

ISSN 2518-1483 (Online),
ISSN 2224-5227 (Print)

2018 • 1

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

БАЯНДАМАЛАРЫ

ДОКЛАДЫ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК
РЕСПУБЛИКИ КАЗАХСТАН

REPORTS

OF THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN

ЖУРНАЛ 1944 ЖЫЛДАН ШЫҒА БАСТАҒАН

ЖУРНАЛ ИЗДАЕТСЯ С 1944 г.

PUBLISHED SINCE 1944



Бас редакторы
х.ғ.д., проф., ҚР ҰҒА академигі **М.Ж. Жұрынов**

Редакция алқасы:

Адекенов С.М. проф., академик (Қазақстан) (бас ред. орынбасары)
Величкин В.И. проф., корр.-мүшесі (Ресей)
Вольдемар Вуйцик проф. (Польша)
Гончарук В.В. проф., академик (Украина)
Гордиенко А.И. проф., академик (Белорус)
Дука Г. проф., академик (Молдова)
Илолов М.И. проф., академик (Тәжікстан),
Леска Богуслава проф. (Польша),
Локшин В.Н. проф. чл.-корр. (Қазақстан)
Нараев В.Н. проф. (Ресей)
Неклюдов И.М. проф., академик (Украина)
Нур Изура Удзир проф. (Малайзия)
Перни Стефано проф. (Ұлыбритания)
Потапов В.А. проф. (Украина)
Прокопович Полина проф. (Ұлыбритания)
Омбаев А.М. проф., корр.-мүшесі (Қазақстан)
Өтелбаев М.О. проф., академик (Қазақстан)
Садыбеков М.А. проф., корр.-мүшесі (Қазақстан)
Сатаев М.И. проф., корр.-мүшесі (Қазақстан)
Северский И.В. проф., академик (Қазақстан)
Сикорски Марек проф., (Польша)
Рамазанов Т.С. проф., академик (Қазақстан)
Такибаев Н.Ж. проф., академик (Қазақстан), бас ред. орынбасары
Харин С.Н. проф., академик (Қазақстан)
Чечин Л.М. проф., корр.-мүшесі (Қазақстан)
Харун Парлар проф. (Германия)
Энджун Гао проф. (Қытай)
Эркебаев А.Э. проф., академик (Қырғыстан)

«Қазақстан Республикасы Ұлттық ғылым академиясының баяндамалары»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Меншіктенуші: «Қазақстан Республикасының Ұлттық ғылым академиясы» Республикалық қоғамдық бірлестігі (Алматы қ.)
Қазақстан республикасының Мәдениет пен ақпарат министрлігінің Ақпарат және мұрағат комитетінде 01.06.2006 ж.
берілген №5540-Ж мерзімдік басылым тіркеуіне қойылу туралы куәлік

Мерзімділігі: жылына 6 рет.

Тиражы: 500 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28, 219 бөл., 220, тел.: 272-13-19, 272-13-18,
<http://nauka-nanrk.kz>, reports-science.kz

© Қазақстан Республикасының Ұлттық ғылым академиясы, 2018

Типографияның мекенжайы: «Аруна» ЖК, Алматы қ., Муратбаева көш., 75.

Главный редактор
д.х.н., проф., академик НАН РК **М. Ж. Журинов**

Редакционная коллегия:

Адекенов С.М. проф., академик (Казахстан) (зам. гл. ред.)
Величкин В.И. проф., чл.-корр. (Россия)
Вольдемар Вуйцик проф. (Польша)
Гончарук В.В. проф., академик (Украина)
Гордиенко А.И. проф., академик (Беларусь)
Дука Г. проф., академик (Молдова)
Илолов М.И. проф., академик (Таджикистан),
Леска Богуслава проф. (Польша),
Локшин В.Н. проф. чл.-корр. (Казахстан)
Нараев В.Н. проф. (Россия)
Неклюдов И.М. проф., академик (Украина)
Нур Изура Удзир проф. (Малайзия)
Перни Стефано проф. (Великобритания)
Потапов В.А. проф. (Украина)
Прокопович Полина проф. (Великобритания)
Омбаев А.М. проф., чл.-корр. (Казахстан)
Отелбаев М.О. проф., академик (Казахстан)
Садыбеков М.А. проф., чл.-корр. (Казахстан)
Сатаев М.И. проф., чл.-корр. (Казахстан)
Северский И.В. проф., академик (Казахстан)
Сикорски Марек проф., (Польша)
Рамазанов Т.С. проф., академик (Казахстан)
Такибаев Н.Ж. проф., академик (Казахстан), зам. гл. ред.
Харин С.Н. проф., академик (Казахстан)
Чечин Л.М. проф., чл.-корр. (Казахстан)
Харун Парлар проф. (Германия)
Энджун Гао проф. (Китай)
Эркебаев А.Э. проф., академик (Кыргызстан)

