Received on: 29 June 2022 Revised on: 17 September 2022 Accepted: 30 December 2022

RESEARCH ARTICLE
DOI:10.47703/ejebs.v4i66.185

The Agricultural Sector in the Republic of Kazakhstan: Analysis of the State, Problems and Ways of Solution

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For citation: Suieubayeva, S. N., Denissova O.K., Kabdulsharipova, A.M., & Ozpenc, A.I. (2022). The Agricultural Sector in the Republic of Kazakhstan: Analysis of the State, Problems and Ways of Solution. Eurasian Journal of Economic and Business Studies, 66(4), 19-31.

Conflict of interest: author(s) declare that there is no conflict of interest.

Abstract

The main objectives of the economic security of the country is to create competitive industries to meet the needs of the population and replace imports of socially essential goods. Kazakhstan's consumer market still retains a high share of imported products, so for the sustainable development of Kazakhstan, it is necessary to form and activate potential economic growth points, primarily in the agricultural and industrial sectors. The purpose is to study the current state of the agricultural industry of the Republic of Kazakhstan and to identify trends in its development. The methods include the systematization of information from the analyzed literature sources: analysis, synthesis, structuring, and traditional ways of economic analysis, such as comparison and details. The method of analysis allows us to study various aspects of agricultural production. Systematization of the data obtained in the course of the study is carried out on the basis of the method of tables. The graphic method is used to visualize the initial data, as well as the results obtained, and their interpretation. Results – the state of the agricultural industry in the Republic of Kazakhstan was analyzed; a comparison of indicators of agricultural production output of the Commonwealth countries was carried out; key areas affecting the increase in the gross domestic product of the country by increasing the production of agricultural products were identified. It is recommended to build a model for assessing the state of problems to improve the level of development of the agro-industrial complex.

Keywords: Agro-Industrial Complex, Agriculture, Gross Domestic Product, Economy, Gross Regional Product, Livestock, Plant Growing, Food Security

SCSTI: 06.71.07
JEL Code:

1. INTRODUCTION

The principles of rational production and consumption are one of the key topics of the Sustainable Development Agenda of the Republic of Kazakhstan for the period up to 2030. Today, most countries of the world are implementing various initiatives to create a closed-cycle economy, rational use of natural resources, environmental conservation, development of rational methods of production and sale and consumption of agricultural products. The agro-industrial complex (AIC), as a real sector of the economy remains one of the main sources of economic growth and well-being of the population of any country.

Today, the agro-industrial complex of Kazakhstan is not only one of the steadily developing sectors of the economy but also an economically attractive area for doing business. In accordance with the Strategic Development Plan of the Republic of Kazakhstan until 2025, the agro-industrial complex policy will increase agricultural productivity, deepen processing, ensure food security, and grow export-oriented, environmentally friendly agricultural products. The positive dynamics in the industry make us think about the prospects of the domestic agro-industrial complex. Especially in the near future, when the COVID-19 pandemic has blocked the processes of globalization for a long time. Thus, at a conference call of the Government, ex-Prime Minister of the Republic of Kazakhstan A. Mamin summarized: «In general, the priority task for the coming period will be the formation of a new structure of the economy based on increasing its self-sufficiency, competitive non-raw materials sector, high-quality investments, and integration into regional and global value chains.» Therefore, the issues of self-sufficiency in food and non-food products, the production of which is low or absent in Kazakhstan, come to the fore. The country spends over $500 million on food imports alone. At the same time, a huge number of programs of state subsidies, loans, and support for the agricultural sector of the country can be characterized as low-effective.

In 2021, the implementation of the National Project for the development of the agro-industrial complex of the Republic of Kazakhstan for 2021-2025 was launched, the main goal of which is to increase labor productivity in the agro-industrial complex and export processed agricultural products by at least two times compared to 2020. The total expenses for inmplementing the national project amount to 6803.3 billion tenge, of which 39.7% fall on budget funds. At the same time, after one year of the project implementation, the issues of low productivity in agriculture, availability of agricultural machinery, the effectiveness of state support tools, and others remain open.

The purpose of this article is to analyze the current state of development of the agro-industrial complex of the Republic of Kazakhstan and identify ways for its effective functioning. This will confirm the hypothesis put forward by the authors of the article. Hypothesis: the development of the agro-industrial complex in terms of modernization will increase the competitiveness of the national product, bring it to a new level, help overcome the economic crisis, contribute to the balanced development of agriculture, activate market entities, increase the interest of foreign investors in the national economy, and also increase economic security.

