Dynamics of development of farming and households in Kashkadarya region

Akram O. Ochilov, Academician of the Turan Academy of Sciences, Doctor of Economics, Professor, Head of the Department «Economics», Karshi State University
Address: Republic of Uzbekistan, 180119, Kashkadarya region, Karshi, Kuchabog street, 17
E-mail: akram.oo@mail.ru
ORCID ID: 0009-0004-9254-188X
Olga V. Kalinina, Doctor of Economics, Professor, Director, Higher School of Industrial Management, Peter the Great St. Petersburg Polytechnic University
Address: Russian Federation, 195251, St. Petersburg, internal territory of the city, Akademicheskoe municipal district, Politekhnicheskaya st., 29, litera B
E-mail: olgakalinina@bk.ru
ORCID ID: 0000-0002-4617-2823
SPIN-code: 5725-5997
Author ID (RINTS): 656089
ResearcherID: A-8906-2017
Nargiza A. Ochilova, Doctor of Philosophy in Economic Sciences (PhD), Associate Professor of the Department of Innovative Economy, Karshi Engineering and Economic Institute
Address: Republic of Uzbekistan, 180119, Kashkadarya region, Karshi, H. Bashir street, 6A
E-mail: nargizaochilova07@gmail.com
ORCID 0009-0000-3217-103X
Irina M. Zaychenko, Candidate of Economic Sciences, Associate Professor, Higher School of Industrial Management of the Institute of Industrial Management, Economics and Trade, Peter the Great St. Petersburg Polytechnic University
Address: Russian Federation, 195251, St. Petersburg, internal territory of the city, Akademicheskoe municipal district, Politekhnicheskaya st., 29, litera B
E-mail: zaychenko@spbstu.ru
ORCID ID: 0000-0002-4516-7088

Abstract: The article highlights issues related to the development of dekhkan and subsidiary farms in the field of agriculture and ways to effectively organize their activities, as well as an innovative approach to the production of agricultural products, factors affecting the strengthening of the export potential of the sector.

Key words: agriculture, farming, horticulture, gardening, productivity, efficiency, agricultural products, innovative agricultural technologies.

Динамика развития фермерских и подсобных хозяйств в Кашкадарьинской области

Очилов Акрам Одилович, академик Академии наук Турана, доктор экономических наук (DSc), профессор, заведующий кафедрой «Экономика»,
Каршинский государственный университет
Адрес: Республика Узбекистан, 180119, Кашкадарьинская область, Карши, улица Кучабог, 17
E-mail: akram.oo@mail.ru
ORCID ID: 0009-0004-9254-188X
Калинина Ольга Владимировна, доктор экономических наук, профессор, директор,
Высшая школа производственного менеджмента,
Санкт-Петербургский политехнический университет Петра Великого
Адрес: Российская Федерация, 195251, г. Санкт-Петербург, вн. тер. г. муниципальный округ Академическое, ул. Политехническая, 29 литера Б
E-mail: olgakalinina@bk.ru;
ORCID ID: 0000-0002-4617-2823
SPIN-код: 5725-5997

Author ID (РИНЦ): 656089
ResearcherID: A-8906-2017
Очилова Наргиза Акрамовна, доктор философии по экономическим наукам (PhD), доцент, кафедра «Инновационная экономика», Каршинский инженерно-экономический институт
Адрес: Республика Узбекистан, 180119, Кашкадарьинская область, Карши,
улица Х. Башира, 6А
E-mail: nargizaochilova07@gmail.com;
ORCID 0009-0000-3217-103X
Зайченко Ирина Михайловна, доцент, Высшая школа производственного менеджмента Института промышленного менеджмента, экономики и торговли,
Санкт-Петербургский политехнический университет Петра Великого
Адрес: Российская Федерация, 195251, г. Санкт-Петербург, вн. тер. г. муниципальный округ Академическое, ул. Политехническая, 29 литера Б
кандидат экономических наук.
E-mail: zaychenko@spbstu.ru
ORCID ID: 0000-0002-4516-7088

Аннотация: В статье освещены вопросы, связанные с развитием дехканских и подсобных хозяйств в сфере сельского хозяйства и пути эффективной организации их деятельности, а также инновационный подход к производству сельскохозяйственной продукции, факторы, влияющие на укрепление экспортного потенциала сектор.