Доклады Национальной академии наук Республики Казахстан»

ISSN 2518-1483 (Online),

ISSN 2224-5227 (Print)

Собственник: Республиканское общественное объединение «Национальная академия наук Республики Казахстан» (г. Алматы)

Свидетельство о постановке на учет периодического печатного издания в Комитете информации и архивов Министерства культуры и информации Республики Казахстан №5540-Ж, выданное 01.06.2006 г.

Периодичность: 6 раз в год.

Тираж: 500 экземпляров

Адрес редакции: 050010, г.Алматы, ул.Шевченко, 28, ком.218-220, тел. 272-13-19, 272-13-18

<http://nauka-nanrk.kz> reports-science.kz

©Национальная академия наук Республики Казахстан, 2018 г.

Адрес типографии: ИП «Аруна», г.Алматы, ул.Муратбаева, 75

E d i t o r i n c h i e fdoctor of chemistry, professor, academician of NAS RK **M.Zh. Zhurinov****E d i t o r i a l b o a r d :****Adekenov S.M.** prof., academician (Kazakhstan) (deputy editor in chief)**Velichkin V.I.** prof., corr. member (Russia)**Voitsik Valdemar** prof. (Poland)**Goncharuk V.V.** prof., academician (Ukraine)**Gordiyenko A.I.** prof., academician (Belarus)**Duka G.** prof., academician (Moldova)**Ilolov M.I.** prof., academician (Tadjikistan),**Leska Boguslava** prof. (Poland),**Lokshin V.N.** prof., corr. member. (Kazakhstan)**Narayev V.N.** prof. (Russia)**Nekludov I.M.** prof., academician (Ukraine)**Nur Izura Udzir** prof. (Malaysia)**Perni Stephano** prof. (Great Britain)**Potapov V.A.** prof. (Ukraine)**Prokopovich Polina** prof. (Great Britain)**Ombayev A.M.** prof., corr. member. (Kazakhstan)**Otelbayv M.O.** prof., academician (Kazakhstan)**Sadybekov M.A.** prof., corr. member. (Kazakhstan)**Satayev M.I.** prof., corr. member. (Kazakhstan)**Severskyi I.V.** prof., academician (Kazakhstan)**Sikorski Marek** prof., (Poland)**Ramazanov T.S.** prof., academician (Kazakhstan)**Takibayev N.Zh.** prof., academician (Kazakhstan), deputy editor in chief**Kharin S.N.** prof., academician (Kazakhstan)**Chechin L.M.** prof., corr. member. (Kazakhstan)**Kharun Parlar** prof. (Germany)**Endzhun Gao** prof. (China)**Erkebayev A.Ye.** prof., academician (Kyrgyzstan)**Reports of the National Academy of Sciences of the Republic of Kazakhstan.****ISSN 2224-5227****ISSN 2518-1483 (Online),****ISSN 2224-5227 (Print)**

Owner: RPA "National Academy of Sciences of the Republic of Kazakhstan" (Almaty)

The certificate of registration of a periodic printed publication in the Committee of Information and Archives of the Ministry of Culture and Information of the Republic of Kazakhstan N 5540-Ж, issued 01.06.2006

Periodicity: 6 times a year

Circulation: 500 copies

Editorial address: 28, Shevchenko str., of.219-220, Almaty, 050010, tel. 272-13-19, 272-13-18,

<http://nauka-nanrk.kz> / reports-science.kz

© National Academy of Sciences of the Republic of Kazakhstan, 2018

Address of printing house: ST "Aruna", 75, Muratbayev str, Almaty

**REPORTS OF THE NATIONAL ACADEMY OF SCIENCES
OF THE REPUBLIC OF KAZAKHSTAN**

ISSN 2224-5227

Volume 1, Number 317 (2018), 97 – 107

UDC 33.336.330.3

A. Uakhitzhanova¹, A. Baidalinova², B. Aimurzina³, A. Daribayeva⁴¹PhD doctoral student JSC Financial Academy;²PhD doctoral student JSC Financial Academy;³Doctor of Economic sciences, associate professor Kazakh University of economics,
Finance and International Trade;⁴Candidate of Economic sciences, associate professor Kazakh University of economics,
Finance and International Trade**FINANCIAL SUPPORT OF THE AGRO-INDUSTRIAL COMPLEX
AS A GUARANTEE OF FOOD SECURITY OF THE REPUBLIC
OF KAZAKHSTAN**