2. LITERATURE REVIEW

Agriculture is the main link of the agro-industrial complex of Kazakhstan, providing the population with food and the industry with raw materials. Back in 2007, in his writings, Dodobaev (2007). Described land as the main element of state wealth and the primary means of production in agriculture. Any enterprise is obliged to use the land fruitfully, take care of it, and increase its fertility. Kerimova & Kasenbayev (2021), Tireuov K.M. et al (2020) wrote about the sustainable development of agricultural enterprises while they considered their innovative development a priority. Considering foreign scientists, such as Nechaev and Paramonov (2008), spoke about agricultural specialists in their writings, they were the organizers of production who should ideally possess technological and economic knowledge. According to the authors, land is the main and specific means of production in agriculture. The final results of economic activity largely depend on the quality of agricultural land, soil fertility, and the farm's location.

Tsypkin and Lyukshinov (2007) were one of the first to emphasize that sustainable economic growth in the country's agro-industrial complex is only possible with stimulating the use of science and technology. The introduction of new technologies should be taken as a basis for the activation of all economic entities of the scientific and technical sphere of the agro-industrial complex, which undoubtedly leads to an increase in its productivity. However, as Han Jun and He Xiang (2011) rightly believe, this is costly for the agricultural environment and leads to a limitation on its sustainable development. They see a way out of this situation in a closed-cycle economy, which is also necessary and acceptable for our agriculture, as a way to solve many problems, in particular vast losses of agricultural products and production waste. Trisha et al. (2017) indicated vast losses in agriculture in European countries, suggesting a «closed-loop economy» for their reduction. This idea can be traced in the works of many foreign scientists, for example, Fraga-Corral et al (2021) write about it. Simal-Gandara (2021), as well as Suman Nandy et al (2022). However, the transition to a closed-cycle economy must be systemic, linking both production and consumption, as well as waste management. Otherwise, the primary resources extracted annually associated with economic growth are about four times higher than the resources saved through closed-cycle economy initiatives, as indicated in their study by Marco Bianchi & Mauro Cordella (2022). And it is necessary to pay special attention to this when implementing this project in our agriculture, the need for the implementation of which is indicated in the recommendation part of this article.

Another direction of solving the problems of agricultural production is the introduction of a model of vertical integration of the food supply chain, and on a contractual basis. This experience is revealed in a study by Filippo Sgroi and Vito Domenico Sciancalepore (2022). Despite many studies in agriculture of domestic and foreign scientists, the conditions and effectiveness of their implementation in developing the agro-industrial complex are insufficient. Theoretical aspects are not fully developed, and foreign experience in the development of the agro-industrial complex and improvement of regulatory legal acts are needed. It is necessary to create a model for the development of the agro-industrial complex of the country from the point of view of

economic security and, if possible, compare it with the existing one.

3. METHODOLOGY

The research methodology is based on the laws of dialectical logic and systematic and situational approaches.

The systematic approach allows the evaluation of ongoing processes comprehensively in implementing the National Project for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2021-2025.. The situational approach is due to the need for a timely assessment of the agricultural sector development in Kazakhstan and the study of the problems inherent in this market. The development of scientific and technological progress in the agro-industrial complex actualizes the constant analysis of the current situation for the timely adoption of managerial decisions by business entities, considering environmental factors.

In the course of the study, primary information is collected through desk studies involving the collection and analysis of official legislative and regulatory acts of the Republic of Kazakhstan and data from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan. Carrying out a critical analysis of scientific literature on the research problem involves using of classification and systematization techniques, analogies and comparisons. At the same time, it is essential to observe the methods of historical and logical knowledge, which will allow us to evaluate economic processes as a whole and draw general conclusions.

The main methods of cognition used are synthesis, structuring, analysis, expert-analytical, analytical hierarchy, and others. The synthesis method allows combining, according to common classification criteria, existing, disparate approaches to the analysis of prospects for the development of the agricultural sector. The structuring method helps to organize all the information received about approaches to analyzing the prospects for the development of the agricultural sector into a system that is easy to understand. The method of analysis allows us to study various aspects of agricultural production.

In accordance with the goals and objectives of this study, as well as the available raw data, preference is given to the use of quantitative methods, namely methods of statistical analysis, which allows processing information, applying the results to develop and make the right decisions. Thus, the work uses the method of groupings, compiled typological, structural and analytical groupings, the structural-dynamic method, and the method of generalizing indicators.

Systematization of the data obtained in the course of the study is carried out on the basis of the method of tables. The graphic method is used to visualize the initial data, the results obtained and their interpretation.

4. FINDINGS AND DISCUSSION

The essential role in the development of the economy of Kazakhstan belongs to the agricultural sector of the economy, in which significant economic potential is concentrated. The level of its development has always played an important role in the economic and socio-political stability of the country, and determines the level of food security of the republic.

