international organizations (HELVETAS Swiss Intercooperation, Interfaith Cooperation Development Organization – ICCO, GIZ/German

Agency for International Cooperation) [11]. The main goal of SAS Organic was to make changes to the system of agricultural organic production in Tajikistan, which primarily focused on the country's cotton sector. Later, in 2009, SAS Organic collaborated with 39 farmers, out of which 4 farmers became organic farmers in the first year of the project, encompassing a total irrigation area of 69.9 hectares of land. The project was implemented in collaboration with Bio-Kishovarz in 6 districts of the Sughd Region. In 2014, the number of organic farmers reached 1177 across 3666.4 hectares of organic land, which included 1669.3 hectares for cotton, 413.5 hectares for wheat, 13.8 hectares for mung bean, and 1567.5 hectares for other crops [7].

The main institutions behind the development of the agro-industrial complex have been legislative acts that direct the state policy for organic agriculture. The main law regulating organic farming is the Law of the Republic of Tajikistan dated July 22, 2013 No. 1001 «Biological Economic Management and Production» [3]. The law prescribes a definition of eco-friendly products. Environmentally friendly products are farm produce that is made, processed and sold in accordance with the requirements of biological economic management, as identical to the concepts used in international legal acts such as “biological”, “organic” and “natural” (as amended by the Law of the Republic of Tajikistan dated 04.04.2019 No. 1592) [3].

There is no official statistics on organic farming in the country. The fact that there is no mention in international review “FIBL_organic-world” means that organic farming in Tajikistan is impulsive in nature. A pivotal point in setting up organic agriculture is certification. There are no local certification authorities in the country; only foreign agencies are present such as IMOControl, KIVA, and Bioinspect.

Exports of organic products from Tajikistan have seen significant growth in recent years. Organic cotton, peanuts and apricots are exported on good business terms from Tajikistan to international markets. The main partner countries that import organic produce from Tajikistan include Russia, Kazakhstan, Uzbekistan, Turkey, Germany, France, Italy and other European countries, as well as China [6]. Exports of organic products are growing steadily and make up an important component of the economy of Tajikistan. The success of organic exports from Tajikistan is dependent on several factors such as quality of produce, organic standard certification, development of international logistics and governmental support for this sector. Total area certified for organic farming (fully organic or in transient state) is 4 000 ha. According to the data of 2017, there are some statistics of land areas that were treated with organic fertilizers (Table 3) [11].

Table 3.

Statistics of organic land areas according to the data of 2017

Crops	Cotton and rotational crops	Beyond cotton	Pea-nuts	Beans	Toma-toes	Wheat	Corn	Apricot
Area (ha)	3500	1600	500	200	100	200	200	500

Source: Development of organic agriculture in Central Asia. Proceedings of the International Conference held on August 22-24 2017 in Tashkent and Samarkand, Uzbekistan, 2018. p. 392 [2]

FAO supports legislative changes and better institutional assistance in organic production as part of technical cooperation projects (TCP) in five countries: Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan and Uzbekistan. The legal framework in these states should be based on the provisions of the International Federation of Organic Agricultural Movement (IFOAM) and the principles of the Codex Alimentarius [7]. However, all countries face similar challenges in developing legislation that addresses organic agriculture. Often concepts and goals of legislative regulation of organic production are overridden with the goals of environmental protection and food safety legislation. Specialized organic production laws have been adopted in the following countries: Azerbaijan, Tajikistan, Kazakhstan, with Kyrgyzstan signing the law in 2015, and Uzbekistan in 2022. All laws allocates powers and authorities in organic agriculture, but responsibilities are not always clearly defined and sometimes overlap. National legislation does not always contain provisions on registers of organic producers (most often this register does not exist at all, for example in Kazakhstan and Tajikistan). There are no provisions in national legislation that would regulate import and export. Foreign certification authorities operating in these countries are not regulated, which results in lack of accurate statistical information on the organic products certified by them.