Ключевые слова: фермерское хозяйство, подсобное хозяйство, растениеводство, садоводство, продуктивность, эффективность, сельскохозяйственная продукция, инновационные агротехнологии.

Введение

Today in the agricultural sector there are a number of regulatory economic measures that are necessary for the economic development of agricultural enterprises, especially dehkan and subsidiary farms. That is, in April 2021, the laws of the Republic of Uzbekistan “On Dekhkan Farming” and “On Subsidiary Farming” were adopted. Other laws and regulations aimed at further improving the performance of dehkan and subsidiary farms serve as an important program. Another important document “Development Strategy of New Uzbekistan for 2022-2026” set a goal of 100 for human value. For example, in the 30th goal “Intensive development of agriculture on a scientific basis will reduce farmers’ incomes by 2 times, and increase agricultural productivity by 5 years” [1]. It is noted that much attention is paid to the development of 464 thousand hectares of unused land, the long-term lease of 200 thousand hectares of land to the population for growing cotton and grain, the cultivation of export products that meet the requirements of international standards, and the development of fruit and vegetable farming. In addition, increasing soil fertility and improving the agricultural service system based on science and innovation will lead to an increase in the level of efficiency in agriculture. That is why, as stated in the strategy, it was planned to create an International Agricultural University together with higher education institutions to improve the integration of science and technology into the network of our country, and conditions were created for the effective use of subsidiary plots.

As you know, one of the pressing problems in the world is the problem of food security of the population. Each country has its own approach to finding a reasonable solution to this problem. For example, the high economic growth of China, the development of which began with agriculture, began with dekhkan farming. Initially, in the early 20th century, unused plots of land were taken from wealthy landowners and distributed to 300 million peasants. On these lands they grew food, satisfied the needs of the family and, through free sale, achieved economic stability. For many years, the Chinese government has argued that distributing land among families works well and is an efficient system. This principle is still observed today.

Review of literature on the topic

In the scientific research of the Russian economist E.V. Tsaregorodtsev, in order to manage personal subsidiary plots and its development, first of all, it is necessary to study the factors of development of farms from organizational, economic and social points of view, and also how to generalize and supplement existing theoretical rules. In his opinion, it would be advisable to develop an algorithm for managing the development of private farms [2].

O.A. Sapova proceeded from the fact that the development of personal subsidiary plots can be achieved by giving them legal status in public administration, by developing directions and mechanisms that create a system of social support for their economic growth [3].

In the studies of B.B. Berkinov, it was emphasized that “the creation of additional jobs and sources of income for the population by providing empty land in villages and towns to newly created family enterprises” [4] is an important tool for achieving economic stability in every family.

Y. Usmanov and A. Pardaboev express the opinion that the creation of scientific and practical conceptual foundations and further strengthening of their support is the most important issue in increasing the economic efficiency of farms and households[5].

According to A. Altiev and a group of researchers, “relations of ownership and use of peasant farms and household lands, in terms of their role and significance, need to be reformed in accordance with the needs and requirements of society and the economy, and also requires the use of its formation of a clear and understandable organizational and legal mechanism and its effective implementation" [6].

In the studies of R.H. Ergashev and Z.S. Shokhodzhaeva, “farming is characterized as a form of economy that economically uses resources in production in the national economy. This will reduce the family’s financial expenses and thereby strengthen the family budget. Agriculture, as a simple link of the national economy, consists mainly of the material and service sectors, and today production activities are concentrated in households based on the situation of the informal economy" [7].

According to G.T. Samieva [8], a farm is a family enterprise specializing in the production of agricultural products, which ensures the joint work of family members and satisfies the population’s need for agricultural products. Farming is the purposeful activity of growing agricultural products for future sale as a commodity or for personal consumption on land considered to belong to the household.

Analysis and results

In the agricultural sector of Uzbekistan, agricultural products, in particular grain products, potatoes, vegetables, leguminous crops, growing fruits and grapes, preserving them in quality and volume terms, ensuring their sale, the establishment of cooperative relations between processing enterprises and farms, a partial increase in export indicators in the form of finished products, as well as widespread attraction of investments in the agricultural sector is one of the urgent tasks of today. In the cultivation of these products, the role of agricultural land, along with farms, is incomparable. According to the current law, a wide path is open for further improvement of horticultural activities. If products grown in households, primarily satisfy the needs of the family, then the surplus can be freely sold without any mandatory restrictions. According to data received from the statistics department of the Kashkadarya region, in particular, the number of currently operating agricultural enterprises in the Kashkadarya region has decreased significantly compared to previous years (Fig. 1).