The President of the Republic of Kazakhstan, Kassym-Jomart Tokayev, gave instructions for the development of the agro-industrial complex of the country in his message to the People of Kazakhstan «Unity of the people and systemic reforms are a solid foundation for the prosperity of the country». He stressed the main problems of corruption in this industry. He raised the topic of the need to subsidize agriculture, especially the modernization of machinery (machinery and equipment). Attention was also paid to inflated prices for the national product, noting that local executive bodies, which should be responsible for their regulation, do not cope with the tasks set against the background of urgent problems in the Republic of Kazakhstan related to the development of the agro-industrial complex, there is a need to conduct a timely analysis of the state of agriculture, as an important sector of the agro-industrial complex of many countries, which includes the following components: crop production, animal husbandry, farms, individual subsidiary farms, etc.

The basis for the analysis of the development of agriculture in Kazakhstan was the information from the Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan and a source of literature. In the Republic of Kazakhstan in 2021, the gross domestic product (GDP) by production method amounted to 82207959.7 million tenge, which is 15.9% higher compared to 2020, in the structure of which the share of agricultural production (services) is 8.9% (7336966.3 million tenge), including gross crop production 4232458.6 million tenge (57.7%), livestock 3104507.7 million tenge (42.3%), which increased by 14.7% and 17.7%, respectively, compared to 2020. In the structure of GDP in 2021, a large share is occupied by the production of services, which amounted to 56.43%, and the share of goods production accounts for 43.57%, of which agriculture, forestry, and fisheries account for 5.43%, compared with 2018, the share of which increased by 0.63% (Figure 1).

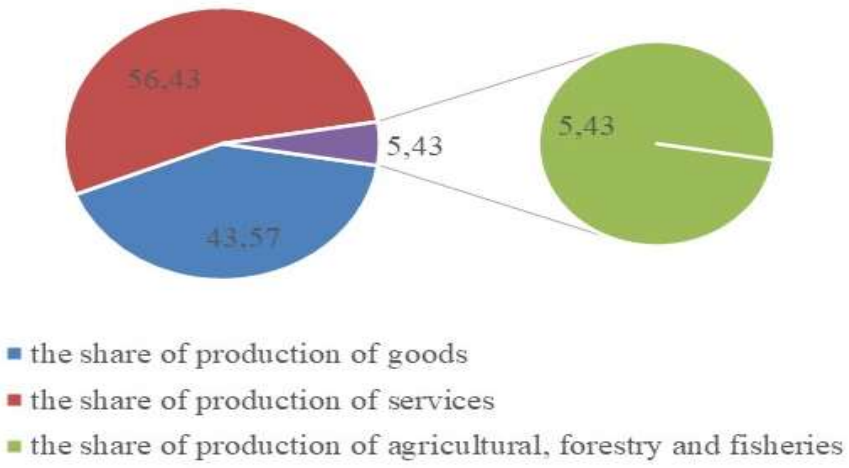

FIGURE 1. The share of production of goods and services in the GDP structure of the Republic of Kazakhstan in 2021

Note: Compiled by the author based on the data from the Bureau of National Statistics (2021)

The growth rate of agricultural output in the Republic of Kazakhstan, in monetary terms, shows a positive trend from 2007 to 2020 by 55.1% and a decline in 2021 compared to 2020 by 7.1% (Figure 2).

FIGURE 2. Dynamics of agricultural output in the Republic of Kazakhstan
Note: Compiled by the author based on the data from the Bureau of National Statistics (2021)

Table 1 shows the output of agricultural products of the Commonwealth countries. If to compare Kazakhstan with the CIS countries in terms of agricultural output for 2021, expressed in billions of dollars. The United States, then, is clear that it is in third place, after Russia and Uzbekistan. Compared to 2020, the dynamics of growth in Kazakhstan increased by 5.8%, while in 2020, the decline in growth rates in dollar terms was 0.2%, and in 2019 11.7%.

TABLE 1. Agricultural output of the CIS countries

Indicator	**in % to the previous year**				**billion US dollars**			
Country	**2018**	**2019**	**2020**	**2021**	**2018**	**2019**	**2020**	**2021**
Azerbaijan	104,2	104,6	107,2	102	3,8	4,1	4,6	5
Armenia	97,2	92,4	95,8	101,4	1,9	1,8	1,8	1,7
Belarus	104,2	96,6	102,9	104,9	9,3	9,3	10,0	9,3
Kazakhstan	103	103,5	99,9	105,7	12,5	13,0	13,5	14,8
Kyrgyzstan	102,4	102,7	102,6	101	3,0	3,0	3,2	3,2
Moldova	109,1	102,5	98,1	72,9	1,8	1,9	2,0	1,2
Russia	102,9	99,4	104	101,5	87,6	81,9	89,6	84,7
Tajikistan	106,8	104	107,1	109	3,1	2,8	2,9	3,3
Uzbekistan	101	100,2	102,7	103	29,6	23,2	25,4	25,9
Ukraine	97,8	107,8	101,4	88,5	26,5	31,2	32,8	27,6
Total	102,9	101,4	102,2	99	179	172	186	149
Changes, in %	-2,34	-1,49	0,8	-3,19	104,6	96,1	107,9	80,2
Note: Compiled by authors								

