

**Name of the program:** BR10765064 «Regulatory and methodological support for the development of organic production in the Republic of Kazakhstan in accordance with international and foreign standards and requirements and priority markets»

**Relevance:** In the course of the research, the world experience of organic crop and animal husbandry, rules and standards for technological processes and products, the demand for organic food and raw materials in the domestic market of Kazakhstan and world markets will be studied (EU, China, Russia, Arab countries).

**Expected results.** a) The research will allow you to gain new knowledge about the production opportunities and market needs for organic products. b) To substantiate the organizational and economic conditions of production and the formation of an export-oriented market of organic products. c) Updating of regulatory, methodological support and creation of a software and information basis for the development of organic production in accordance with international, interstate and foreign standards for priority sales markets.

**Relevance of the tasks to be solved.** In many countries of the world (Austria, Germany, France, USA, etc.), organic food products are produced in a significant volume. Organic production becomes a barrier that restricts or excludes the use of synthetic mineral fertilizers, chemical pesticides, including plant protection products, veterinary drugs for animals, etc.

**Practical significance of research results.** The research has a real applied nature. The dissemination of the acquired knowledge among farmers will contribute to the greening of agriculture, the production of organic food. The possibility of commercial implementation of the project and export of certain types of products is expanding.

**Goal:** The purpose of the program is to provide regulatory and methodological support for the development of organic production in the Republic of Kazakhstan in accordance with international and foreign standards and requirements and priority markets.

**Expected results:**

In scientific terms, for the first time in Kazakhstan, based on a detailed analysis of the conditions of activity, the main factors affecting the production and sale of organic products in the domestic and foreign markets of Kazakhstan will be determined.

The agroecological condition of agricultural lands under the influence of anthropogenic factors will be assessed and the degree of soil pollution and agricultural systems at various levels will be determined.

The economic, environmental and social consequences of the transition of agricultural formations of the Republic of Kazakhstan to organic methods of management will be substantiated.

Models of interaction of market participants of organic products at the stage of extraction, processing and presentation of agricultural raw materials to the international market will be developed.

4 articles will be published in journals recommended by CCSON, 2 articles in interdisciplinary journals Scopus (Q3) with a non-zero impact factor.

At least 2 Master's theses based on the materials of the Program will be defended.

At least 1 doctoral dissertation based on the materials of the Program will be defended.

At least 5 diploma projects (works) based on the materials of the Program will be defended.

A draft Roadmap for the development of organic agriculture of the Republic of Kazakhstan for 2022-2023 will be developed.

A concept for the formation and functioning of the Register of organic seeds of agricultural crops in the Republic of Kazakhstan will be developed.

A concept for the application of a traceability system for the production and turnover of organic products will be developed.

The Procedure for assessing the suitability of lands (soils) and establishing zones for the production of organic products and raw materials will be developed.

Methodological recommendations will be developed for specific areas of production and sale of organic products.

A review of the practice of countries with a developed agricultural sector to ensure high labor productivity in the production and marketing of organic agricultural products will be conducted.

2 seminars will be held with participants of organic production.

A system of accounting and traceability of organic products will be created.

An information platform will be created for the main participants in the production and sale of organic products.

A video about the production and sale of organic products will be filmed.

#### **The results obtained in 2021:**

The analysis of the state of production and sale of organic products in Kazakhstan and the world is given, a survey of the target groups of the organic products market is conducted and the results are processed, an assessment of the agroecological state of agricultural land from the effects of anthropogenic factors is given and the degree of soil and agricultural systems contamination at various levels is determined, the concept of the procedure for assessing the suitability of lands (soils) and the establishment of zones for the production of organic products and raw materials is developed, the real practical experience in assessing the agroecological condition of agricultural lands under the influence of anthropogenic factors and studying the degree of pollution at various levels was studied, a draft Roadmap for the development of organic agriculture of the Republic of Kazakhstan for 2022-2023 was developed, monitoring (analysis and evaluation of scientific, technical, organizational and practical level) of standardization documents operating in the field of organic production was carried out.

The degree of implementation of some projects and concepts formed the basis of the new legislative framework in the field of organic agriculture of the Republic of Kazakhstan.

Scope of application. The results of the study will be applied by agricultural enterprises in the transition to organic agriculture, branch ministries and departments, local executive bodies in the development of relevant regulatory, methodological and other acts, educational institutions in the training of personnel and other interested parties.