Discussions

The main institutions that regulate and define the environmentally-friendly development of agriculture are, first of all, legislative acts. State policy and the vector of development of ecological agriculture have been designated at the legislative level. As part of the critical analysis of the regulatory framework that governs the organic produce market in Tajikistan, we would like to note the following laws:

1. Law of the Republic of Tajikistan “On Biological Economic Management and Production” No. 1592 dated April 4, 2019 [3]. This Law establishes the legal

and organizational framework for biological economic management and is aimed at production, processing, storage, transportation, packaging, labeling and sale of environmentally friendly products. These institutions are crucial to driving the environmentally-friendly development of agriculture in Tajikistan [3].

2. The National Strategy of the Republic of Tajikistan for Natural Disaster Risk Reduction for 2019-2030 was approved by Decree of the Government of the Republic of Tajikistan No. 602 dated December 29, 2018. The goal of the strategy is to prevent and reduce existing and emerging natural disaster risks by building national capacity to manage these risks (Government of the Republic of Tajikistan 2018) [7]. Agriculture and food security are addressed in this national strategy as one of its strategic objectives to ensure food security and public access to proper food through agricultural development. This sector is one of the priority sectors of the country's economy.

5. The Law of Tajikistan on Food Security (No. 671 dated Dec 29, 201, as last amended in 2019) promotes effective use of irrigation structures, development of production capacities and storage of seeds [4]. The law puts an emphasis on allocation of national funds to local farmers on a competitive basis under the national food security policy but financing ecological agriculture has not been addressed individually. Subsidizing the purchases of organic seeds has also not been addressed.

8. The Law "On Dehkan Farms" (No. 1289 dated March 15, 2016) provides a legislative basis for private farms and their activities [6]. However, aspects and particulars of such farms engaged in organic production have not been described. In general, farmers lack information on ways to optimize the use of fertilizers, pesticides and water. Another challenge is an insufficient degree of freedom that farms can exercise in choosing crops for cultivation. Despite the legislatively enshrined right of dehkan farms to independently determine agricultural production patterns, in practice this right is exercised to a limited extent. Significant barriers are associated with the underdevelopment of market infrastructure, limited access to financial resources, and logistical support. Distribution channels, the supply of seeds, inputs, and agricultural machinery, as well as the operation of irrigation systems, are largely controlled by external economic actors focused primarily on traditional export crops, primarily cotton. As a result, the formally declared freedom of choice is transformed into an economically conditioned dependence, making the cultivation of alternative crops less accessible and associated with increased risks for farms.

9. Medium-term Development Program of the Republic of Tajikistan for 2021-2025 (MDP), as approved by Resolution No. 168 dated April 30, 2021,

as well as FAO report with a proposed national investment plan for food security and sustainable agricultural development for 2021-2030 for the Republic of Tajikistan [21]. A distinctive feature of the updated program is to take over the experience of the COVID-19 pandemic. The basic principles of the strategy pursue the following:

- land inventory in order to introduce land registers, which will further help with targeted and efficient use of land, and aid in improving the structure of seed farms increasing their capacity and efficiency
- improving food security and food quality by means of the principles of organic agriculture and the principles of green entrepreneurship [11].

Over the last decade, Tajikistan has seen a number of projects delivered in agriculture and DRR (Disaster Risk Reduction), EWRS (Early Warning and Response Systems) and agrometeorological services. Most of these initiatives were carried out with the support of international organizations and were focused on strengthening food and nutrition security, enhancing adaptation to climate change, encouraging more efficient and sustainable management of natural resources, as well as improving systems for locust monitoring and control. However, as far as development of organic agriculture is concerned, there is no mention of successful international projects implemented over the past 5 years.

National pesticide management legislation is incomplete. There is no register of pesticides, so pesticides are not controlled. Thus, the market sees many falsified or counterfeit products. An important aspect behind strong organic farming is its legislative aspects, including certification. Absence of their own relevant certification authorities and standards hinders successful implementation of organic agriculture. In this context, the most important aspect for eco-products market development is to establish requisite institutions and infrastructure for this market. Currently, Tajikistan does not have a unified and integrated certification system for organic products, which makes it hard to develop organic agriculture and access to international markets.