Today there are three main forms of management in Kazakhstan: agricultural enterprises (large farms), farms/peasant farms (medium farms) and personal subsidiary farms (small farms). Large farms are legal entities, and farms are individual entrepreneurs in their organizational and legal forms and are not legal entities. The private subsidiary farm was excluded as an economic entity (not a legal entity). However, they remain important producers of agricultural products, especially in animal husbandry.

Of the economic entities in the agricultural sector, 15% – 4% are represented by large enterprises, and they process about 50% of all agricultural land. Large farms are concentrated mainly in the northern regions of the country, where farming is practiced. Cereals and oilseeds are mainly grown in these regions. Over the past 5-7 years, animal husbandry has been actively developing in the northern regions; in particular, with the support of the state, the breed composition of the livestock is changing. Table 2 shows the differentiation of the development of agriculture, considering the climatic and socio-economic conditions of the population.

TABLE 2. Priorities of agro-industrial complex development by regions of Kazakhstan

Region	Crop production	Animal husbandry
Akmola	Grain production: wheat, barley; oilseeds: rapeseed	Dairy and meat cattle breeding Broiler poultry farming
Kostanay	Grain production: wheat (hard and strong), Oilseed barley: rapeseed and flax seeds	Dairy and meat cattle breeding, pig breeding
Pavlodar	Grain production: barley, buckwheat, millet, Oilseeds: sunflower	Dairy cattle breeding, horse breeding
North Kazakhstan	Grain production: wheat, barley; oilseeds: rapeseed; potatoes	Dairy cattle breeding, pig breeding
Aktobe	Durum wheat (separate areas), barley, fodder crops	Beef cattle breeding, sheep breeding
West Kazakhstan	Durum wheat (separate areas), fodder grain, fodder crops	Beef cattle breeding, sheep breeding
Atyrau	Vegetable melon crops	Sheep breeding, camel breeding
East Kazakhstan	Feed grain, sunflower seeds, fodder crops	Dairy cattle breeding, broiler poultry farming, sheep breeding
Karaganda	Durum wheat (separate areas), fodder grain, fodder crops	Beef cattle breeding, sheep breeding, horse breeding, broiler poultry farming
Almaty	Feed grains (corn), oilseeds (beans, soybeans), safflower, vegetables, sugar beet, fruits and berries	Dairy cattle breeding, broiler poultry farming, sheep breeding
Zhambyl	Vegetable melon crops	Sheep breeding, dairy cattle breeding
Kyzylorda	Rice, vegetables, melons	Sheep breeding, camel breeding
South Kazakhstan	Vegetables and melons, fruit and vegetable products and grapes, cotton	Sheep breeding, dairy cattle breeding
Note: Compiled by authors		

Personal-subsidiary farms, in fact, are represented by families living in rural areas. In their personal farmstead, they have, on average, from 1 to 3 cows, sheep and goats, poultry, and a small vegetable garden, the area of which can vary from several acres to

0.25-1 ha. Despite the small scale, personal-subsidiary farms today produce up to 70% of all livestock products in the country. In total, more than 15,000 organizations engaged in agricultural activities (excluding forestry and fisheries) are registered in Kazakhstan. This is 3.5% of all organizations registered in Kazakhstan.

Figure 3 shows the most significant types of agricultural activities according to the Russian Classification of Economic Activities (RCEA): code 01111 «Cultivation of grain and leguminous crops, including crop production» - 4214 organizations; code 01500 «Mixed agriculture» - 3052 organizations; code 01420 «Breeding of other breeds of cattle for meat» -1495 organizations.