Annotation. This article refers to the need to ensure the country's food security and the dependence of the agro-industrial complex of the Republic of Kazakhstan on the amount of financing. The analysis of the current state of the industry for the period from 2011 to 2015 was carried out, weak and strong sides, opportunities and threats were studied. Attention is given to the sources of financial support for the AIC and their structure. The share of financing of the gross output of agricultural products is presented. The availability of the domestic food market is assessed. The coefficients of food dependence of the Republic of Kazakhstan for 2015 are calculated. The current trends in the development of the industry are being considered, which pose new tasks for state bodies. These tasks require the development of appropriate measures to ensure the production of demand in the markets of competitive agricultural products in the medium term. On the basis of the conducted assessment of the dependence of the industry development on the volumes of financial support to agriculture, it can be concluded that the development of the agricultural sector depends on financing the activities of agribusiness entities and this dependence is high enough to influence the development of the industry. Indicators showing that the country needs to develop an internal market that can limit the import of food and agricultural products is shown. At the same time, it is necessary to direct efforts to expand the range and increase production of locally produced goods, which will contribute to the development of the internal turnover of funds and increase the profitability of rural commodity producers and ensure employment of the population.

Key words: agro-industrial complex, food security, financial security, agriculture, agricultural products, profitability of agricultural producers, sources of financing, investment growth.

The agro-industrial complex (APC) is one of the important sectors of the economy that forms the food and economic security of the country, as well as the labor and settlement capacities of rural areas. The Law "On State Regulation of the Development of the Agro-Industrial Complex and Rural Territories" provides an interpretation of the concept, that is, the agro-industrial complex - a set of sectors of the economy, including the production, collection, storage, transportation, processing and sale of agricultural and fishery products, as well as food industry, related industries and spheres of activity that provide them with modern technologies, technological equipment, money, information and other resources, veterinary and sanitary and phytosanitary security, scientific support and training [1].

S.N. Umirzakov in his article notes that more than 70 branches of the national economy directly or indirectly participate in the creation of the final products of the agro-industrial complex at different stages of production and circulation. The structure of the agro-industrial complex includes only industries that

are technologically and economically interconnected and directly involved both in the production process and in the output of the final product to the consumer. The ratio of industries engaged in the production of food products and direct consumer goods is the branch structure of the agro-industrial complex [2].

As shown by NA Umbetaliev, the socio-economic situation of the Kazakh agrarian sector, despite measures taken, remains difficult [3].

In coordination with R. Dulambayev, we also believe that the goal of the state policy for development of the agrarian sector today is to concentrate on economic modernization and the introduction of innovative programs [4].

In A. Zh. Rakhimzhanova's article is written that the development of the agro-industrial complex of Kazakhstan in recent years has shown positive results, but with the growing influence of external threats, the preservation of internal risks, the emergence of the prospects of the world agro-food market, it is necessary to optimize the measures of state support, stimulate processes of integration and cooperation. In agricultural production, and diversify production in accordance with natural, climatic and socio-economic factors [5].

According to A. P. Zinchenko, relevance does not lose the topic of reproduction problem in agriculture in Russia after the collapse of the union [6].

Obolentsev I. in his article argues that Russia's agriculture should become a permanent priority of state policy as one of the priority areas [7].

In his own article, V. F. Bashmachkov cited examples of Asian countries in the basis of structure, where were large landowning commodity farms, in symbiosis with where small peasant farms of a consumer nature worked. Now the emphasis is on development of family-type farms, which enabled them to increase agricultural production and provide the population with food [8].

For Kazakhstan, the problem of strengthening national sovereignty and territorial integrity, forming an effectively functioning system of national security, including interconnected subsystems of military, information, public, environmental, economic and food security is very urgent. In this regard, the study of organizational and economic mechanism of the economic and food security systems of Republic of Kazakhstan, as well as the development of recommendations for improving the management system of the national economy and its structural component - the agro-industrial complex at the stage of transition of the Kazakh economy to sustainable development become especially urgent [9].