The Law of the Republic of Tajikistan “On Biological Economic Management and Production” No. 1592 dated April 4, 2019 [3], and other regulations do not prescribe the creation of additional standards or GOSTs, according to which it would be possible to determine whether a product is environmentally friendly or not. The law also does not address certification. There is now a clearly defined vision of the necessity to update regulations and standards governing the work of all players in the organic market: farmers, traders, and certifying bodies. Next, we would like to highlight several actions in this area. None of the laws in the CIS countries stipulate interest rates for the purchase

of fertilizers for organic farming, or preferential loans and grants for start-up entrepreneurs. The laws also do not regulate subsidies. Thus, the law, as well as other regulations, do not address state support measures which should play an important role in transition to sustainable organic agriculture [270, 282, 29]. At the moment, the law is more of a framework than a delivery plan, so a lot of work is required to be done to prepare by-laws that would create a mechanism to implement the law.

Harmonization of European and Tajik standards requires a lot of focus. This creates challenges for producers that do not know what standards must be met and what procedures must be followed to be granted certification. It should also be noted that control and supervision mechanisms over the production and sale of organic produce have not been sufficiently developed in Tajikistan. Lack of an effective monitoring and control arrangement may lead to violations and decrease confidence in organic products. The issue with many farmers is that it is easier for them to export organic agricultural products than to develop a domestic sales market. There is a need for a complete process flow of eco-clean products from organic agriculture to processing, packaging, transportation and distribution of organic products [3129].

In fact, the state does not provide financial, communication or investment support to organic agriculture. There is no system for collecting information on the number of producers, certified land, market volume and other components, which could further serve as a basis for development forecasts. There is no role distribution between government bodies, ministries and market entities such as producers, consumers, suppliers, and traders which create barriers for development of organic agriculture [2830].

Conclusion

As has been earlier noted by the authors, one of the main challenges in fostering the ecological agriculture is to improve both legislative framework and institutes governing business processes and institutional factors for development of the ecological agriculture. Designing standards for eco-clean products is one of the paramount challenges in delivering the basics of ecological agriculture as part of green entrepreneurship.

Priority should extend beyond measures aimed at reducing soil degradation and limiting the overapplication of pesticides to include the wider adoption of organic nutrient inputs, advanced soil conservation practices, and biologically based approaches to crop protection and rotation, with a clear focus on minimizing anthropogenic pressure on agroecosystems. Thus, it should become a

priority to introduce land cultivation techniques based on organic fertilizers and to establish production and marketing chains of finished eco-clean products in the delivery of government programs for the development of ecological agriculture. In the future, having in place a sophisticated infrastructure for processing companies will in many ways stabilize the environmental situation and rural issues. By expanding the production capacity of the Khujand canning plant, Tajikistan has the potential to re-establish its position in international markets for natural, non-reconstituted juices made from apricots, peaches, quinces, apples, pomegranates, grapes, and tomatoes.

In order to deliver these goals and objectives, we have defined the following actions:

- introduction of innovative irrigation and fertilization techniques, as well of a system for monitoring and forecasting weather conditions
- enhancing the legal and institutional mechanisms governing the application of chemicals in agricultural production requires the formulation and practical enforcement of comprehensive regulations and safety standards. This includes establishing rigorous criteria for assessing the quality and safety of chemical inputs, alongside the systematic monitoring and inspection of their use in farming practices;
- establishing a national crop insurance system for dehqan farms. This will enable agricultural producers to protect their crops from losses caused by adverse weather conditions or other factors and claim compensation for losses;

Developing a mechanism for subsidizing and providing preferential loans specifically to those farms that have begun to implement or are already producing organic output. The transition period from traditional agriculture usually takes 3-5 years, with hectare-by-hectare support to be provided during this period.