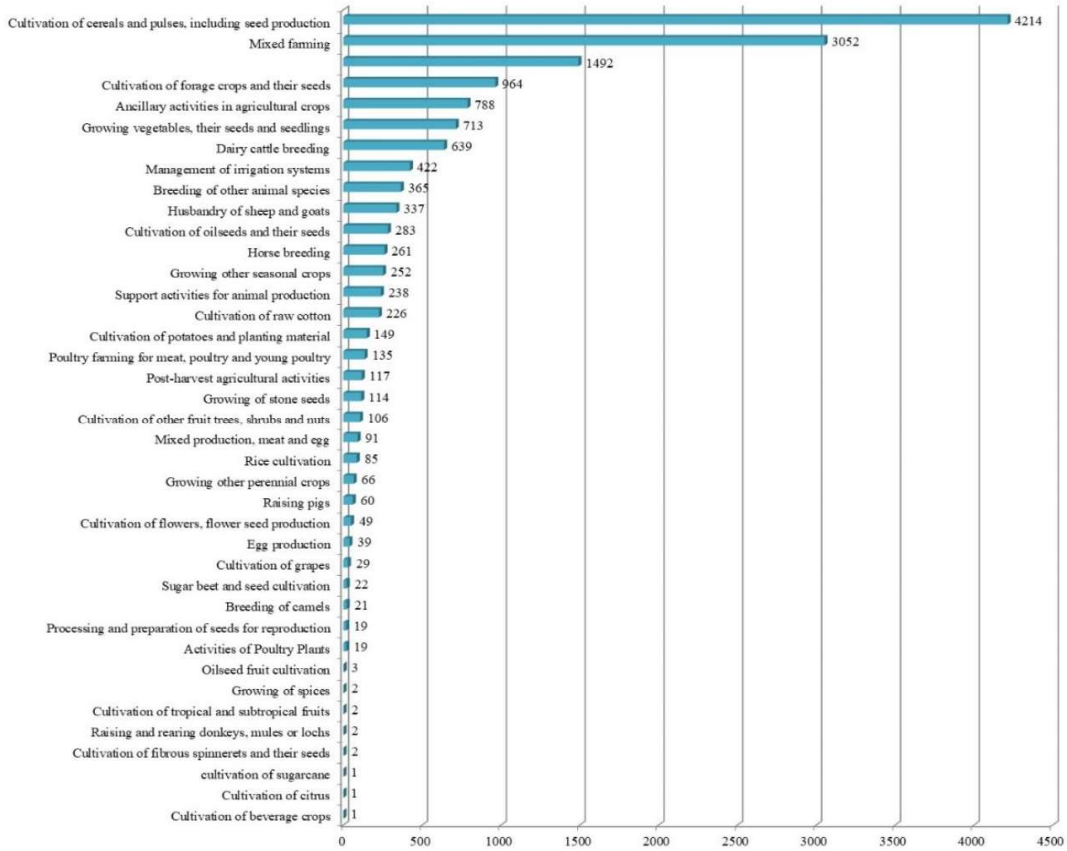

FIGURE 3. Number of enterprises by industry in the Republic of Kazakhstan registered in 2021

Source: Compiled by the author based on the data from the Bureau of National Statistics (2021)

One enterprise in the country is registered: cultivation of crops for the production of beverages, citrus fruits and sugar cane.

Figure 4 shows that the largest number of agricultural organizations located in the Turkestan region – 3503. Almost two times fewer organizations are located in the Almaty region – 1821, which ranks second in the number of such organizations. Akmola region is in third place – 1711. The smallest number of organizations is registered in Atyrau and Mangystau regions – 131 and 143, respectively.

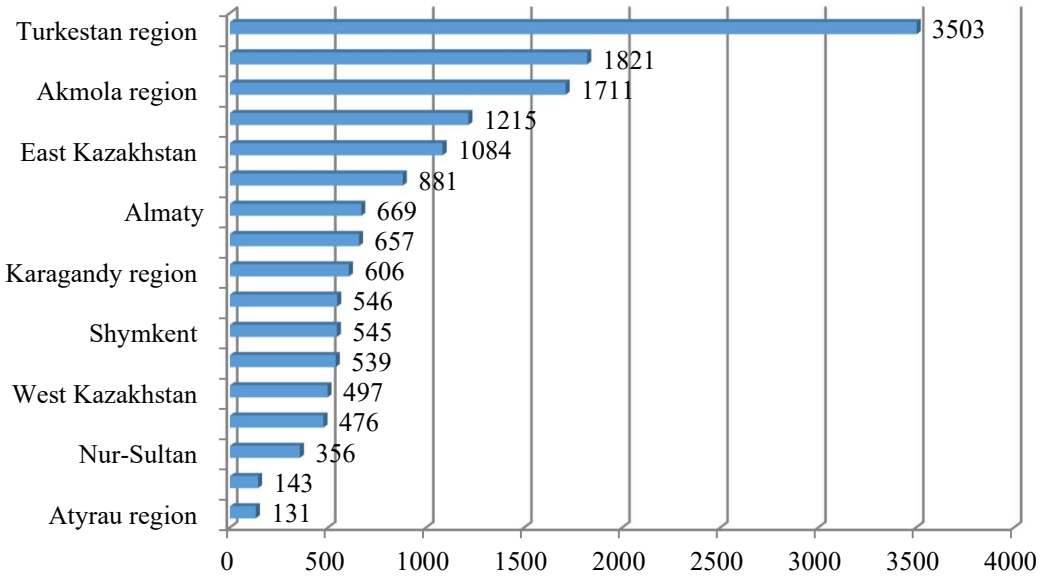

FIGURE 4. Number of agricultural enterprises by regions of the Republic of Kazakhstan

Source: Compiled by the author based on the data from the Bureau of National Statistics (2021)

Figure 5 shows the gross regional product (GRP) in 2021 by the regions of the Republic of Kazakhstan.