Economic efficiency or significance of the work. The economic efficiency and significance of the work is that conditions will be provided for the creation of agricultural enterprises engaged in organic agriculture, ensuring their profitability and creating conditions for the availability of organic agricultural products for residents of the Republic of Kazakhstan.

#### **The results obtained in 2022:**

A concept has been developed for the formation and functioning of the Register of Organic seeds of agricultural crops in the Republic of Kazakhstan.

The economic results of the transition to organic methods of management are studied.

The social effects of the transition of agricultural formations of the Republic of Kazakhstan to organic methods of management are determined.

The changes in the ecological situation after the transition of agricultural formations of the Republic of Kazakhstan to organic methods of management are studied.

The concept of a system of traceability of organic products throughout the life cycle of products according to the principles of "from field to table" and "from farm to fork" has been developed.

The organizational and economic conditions for the effective production and sale of organic products in the studied regions of Kazakhstan are determined.

2 articles have been published in domestic journals (recommended by KKSON).

Published 1 article in foreign journals with a non-zero impact factor in interdisciplinary journals Scopus (Q3).

Shot 1 video on organic production.  
A seminar on organic production was held.  
3 bachelor's degree theses have been defended.  
2 master's theses have been defended.

### **The results obtained in 2023:**

A model of interaction between market participants of organic products at the stage of extraction, processing and presentation of agricultural raw materials to the international market has been developed

A model of the information platform of the main participants of the organic products market has been developed

The optimal logistics routes for the supply of organic products, as well as delivery methods in accordance with the requirements of priority markets, have been determined

Consumer preferences and needs of priority sales markets have been studied in order to organize high-quality and effective marketing of Kazakhstani organic products

The analysis of the requirements of domestic trade in priority sales markets is carried out

Priority types of Kazakh organic products for export have been identified

A system of accounting and traceability of organic products has been created

2 articles have been published in foreign and/or domestic journals (recommended by the Committee for Quality Assurance in Science and Higher Education)

1 article has been published in foreign journals with a non-zero impact factor in interdisciplinary journals Scopus (Q3)

2 bachelor's degree projects (works) have been defended

1 doctoral dissertation has been defended

The results of the research were tested in the workshop

A SWOT analysis of the organic products market was carried out

A draft Concept for the formation and operation of the PGS-Qazaqstan program has been developed

A draft of the professional standard "Organic production" has been developed

### **Members of the research group:**

1. Karabasov Rasul Asylbekovich The Hirsch index is 4. <https://www.scopus.com/authid/detail.uri?authorId=57194524235>, <https://orcid.org/0000-0003-1963-3097>,
2. Bulashev Berdibek Kabykenovich
3. Orynbekova Gulnara Akhmedovna Scopus Author ID: 57204568761 ORCID icon <https://orcid.org/0000-0002-2863-2611>
4. Bespaeva Rosa Sansyzbaevna Scopus Author ID: 57193856619 ORCID icon <https://orcid.org/0000-0002-3955-9237>
5. Pyagai Alexander Anatolyevich. The Hirsch index is 2. <https://www.scopus.com/authid/detail.uri?authorId=56127534300>. <https://orcid.org/0000-0002-1590-872X>.
6. Ospankulova Gulnazim Khamitovna
7. Nugmanov Erbol Tuleshovich
8. Kenges Gulzhihan Kengeskyzy The Hirsch index is 1. <https://orcid.org/0000-0001-8529-8923>
9. Mataybaeva Gaukhar Askerovna
10. Zain Aidynov Pshenbayevich <https://www.scopus.com/results/authorNamesList.uri?st1=Aidynov&st2=&origin>
11. Bodaukhan Kairat
12. Nurmaganbetov Kairat Kuanyshbaevich
13. Kuttayakova Gulmira Zhumadildaevna

14. Sharpenova Kuralay Kairbekovna
15. Ибжанова Айнура Алимбаевна
16. Kulmagambetova Aisulu Sultanovna The Hirsch index is 1.  
<https://www.scopus.com/authid/detail.uri?authorId=57204894459>.
17. Kharova Alyona Viktorovna The Hirsch index is 1.  
<https://www.scopus.com/results/authorNamesList.uri?st1=Kharova&st2=&origin>
18. Karsybayeva Karlygash Alpysovna
19. Zhunusova Maira Saruarovna
20. Ramazan Rabiga Asylbekovna

**List of publications and patents published within the framework of this project:  
(with links to them):**

**Information for potential users:**

The results of the scientific and technical program will be tested in the seminars scheduled according to the calendar plan of scientific research. The place and time of the seminars will be announced additionally.