- development and implementation of measures to support the export of farm produce. It is necessary to create a designated structure that will deal with export of agricultural products and provide support in taxation, transport benefits and other organizational and economic issues. This will help farmers expand their market and increase their export earnings. Higher added value production, for example, in addition to exporting fruits, helped drastically increase production volumes and product range at the Shirin and Amiri chocolate factories that produce healthy candies such as fruits with nuts in chocolate, apricots, prunes, seedless grapes, and cherries.

Focus needs to be placed on attracting investments from both public and private sector in order to secure ecological growth of agriculture. Creation of

national Tajik food brands that meet both organic and halal standards will increase export potential.

In general, the development of ecological agriculture in Tajikistan requires an integrated approach and joint efforts from the state, producers, consumers and other groups of stakeholders [32]. Organic farming offers a number of environmental benefits that help reduce the negative impact of agriculture on the environment and promote sustainable rural development. However, in order to make sure there is a large-scale transition to organic farming, a number of challenges need to be overcome, such as raising awareness and training of farmers, designing effective organic certification and labeling systems, and support from governments and international organizations.

Список литературы

1. Вазиров, А. К. (2020). Госрегулирование экологической безопасности сельского хозяйства как основа устойчивого развития горного региона. *Вестник Таджикского национального университета. Серия социально-экономических и общественных наук*, (4), 119–205. EDN: <https://elibrary.ru/BVABJU>
2. Всемирный банк. (2021). *Обзор агропродовольственной отрасли и государственных расходов на сельское хозяйство Таджикистана*. Всемирный банк.
3. Закон Республики Таджикистан от 22 июля 2013 года № 1001 «О биологическом хозяйствовании и производстве». Получено с <https://faolex.fao.org/docs/pdf/taj149862.pdf>
4. Закон Таджикистана «О продовольственной безопасности» (№ 671 от 29 декабря 2010 года с учетом последних изменений от 2019 года). Получено с http://portali-huquqi.tj/publicadliya/view_qonunhovview.php?showdetail=&asosi_id=12432
5. Закон «О дехканских хозяйствах» (№ 1289 от 15 марта 2016 года). Получено с https://base.spinform.ru/show_doc.fwx?rgn=84275
6. ЕЭК ООН. *Таджикистан, обзоры результативности экологической деятельности*.
7. Исайнов, Х. Р., Ходиев, Д. А., Хафизов, Х. А. (2018). Приоритетные направления привлечения прямых инвестиций в освоение природно-ресурсного потенциала региона. *Аудит и финансовый анализ*, (2), 270–274. EDN: <https://elibrary.ru/YNUGDB>
8. Козлов, А. Д., Мингалева, Ж. А. (2025). Эффективность реализации государственных экологических проектов для достижения устойчивого развития субъектов Российской Федерации. *Наука Красноярья*, 14(1), 31–53. <https://doi.org/10.12731/2070-7568-2025-14-1-280>. EDN: <https://elibrary.ru/LSWYPC>