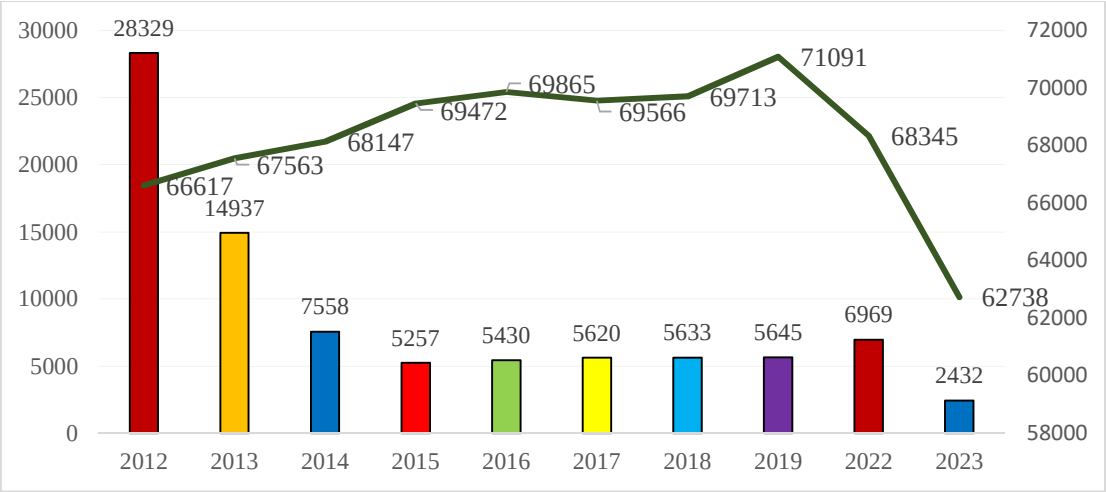

Рис. 1. / Fig. 1. **Количество дехканских и подсобных хозяйств, действующих в Кашкадарьинской области, и выделенных им земельных участков [9] / Number of dehkan and subsidiary farms operating in the Kashkadarya region and land plots allocated to them [9]**

The figure shows that in 2012-2023, sharp changes in the number of operating agricultural enterprises were observed in the Kashkadarya region. For example, in 2012 there were 28,329 agricultural enterprises in the region, and in 2013 this number decreased to 14,937. The sharp decline occurred due to the cessation of the activities of low-profit, unprofitable small farms. In 2014, compared to the previous year, the number of farms decreased by almost 50%, that is, it reached 7558. A significant change was observed from 2015 to 2019, and by 2020 the figure was 6,969. Looking at the numbers at the end of 2023, there were only 2,432. Thus, as of January 1, 2024, 2,432 farms are operating and growing food.

The area of cultivated land was 66,617 hectares in 2012 and reached 71,091 hectares in 2019 with significant growth over the years. By 2023, 62,738 hectares of land will be sown with agricultural products. The sharp decline in the number of farms can be explained by the fact that the level of economic efficiency has decreased Figure 2 shows that several factors influence agricultural production. Natural factors include the location of farms and farms, the level of productivity of land allocated for crops, the level of water availability of farms and farms, the possibility of using groundwater, the conditions for the development of plants and various insects, and changes in the number of days with precipitation. and costs have exceeded income. So, there are several factors that can influence this.