When forming an agrarian policy, it is impossible not to take into consideration the global trends in development of agriculture in developed countries. In most countries of the world, support for agriculture is recognized as a national priority, and effective systems of state financial regulation are implemented. In recent years, developed countries have been paying increased attention to the problems of their own food security. Every year, funds allocated for financial support for agriculture are increasing. The experience of developed countries in the field of financial support of the national economy and creation of new competitive industries, including the agro-industrial complex, deserves a lot of attention. Each country chooses its own way of regulating the economy, developing and determining for itself the most optimal forms and methods [10].

Agriculture in Kazakhstan is one of the most important branches of the economy, which allows almost completely to ensure food security, as well as export significant amounts of agricultural products abroad. The share of agriculture in the GDP of Kazakhstan for 2011-2015. varies insignificantly and is 8%.

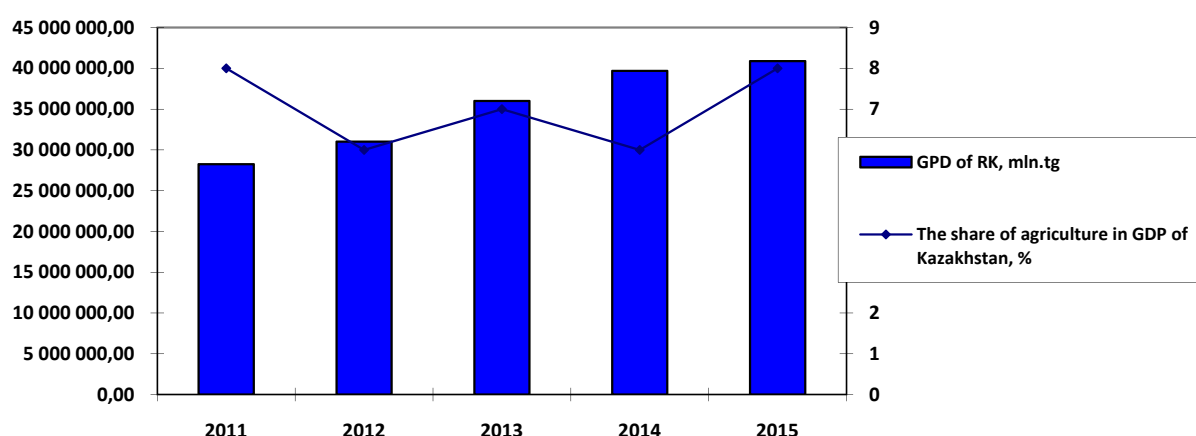


Figure 1- Dynamics of the share of agriculture in the GDP of the Republic of Kazakhstan in the period from 2011 to 2015, in% [11]

In 2015, the gross output of agriculture amounted to 3.3 trillion. KZT, which in real terms is 21.6% higher than in 2011. In the gross harvest there is a high share of production of personal subsidiary plots. About 80% of agricultural products produced in Kazakhstan are sold as raw materials, without processing, and finished products have weak competitiveness.

The average annual growth rates of food production in general do not keep pace with the growth rates of consumption and income of the population, as a result of which the free niche in the market is filled by imports and its share in domestic consumption remains very significant. Gross output of food production in 2015 amounted to 1.1 trillion. KZT, which in real terms is 13% higher than in 2011. The main share in the structure of food production is occupied by the grain processing industry (22.3%), (16.7%), bread and bakery (15%), meat processing (13.6%), fruit and vegetable (7.6%), fat and oil (7.9%) and other industries (16.9%). In total, production of food products amounted to KZT1,122,041.4 million [12].

In general, under utilization of an export potential of agriculture, a high share of imports of processed products led to a negative balance in foreign trade in food products - minus 1.3 billion US dollars. In rural areas, agricultural products are available in sufficient quantities. At the same time, processing companies are experiencing a shortage of these products. The main problem is the lack of infrastructure for purchase of products from agricultural producers and its further promotion to the sales markets, including enterprises for processing it. Solving this problem requires an integrated approach involving the potential of cooperation of personal subsidiary and small peasant farms [13].

Among the strengths of Kazakhstan's agro-industrial complex, it should be noted that Kazakhstan occupies the ninth place in the world in terms of area; In terms of arable land per capita, Kazakhstan ranks second in the world; Kazakhstan is one of the largest exporters of grain and flour; the large rural population (43% of the total population), a high proportion of the employed; large potential demand for food products of CIS and Central Asian markets; constant growth of the gross product of the agroindustrial complex; high potential for production and export of organic products. Weak aspects of the development of the agroindustrial complex are: a low share in the country's GDP; low level of implementation of research and development work; insufficient level of veterinary and food safety; high capital intensity; long payback period; dependence on natural and climatic conditions; low labor productivity; low profitability of SHPP. [14].