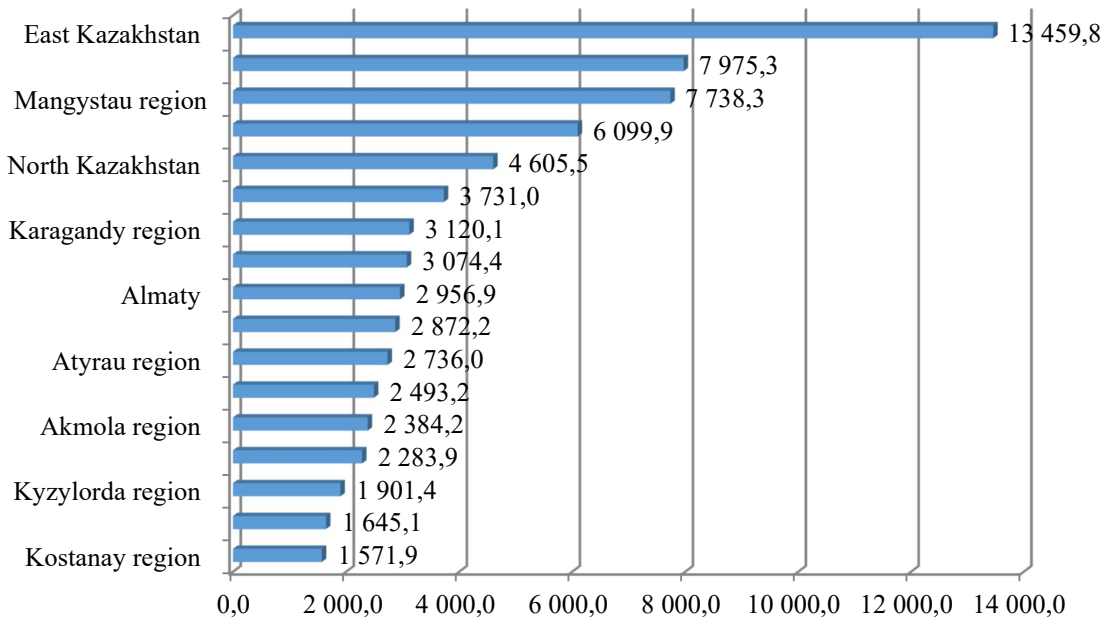

FIGURE 5. Gross regional product by type of economic activity in the RK for 2021

Source: Compiled by the author based on the data from the Bureau of National Statistics (2021)

In the production of which, the East Kazakhstan region occupies the first place - 13459.8 billion tenge (19.05%). Then comes Turkestan and Mangystau regions – 7975.3 (11.29%) and 7738.3 (10.95%) billion tenge, respectively. The least GRP accounts for Kostanay and Aktobe regions – 1571.9 (2.22%) and 1645.1 (2.33%) billion tenge.

Of the total GRP in the Republic of Kazakhstan, only 5.39% is accounted for by agriculture, forestry, and fisheries. Considering in more detail such economic activities as agriculture, forestry and fisheries, let us turn to Figure 6, from which it can be seen that the city of Shymkent is located in the first place (14.94%), followed by Akmola region (11.89%), Kostanay (11.72%) and Northern Kazakhstan (11.59%). The smallest share is occupied by Turkestan (0.13%), East Kazakhstan (0.22%), Zhambyl region (0.57%), and Almaty region (0.62%).