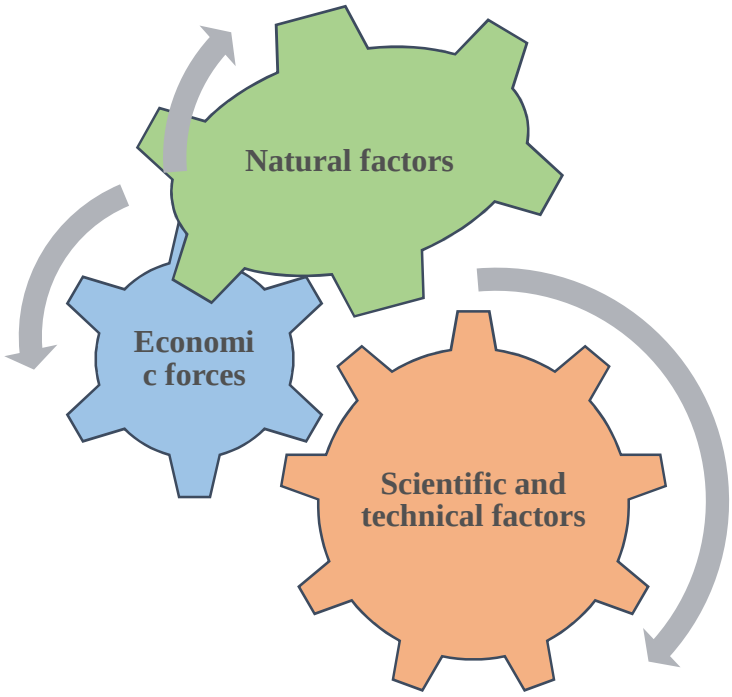

Рис. 2. / Fig. 2. **Факторы, влияющие на производство в дехканских и подсобных хозяйствах [10] / Factors influencing production in dehkan and subsidiary farms [10]**

Scientific and technical factors include scientific and technological achievements and new practical innovative production methods; economic factors include the level of use of banking services, the level of labor resources of farmers and households, the cost of training to use foreign experience and innovative methods, and the production process includes transportation costs, changes in prices for infrastructure services, etc. Since agricultural production is largely seasonal, the level of use of natural solar energy affects the quality of the product. This aspect is reflected in gross product and productivity indicators. The negative aspects of the natural climate are manifested in strong wind erosion, hail, and a sharp drop in temperature. In this case, it is advisable to use means to protect crops from adverse weather conditions of nature. The progress of science and technology has a direct impact on every area. It is the development of the agricultural sector that leads to an increase in the level of profitability and the targeted use of innovative technologies in agriculture. In recent years, various training and qualification seminars have been held to familiarize agricultural workers with innovative agricultural technologies and their practical application. In particular, economic efficiency will increase by improving “Smart agriculture” technologies in the agriculture of our country. According to statistics, there are currently about 5 million dekhkan and subsidiary farms operating in the republic. Providing the country's population with quality food products is the task of agricultural enterprises. Today, all the problems that arise during the implementation of the “Smart Agriculture” project are gradually being eliminated, and the large-scale application of this technology is being improved. After all, this process serves to introduce digital technologies into the efficient use of land and water intended for sowing crops in agriculture. Economic factors affecting agricultural production include all financial costs, including initial costs for raw materials and means of production. It is recommended to use banking services and attract investors.

Conclusion

As can be seen from the information provided, the role of farmers and household plots in the production of agricultural products is incomparable. We believe that in order to ensure growth in agricultural production in terms of quality and volume, attention should be paid to the following:

- study supply and demand when determining the type of products produced on dehkan and subsidiary farms, and on this basis improve the cultivation of productive varieties;

- development of an action plan to increase the level of productivity of agricultural land and study of factors influencing economic efficiency;
- distribution of irrigated lands by type of crop based on eliminating water management problems, improving the targeted use of economical and innovative technology;
- integrated use of data from regional statistical committees, including information on land quality, final annual performance indicators of recent years, productivity and other data, creation of directions for regular use;
- Expanding the use of innovative agricultural technologies, such as “Smart agriculture”.

The implementation of these recommendations will reduce costs in agriculture, achieve economic stability, and most importantly, ensure food security of the population.