9. Одинаев, Х. А., Абдуллоева, Ш. Б. (2018). *Рынок экологических услуг: проблемы и перспективы развития* [Монография]. СИНО.
10. Пириев, Дж. С. (2019). Теоретические основы региональной организации производства и кластерной политики. *Вестник Таджикского национального университета. Серия социально-экономических и общественных наук*, (5), 66–72.
11. Продовольственная и сельскохозяйственная организация Объединенных Наций (ФАО). (2018). *Развитие органического сельского хозяйства в Центральной Азии: Материалы Международной конференции, проведенной 22–24 августа 2017 года в Ташкенте и Самарканде, Узбекистан*.
12. Ульмасов, Р. У., Носирзода, А. А. (2022). Демографические и миграционные проблемы в Таджикистане. В О. А. Козлова (Ред.) и др., *Глобальные вызовы демографическому развитию: Сборник научных статей. В 2-х томах* (Т. I, с. 438–448). Институт экономики Уральского отделения РАН. <https://doi.org/10.17059/udf-2022-3-14>. EDN: <https://elibrary.ru/RUXBFS>
13. Сеитов, С. К. (2024). Распределение объемов поддержки среди субъектов агропромышленного комплекса в Красноярском крае. *Наука Красноярья*, 13(3), 65–86. <https://doi.org/10.12731/2070-7568-2024-13-3-258>. EDN: <https://elibrary.ru/PHPXAM>
14. *Страновой обзор использования пестицидов и особо опасных пестицидов в Таджикистане* (2021, 15 марта).
15. Ходиева, Д. А., Сафаров, А. Х. (2020). Совершенствование организационно-экономического механизма управления развитием регионов. *Экономика Таджикистана*, (2), 160–166. EDN: <https://elibrary.ru/KRTHRB>
16. Хушвахтзода, К. Х., Имомназарова, Т. А. (2020). Финансово-кредитные ресурсы развития сельского предпринимательства (концептуальные вопросы). *Вестник Таджикского национального университета. Серия социально-экономических и общественных наук*, (8), 5–10. EDN: <https://elibrary.ru/WCYQFV>
17. Черняков, В. М. (2025). Совершенствование механизмов государственной поддержки сельского хозяйства в рамках стратегического планирования. *Наука Красноярья*, 14(1), 174–194. <https://doi.org/10.12731/2070-7568-2025-14-1-289>. EDN: <https://elibrary.ru/XRBRJA>
18. Шокиров, Р. С., Махмудов, М. К. (2019). Возможности использования зарубежного опыта формирования рынка экологически чистой продукции в республике Таджикистан. *Вестник ТГУПБП*, (4). EDN: <https://elibrary.ru/KZXFFR>
19. Эргардт, О. И., Неъматов, Х. Т. (2020). Тенденции развития сельского хозяйства в Республике Таджикистан. *Вестник науки*, 2(11), 99–107. EDN: <https://elibrary.ru/VMLLYT>
20. Bakharev, V., Giyosidinov, B. B., Kirillova, T., Kozlova, N., Sheleiko, V., & Cherkessova, T. (2024). State-run food retail chains as a tool of food security: An analysis

- of existing practices. B T. C. Devezas, M. A. Berawi, S. E. Barykin, & T. Kudryavtseva (Eds.), *Understanding the digital transformation of socio-economic-technological systems* (Lecture Notes in Networks and Systems, Vol. 951, pp. 45). Springer Cham. https://doi.org/10.1007/978-3-031-56677-6_45
21. FiBL & IFOAM. (2023). *Organic International. FiBL survey 2021: The world of organic agriculture, 2021 edition published – statistics and emerging trends 2020*. Получено с <https://www.organic-world.net/yearbook/yearbook-2021.html>
 22. Kotliarov, I. D. (2022). Heterogeneity of stakeholders as an obstacle to the development of agricultural cooperatives in Russia. *Russian Peasant Studies*, 7(4), 20–32. <https://doi.org/10.22394/2500-1809-2022-7-4-20-32>. EDN: <https://elibrary.ru/LJKEEN>
 23. Popov, V., Minin, V., Maksimov, D., & Zakharov, A. (2023). Prospects and objectives for organic agriculture development in the North-West Russia. B A. Ronzhin & A. Kostyaev (Eds.), *Agriculture digitalization and organic production: Smart innovation, systems and technologies* (p. 331). Springer Singapore. https://doi.org/10.1007/978-981-19-7780-0_8
 24. Samenbetova, D. S., & Patlasov, O. Yu. (2022). Model of state support for organic farming of Kazakhstan in the context of creation of international regulatory framework for the industry. *BIO Web of Conferences*, 42. EDP Sciences. <https://doi.org/10.1051/bioconf/20224206004>. EDN: <https://elibrary.ru/NDMMEB>
 25. Samenbetova, D. S., & Patlasov, O. Yu. (2022). Market analysis of organic agricultural products in Kazakhstan based on consumer behaviour research. B *Proceedings of the 1st International Conference on Methods, Models, Technologies for Sustainable Development — MMTGE* (Vol. Agroclimatic Projects and Carbon Neutrality, pp. 359–364). <https://doi.org/10.5220/0011571900003524>
 26. Semenova, E. (2023). Stimulating the export of organic products. B A. Ronzhin & A. Kostyaev (Eds.), *Agriculture digitalization and organic production: Smart innovation, systems and technologies* (Vol. 331). Springer Singapore. https://doi.org/10.1007/978-981-19-7780-0_1
 27. Mikhaylov, A., Barykin, S., Dinets, D., et al. (2025). Smart ecotourism and natural ecology in Kazakhstan. *Research in Ecology*, 7(3), 89–103. <https://doi.org/10.30564/re.v7i3.10233>. EDN: <https://elibrary.ru/WIEABM>
 28. Wang, L. K., et al. (2022). Vermicomposting process for treating agricultural and food wastes. B L. K. Wang, M. H. S. Wang, & Y. T. Hung (Eds.), *Waste treatment in the biotechnology, agricultural and food industries* (Handbook of Environmental Engineering, Vol. 26, p. 3). Springer Cham. https://doi.org/10.1007/978-3-031-03591-3_3
 29. Willer, H., Trávníček, J., Meier, C., & Schlatter, B. (Eds.). (2022). *The world of organic agriculture: Statistics and emerging trends 2022*. Research Institute of Organic Agriculture FiBL, IFOAM – Organic International. Получено с <https://www.fibl.org/fileadmin/documents/shop/1344-organic-world-2022.pdf>