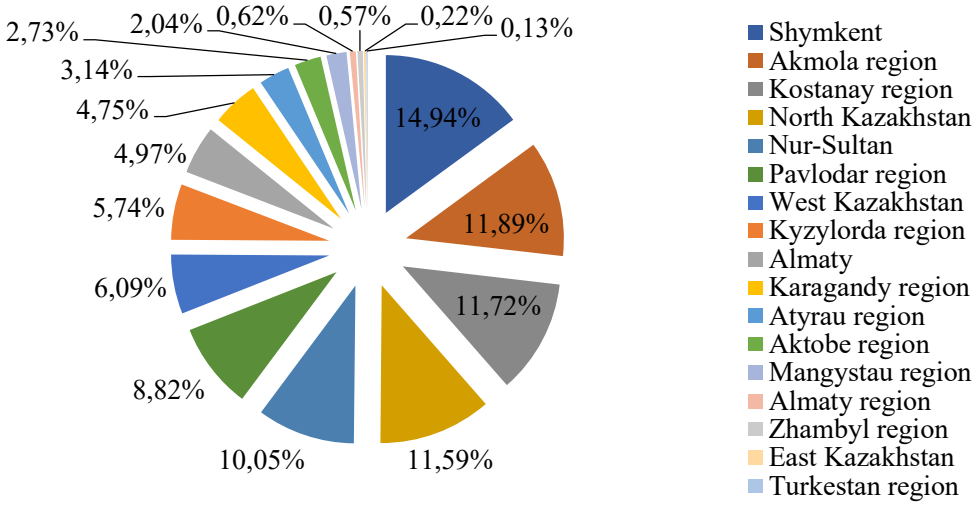

FIGURE 6. Gross regional product in the share ratio in agriculture, forestry, and fisheries in the Republic of Kazakhstan for 2021

Source: Compiled by the author based on the data from the Bureau of National Statistics (2021)

Thus, the analysis of the state of the agricultural sector in the Republic of Kazakhstan allows us to conclude that the main task of the agricultural sector in the country's economy is to protect the interests of domestic producers. Therefore, research is required not only on the general problems inherent in this market but also an analysis of the problems of each region separately. The agricultural market is considered an integral part of the national market. Therefore, after economic reforms in the food market in Kazakhstan, both national and regional market problems have arisen, to solve which is necessary: to attract investment, improve product quality, increase the production of environmentally friendly food, eliminate the price difference between production and processing industry, etc.

It should be noted that the development of the national agro-food market of the country depends on the activities of regional markets. Therefore, to talk about the food market as

a separate market of the country is a conditional concept since it is one of the constituent elements.

5. CONCLUSIONS

Based on the studied material at the time of writing the article, the following conclusions were made:

- the problems associated with the development of the agro-industrial complex affect the nation of the country. This industry is most susceptible to corruption, as the President of the Republic of Kazakhstan, Kassym-Jomart Tokayev, emphasized in his message;
- issues related to subsidies, reimbursement of part of the costs incurred by peasant farms (farmers) are raised annually, and the proposed national projects and programs today bring a small number of positive results;
- the population of Kazakhstan has experienced a shortage of vegetables and fruits, which are on the market at inflated prices. Prices for agricultural products are growing annually and monthly. The state bodies regulating prices do not cope with the tasks set. First of all, not only the farms themselves suffer but also the population, which cannot afford domestic products since the prices of export products are much lower;
- agriculture needs high-quality assistance from state executive bodies and subsidies;
- the lack of a clear mechanism for tracking problems at a lower level and a hierarchical structure for monitoring, as well as solving this problem;
- significant fluctuations in yields are observed not only due to unfavorable climatic conditions but also due to the very low scientific and technical equipment of the industry, in fact, at all stages of production, including post-harvest processes;
- the processes of processing and selling agricultural products, both on the local market and abroad, also require improvement. For example, only 2-3% of all vegetable and fruit products in the country are processed. However, despite the meagre share of processing of agricultural products, Kazakhstan is among the major producers and exporters of some types of products, such as cereals and flour.

To increase the level of development of the agro-industrial complex and its modernization, it is recommended to build a model for assessing the state of problems. To build what is necessary:

- to study the foreign experience of agro-industrial complex development and its modernization;
- deeply analyze the current state of the agro-industrial complex of the Republic of Kazakhstan;
- to develop a methodology for assessing, diagnosing, and monitoring the country's agro-industrial complex;
- to develop a model of the agro-industrial complex to improve the economic security of the republic.

References

1. Bianchi, M., & Cordella, M. (2023). Does circular economy mitigate the extraction of natural resources? Empirical evidence based on analysis of 28 European economies over the past decade. *Ecological Economics, 203,* 107607.