References

1. Altiev A. et al. Improving the organizational and legal status of farm lands and farm enterprises. *Journal of Agroscience.* 2018;5:110.
2. Ochilova N.A. Improving the Use of Agricultural Land in Kashkadarya Region. *International Journal of Economics, Finance and Sustainability Development.* 2022;4(3):49-54.
3. Berkinov B.B. Ways to increase the potential of family business. Monograph. Tashkent. 2019. P. 82.
4. Data from the Department of Statistics of Kashkadarya Region.
5. Development Strategy of New Uzbekistan for 2022-2026. National Database of Legal Documents, January 29, 2022. URL: www.lex.uz.
6. Samyeva G.T. Directions of production diversification in dehkan farms: 08.00.04. Candidate's dissertation, Karshi. 2019.
7. Tsapova O.A. State management of the development of personal farms of the population (Based on the materials of the Republic of Kazakhstan): Dis. ... Cand. of Economics: 08.00.05.
8. Tsaregorodtseva E.V. Management of the development of personal subsidiary farms in the agricultural sector of the economy: based on the materials of the Perm Territory: dissertation of Candidate of Economic Sciences: 08.00.05. Perm, 2012.
9. Ergashev R.Kh., Shokhuzhaeva Z.S. Economy of dehkans and farms. – T.: Economy and Finance, Textbook. 2016. p. – 468.
10. Usmanov Yu., Pardaboev A. Organizational issues of land use of dehkan and subsidiary farms. *Journal of Agroscience.* 2018;6:105.
11. Ochilova N.A. Economic performance of dehkan farms in kashkadarya region. *Journal of Management Value & Ethics.* 2022;12(2):117-121. ISSN-2249-9512
12. Khamraeva S.N., Khakkulov F.F. The essence of cooperation in cotton growing. *Bulletin of Science and Education.* 2020;20-2(98):37-39.
13. Khamraeva S.N. Features and trends of digital economy development in Uzbekistan and Abroad. *Academia: An International Multidisciplinary Research Journal.* 2021;11(2):1198-1205.
14. Khamraeva S.N. The role of infrastructure in the socio-economic development of agriculture in the context of anti-crisis measures //Regional features of mitigating the effects of the global financial and economic crisis in Uzbekistan. Proceedings of the Republican scientific-practical conference. Termez. 2014. P. 182-184.
15. Khamraeva S.N., Innovative development of agricultural infrastructure: problems and ways of its achievement. The phenomenon of market economy: from the origins to the present day. Partnership in the face of risk and uncertainty. 2020. Pp. 310-319.

Список литературы

1. Альтиев А. и др. Улучшение организационно-правового положения земель фермерских и фермерских хозяйств. *Журнал агронауки*. 2018;5:110.
2. Ochilova N.A. Improving the Use of Agricultural Land in Kashkadarya Region. *International Journal on Economics, Finance and Sustainable Development*. 2022;4(3):49-54.

3. Беркинов Б.Б. Пути увеличения потенциала семейного бизнеса. Монография. – Ташкент. – 2019. – С. 82.

4. Данные управления статистики Кашкадарьинской области.

5. Стратегия развития Нового Узбекистана на 2022-2026 годы. Национальная база правовых документов, 29 января 2022 г. – URL: www.lex.uz.

6. Самиева Г.Т. Направления диверсификации производства в дехканских хозяйствах: 08.00.04. Кандидатская диссертация, Карши. 2019.

7. Цапова О.А. Государственное управление развитием личных хозяйств населения (На материалах Республики Казахстан): Дис. ... канд. экон. наук : 08.00.05.

8. Царегородцева Е.В. Управление развитием личных подсобных хозяйств в аграрном секторе экономики: на материалах Пермского края: диссертация кандидата экономических наук: 08.00.05. Пермь, 2012.

9. Эргашев Р.Х., Шохужаева З.С. Экономика дехкан и фермерских хозяйств. – Т.: Экономика-финансы, Учебник. 2016. с. – 468.

10. Усманов Ю., Пардабоев А. Организационные вопросы землепользования дехканских и подсобных хозяйств. Журнал агронауки. – 2018. – № 6. – С. 105.

11. Ochilova N.A. Economic performance of dehkan farms in kashkadarya region. *Journal of Management Value & Ethics*. 2022;12(2):117-121. ISSN-2249-9512

12. Хамраева С.Н., Хаккулов Ф.Ф. Сущность кооперации в хлопководстве // Вестник науки и образования. – 2020. – №. 20-2 (98). – С. 37-39.

13. Khamraeva S.N. Features and trends of digital economy development in uzbekistan and abroad. *Academicia: An International Multidisciplinary Research Journal*. 2021;11(2):1198-1205.

14. Khamraeva S.N. The role of infrastructure in the socio-economic development of agriculture in the context of anti-crisis measures //Regional features of mitigating the effects of the global financial and economic crisis in Uzbekistan. Proceedings of the Republican scientific-practical conference.–Termez. – 2014. – С. 182-184.

15. Khamraeva S.N., Innovative development of agricultural infrastructure: problems and ways of its achievement. The phenomenon of market economy: from the origins to the present day. Partnership in the face of risk and uncertainty. 2020. – С. 310-319.