References

1. Vazirov, A. K. (2020). State regulation of environmental safety in agriculture as a basis for sustainable development of a mountain region. *Vestnik of the Tajik National University. Series of Socio-Economic and Social Sciences*, (4), 119–205. EDN: <https://elibrary.ru/BVABJU>
2. World Bank. (2021). *Overview of the agrifood sector and public spending on agriculture in Tajikistan*. World Bank.
3. Law of the Republic of Tajikistan No. 1001, dated July 22, 2013, “On biological farming and production”. Retrieved from <https://faolex.fao.org/docs/pdf/taj149862.pdf>
4. Law of Tajikistan “On Food Security” (No. 671, dated December 29, 2010, as amended in 2019). Retrieved from http://portali-huquqi.tj/publicadliya/view_qonun-hoview.php?showdetail=&asosi_id=12432
5. Law “On Dekhkan Farms” (No. 1289, dated March 15, 2016). Retrieved from https://base.spinform.ru/show_doc.fwx?rgn=84275
6. UNECE. *Tajikistan: Environmental performance reviews*.
7. Isainov, Kh. R., Khodiev, D. A., & Khafizov, Kh. A. (2018). Priority directions for attracting direct investments to develop the natural resource potential of the region. *Audit and Financial Analysis*, (2), 270–274. EDN: <https://elibrary.ru/YNUGDB>
8. Kozlov, A. D., & Mingaleva, Zh. A. (2025). Efficiency of implementing state environmental projects to achieve sustainable development of the Russian Federation subjects. *Siberian Journal of Economic and Business Studies*, 14(1), 31–53. <https://doi.org/10.12731/2070-7568-2025-14-1-280>. EDN: <https://elibrary.ru/LSWYPC>
9. Odinaev, Kh. A., & Abdulloeva, Sh. B. (2018). *Market of environmental services: Problems and development prospects* [Monograph]. SINO.
10. Piriev, J. S. (2019). Theoretical foundations of regional organization of production and cluster policy. *Vestnik of the Tajik National University. Series of Socio-Economic and Social Sciences*, (5), 66–72.
11. Food and Agriculture Organization of the United Nations (FAO). (2018). *Development of organic agriculture in Central Asia: Proceedings of the International Conference held on August 22–24, 2017, in Tashkent and Samarkand, Uzbekistan*.
12. Ulmasov, R. U., & Nosirzoda, A. A. (2022). Demographic and migration problems in Tajikistan. In O. A. Kozlova et al. (Eds.), *Global challenges to demographic development: Collection of scientific articles. In 2 volumes* (Vol. I, pp. 438–448). Institute of Economics, Ural Branch of the Russian Academy of Sciences. <https://doi.org/10.17059/udf-2022-3-14>. EDN: <https://elibrary.ru/RUXBFS>
13. Seitov, S. K. (2024). Distribution of support volumes among agro-industrial complex entities in the Krasnoyarsk Territory. *Siberian Journal of Economic and Business*