https://doi.org/10.1016/j.ecolecon.2022.107607.
2. Blanco, C., & Raurich, X. (2022). Agricultural composition and labor productivity. *Journal of Development Economics, 158,* 102934. https://doi.org/10.1016/j.jdeveco.2022.102934
3. Bureau of National Statistics (2022). [updated June 19, 2022; cited July 3, 2022]. Available: https://www.stat.gov.kz/.
4. Decree of the Government of the Republic of Kazakhstan dated October 12, 2021 No. 732. On approval of the national project for the development of the agro-industrial complex of the Republic of Kazakhstan for 2021-2025. Information and legal system of normative legal acts of the Republic of Kazakhstan "Adilet" (2021). [updated October 12, 2021; cited June 5, 2022]. Available: https://adilet.zan.kz/rus/docs/P2100000732/history. (in Russ.)
5. Decree of the President of the Republic of Kazakhstan dated February 15, 2018 No. 636. On the approval of the National Development Plan of the Republic of Kazakhstan until 2025 and the invalidation of certain decrees of the President of the Republic of Kazakhstan. Information and legal system of normative legal acts of the Republic of Kazakhstan "Adilet" (2018). [updated February 15, 2018; cited March 28, 2022]. Available: https://adilet.zan.kz/rus/docs/U1800000636. (in Russ.)
6. Dodobaev, Y. T. (2007). Analysis of the economic activity of the agro-industrial complex: [Analiz khozyaistvennoi deyatel'nosti APK] Uchebnoe posobie-Almaty. Ehkonomika. (in Russ.)
7. Fraga-Corral, M., Ronza, P., Garcia-Oliveira, P., Pereira, A. G., Losada, A. P., Prieto, M. A., Quiroga M.I., & Simal-Gandara, J. (2022). Aquaculture as a circular bio-economy model with Galicia as a study case: How to transform waste into revalorized by-products. *Trends in Food Science & Technology, 119,* 23-35. https://doi.org/10.1016/j.tifs.2021.11.026.
8. Jun, H., & Xiang, H. (2011). Development of circular economy is a fundamental way to achieve agriculture sustainable development in China. *Energy Procedia*, *5*, 1530-1534. https://doi.org/10.1016/j.egypro.2011.03.262.
9. Kerimova, U. K., & Kasenbayev, G. S. (2021). The key problems of the development of the agro-industrial complex in Kazakhstan and ways to solve them. [Klyuchevye problemy razvitiya agropromyshlennogo kompleksa v Kazakhstane i puti ikh resheniya]. *Vestnik universiteta Turan*, *4,* 85-92. https://doi.org/10.46914/1562-2959-2021-1-4-85-92. (in Russ.)
10. Nandy, S., Fortunato, E., & Martins, R. (2022). Green economy and waste management: An inevitable plan for materials science. Progress in Natural Science: Materials International. https://doi.org/10.1016/j.pnsc.2022.01.001
11. Nechaev, V. I., & Paramonov, P. F. (2006). Organization of production and business activities in the agro-industrial complex. [Organizatsiya proizvodstva i predprinimatel'skoi deyatel'nosti v APK.]. KubGAU. Krasnodar. (in Russ.)
12. Resolution adopted by the UN General Assembly on September 25, 2015 No. 70/1 «Transforming our world: The 2030 Agenda for Sustainable Development». UNCTAD - Palais des Nations (2015). [updated October 21, 2015; cited June 01, 2022]: Available: https://unctad.org/system/files/official-document/ares70d1_ru.pdf. (in Russ.)

13. Resolution of the Government of the Republic of Kazakhstan dated December 30, 2021 No. 960. On approval of the Concept of development of the agro–industrial complex of the Republic of Kazakhstan for 2021 – 2030. Information and legal system of normative legal acts of the Republic of Kazakhstan "Adilet" (2021). [updated December 30, 2021; cited May 5, 2022]. Available: https://adilet.zan.kz/rus/docs/P2100000960. (in Russ.)
14. Santeramo, F. G. (2022). Circular and green economy: the state-of-the-art. *Heliyon, 8*(4), e09297. https://doi.org/10.1016/j.heliyon.2022.e09297.
15. Sgroi, F., & Sciancalepore, V. D. (2022). Dynamics of structural change in agriculture, transaction cost theory and market efficiency: The case of cultivation contracts between agricultural enterprises and the food industry. *Journal of Agriculture and Food Research, 10,* 100396. https://doi.org/10.1016/j.jafr.2022.100396.
16. Tireuov, K. M., Kerimova, U. K., & Turekulov, S. A. (2020). Efficient functioning of enterprises in agricultural sector of the Republic of Kazakhstan. Problems of AgriMarket. [Ehffektivnost' funktsionirovaniya predpriyatii agrarnogo sektora Respubliki Kazakhstan]. *Problemy agrorynka, 3,* 116-122. (in Russ.)
17. Toop, T. A., Ward, S., Oldfield, T., Hull, M., Kirby, M. E., & Theodorou, M. K. (2017). AgroCycle–developing a circular economy in agriculture. *Energy Procedia, 123*, 76-80. https://doi.org/10.1016/j.egypro.2017.07.269.
18. Tsypkin, YU. A., & Lyukshinov, A. N. (2007). *Management in the agro-industrial complex. [Menedzhment v APK].* Textbook. Kolos. (in Russ.)

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