- Studies*, 13(3), 65–86. <https://doi.org/10.12731/2070-7568-2024-13-3-258>. EDN: <https://elibrary.ru/PHPXAM>
14. *Country overview of pesticide and highly hazardous pesticide use in Tajikistan* (March 15, 2021).
 15. Khodieva, D. A., & Safarov, A. Kh. (2020). Improving the organizational and economic mechanism for managing regional development. *Economy of Tajikistan*, (2), 160–166. EDN: <https://elibrary.ru/KRTHRB>
 16. Khushvakhtzoda, K. Kh., & Imomnazarova, T. A. (2020). Financial and credit resources for the development of rural entrepreneurship (conceptual issues). *Vestnik of the Tajik National University. Series of Socio-Economic and Social Sciences*, (8), 5–10. EDN: <https://elibrary.ru/WCYQFV>
 17. Chernyakov, V. M. (2025). Improving mechanisms of state support for agriculture within the framework of strategic planning. *Siberian Journal of Economic and Business Studies*, 14(1), 174–194. <https://doi.org/10.12731/2070-7568-2025-14-1-289>. EDN: <https://elibrary.ru/XRBRJA>
 18. Shokirov, R. S., & Makhmudov, M. K. (2019). Opportunities for using foreign experience in forming a market for environmentally friendly products in the Republic of Tajikistan. *Vestnik of TSUPBP*, (4). EDN: <https://elibrary.ru/KZXFFR>
 19. Ergardt, O. I., & Nematov, Kh. T. (2020). Trends in the development of agriculture in the Republic of Tajikistan. *Science Bulletin*, 2(11), 99–107. EDN: <https://elibrary.ru/VMLLYT>
 20. Bakharev, V., Giyosidinov, B. B., Kirillova, T., Kozlova, N., Sheleiko, V., & Cherkesova, T. (2024). State-run food retail chains as a tool of food security: An analysis of existing practices. In T. C. Devezas, M. A. Berawi, S. E. Barykin, & T. Kudryavtseva (Eds.), *Understanding the digital transformation of socio-economic-technological systems* (Lecture Notes in Networks and Systems, Vol. 951, p. 45). Springer Cham. https://doi.org/10.1007/978-3-031-56677-6_45
 21. FiBL & IFOAM. (2023). *Organic International. FiBL survey 2021: The world of organic agriculture, 2021 edition published — statistics and emerging trends 2020*. Retrieved from <https://www.organic-world.net/yearbook/yearbook-2021.html>
 22. Kotliarov, I. D. (2022). Heterogeneity of stakeholders as an obstacle to the development of agricultural cooperatives in Russia. *Russian Peasant Studies*, 7(4), 20–32. <https://doi.org/10.22394/2500-1809-2022-7-4-20-32>. EDN: <https://elibrary.ru/LJKEEN>
 23. Popov, V., Minin, V., Maksimov, D., & Zakharov, A. (2023). Prospects and objectives for organic agriculture development in the North-West Russia. In A. Ronzhin & A. Kostyaev (Eds.), *Agriculture digitalization and organic production: Smart innovation, systems and technologies* (p. 331). Springer Singapore. https://doi.org/10.1007/978-981-19-7780-0_8

24. Samenbetova, D. S., & Patlasov, O. Yu. (2022). Model of state support for organic farming of Kazakhstan in the context of creation of international regulatory framework for the industry. *BIO Web of Conferences*, 42. EDP Sciences. <https://doi.org/10.1051/bioconf/20224206004>. EDN: <https://elibrary.ru/NDMMMEB>
25. Samenbetova, D. S., & Patlasov, O. Yu. (2022). Market analysis of organic agricultural products in Kazakhstan based on consumer behaviour research. In *Proceedings of the 1st International Conference on Methods, Models, Technologies for Sustainable Development — MMTGE* (Vol. Agroclimatic Projects and Carbon Neutrality, pp. 359–364). <https://doi.org/10.5220/0011571900003524>
26. Semenova, E. (2023). Stimulating the export of organic products. In A. Ronzhin & A. Kostyaev (Eds.), *Agriculture digitalization and organic production: Smart innovation, systems and technologies* (Vol. 331). Springer Singapore. https://doi.org/10.1007/978-981-19-7780-0_1
27. Mikhaylov, A., Barykin, S., Dinets, D., et al. (2025). Smart ecotourism and natural ecology in Kazakhstan. *Research in Ecology*, 7(3), 89–103. <https://doi.org/10.30564/re.v7i3.10233>. EDN: <https://elibrary.ru/WIEABM>
28. Wang, L. K., et al. (2022). Vermicomposting process for treating agricultural and food wastes. In L. K. Wang, M. H. S. Wang, & Y. T. Hung (Eds.), *Waste treatment in the biotechnology, agricultural and food industries* (Handbook of Environmental Engineering, Vol. 26, p. 3). Springer Cham. https://doi.org/10.1007/978-3-031-03591-3_3
29. Willer, H., Trávníček, J., Meier, C., & Schlatter, B. (Eds.). (2022). *The world of organic agriculture: Statistics and emerging trends 2022*. Research Institute of Organic Agriculture FiBL, IFOAM — Organic International. Retrieved from <https://www.fibl.org/fileadmin/documents/shop/1344-organic-world-2022.pdf>

ДАННЫЕ ОБ АВТОРАХ

Саменбетова Дилара Сергалиевна, выпускница аспирантуры

Частное учреждение образовательная организация высшего образования
«Омская гуманитарная академия»
ул. 2 Челюскинцев, 4, г. Омск, 644105, Российская Федерация
Dilya-dana@mail.ru

Патласов Олег Юрьевич, д-р экон. наук, профессор кафедры Экономики и управления персоналом

Частное учреждение образовательная организация высшего образования
«Омская гуманитарная академия»
ул. 4-я Челюскинцев, 2А, г. Омск, 644105, Российская Федерация
opatlasov@mail.ru

Каримова Умеда Рахматуллоевна, канд. экон. наук, преподаватель кафедры
«Финансы и кредит в АПК»

*Таджикский аграрный университет имени Шириншох Шотемур
пр. Рудаки, 146, г. Душанбе, 734003, Республика Таджикистан
Umeda_karimova@mail.ru*

DATA ABOUT THE AUTHORS

Dilara S. Samenbetova, postgraduate student

*Omsk Humanitarian Academy
2A, 4th Cheluskintsev Str., Omsk, 644105, Russian Federation
Dilya-dana@mail.ru
ORCID: <https://orcid.org/0000-0002-2748-2359>*

Oleg Yu. Patlasov, Doctor of Economic Sciences, Professor

*Omsk Humanitarian Academy
2A, 4th Cheluskintsev Str., Omsk, 644105, Russian Federation
opatlasov@mail.ru
ORCID: <https://orcid.org/0000-0003-2015-1474>
Scopus Author ID: 56437696900*

Umeda R. Karimova, Candidate of Economic Sciences, Lecturer in the Department of
Finance and Credit in the Agro-Industrial Complex

*Tajik agrarian University named Shirinsho Shotemur
146, Rudaki Ave., Dushanbe, 734003, Republic of Tajikistan
Umeda_karimova@mail.ru*

Поступила 11.12.2025

После рецензирования 20.01.2026

Принята 02.04.2026

Received 11.12.2025

Revised 20.01.2026

Accepted 02.04.2026