Plant cultivation preserves the monoculture of wheat, its sown areas occupy 57-60% with a scientifically justified norm of 45%. As a result, according to statistics, 2-3 million tons of wheat are accumulated annually in transitional reserves. This volume, on the one hand, puts pressure on the market,

reducing the price of the product. On the other hand, there is some pressure on the budget - the need for subsidies in the declared areas. At the same time, due to the lack of production of barley, oilseeds, corn, oats and sugar beet, there is a shortage of raw materials for the production of mixed fodders and products with high added value. In addition, due to the low level of application of mineral fertilizers (11% of the normative) and varietal seeds (3% of all sown areas), there is a decline in the quality of domestic crop production. The solution of these problems lies in the plane of stimulating the diversification of cultivated areas, increasing the use of fertilizers and varietal seeds. [15].

Kazakhstan almost fully meets its domestic needs for livestock products - in meat and milk. Moreover, for lamb, beef, pork, there is potential for increasing exports. The exception is poultry and fish, for which the share of imports is 54% and 67%. In addition, agricultural producers are experiencing a shortage of raw materials of the appropriate quality. The productivity of agricultural animals and birds remains low. The main reasons for this circumstance are a low proportion of breeding animals and birds, a lack of a country feed balance, a low level of application of mixed fodders, and a lack of use of pasture potential.

Low rates of growth in labor productivity in the industry are associated with a high level of wear (54-88%) with low annual rates of renewal by main types of agricultural machinery and equipment (1-2%). Terms of operation of a significant proportion of equipment exceed the normative by 10-15 years. Due to these reasons, the level of technical serviceability of machines during the field works is reduced to 65-75% with an acceptable level of 85-95%. This situation has arisen as a result of the priority direction in recent years of state measures support for leasing large agricultural producers to purchase expensive equipment and . As a result, the acquisition of inexpensive equipment for most small and medium-sized agricultural enterprises became inaccessible.

A significant proportion of agribusiness entities do not have access to credit resources, due to a lack of proper liquid collateral and an unreliable financial condition, especially this issue is relevant for small and medium-sized entities of the agro-industrial complex. In the insurance system, a negative role is played by the OVS, whose activities nullify insurance as a financial tool to control the effective production and protection of the property interests of the SSP. The subsidy policy does not fully stimulate the growth of production efficiency in the agro-industrial complex.

The trade and logistics infrastructure of the agricultural sector is poorly developed. The rise in price of goods from "farm to table" reaches 100% or more. As a result, high price fluctuations occur during off-season, the inability to form large lots and ensure the continuous supply of agricultural and food products. Thus, the above tendencies put new tasks before the state bodies. They require development of appropriate measures to ensure the production of competitive products of the agro-industrial complex in demand in markets for the medium term. At the present stage of development of Kazakhstan, when the state has taken a course in the number of the most economically developed countries of the world, the biggest and most important task is to raise the agrarian sector of the economy to a qualitatively new level of development, such as agriculture that allows ensuring the country's food security. During the period from 2011 to 2015, state support programs were implemented, such as the Business Road Map 2020, Performance 2020, Agribusiness 2020. In 2015, there is a significant increase in the share of agriculture in GDP, due to a sharp decline in exports in nominal terms due to fluctuations in the national currency rate [16].

One of the problems of market regulation of the economy is the implementation of financial support for the agro-industrial complex. The problem is formed by the specifics of the AIC, i.e. high riskiness of the industry due to the large gap between the processes: investing and obtaining finished products. Thus, it becomes necessary to study financing of the agro-industrial complex, especially in the context of ensuring country's food security. The structure and sources of financing of agriculture in the Republic of Kazakhstan in the dynamics are presented in Table 1.

Table 1 - Sources of capital funding of agriculture in the period from 2011 to 2015

Years	Total investments		Budget resources		Own funds		Bank loans		Other sources	
	million tenge	Ud.the weight, %	Million tenge	Ud.the weight, %	Million tenge	Ud. the weight, %	Million tenge	Ud. the weight, %	Million tenge	Ud. the weight, %
2011	109423,5	100	2265,9	2,1	80090,4	73,1	-	-	27067,2	24,7
2012	133944,4	100	792,3	0,5	103564,4	77,3	-	-	29587,7	22,1
2013	139626,7	100	2976,1	2,1	105754,7	75,7	6180,8	4,4	24715,1	17,7
2014	173208,5	100	2518,0	1,4	132303,8	76,3	10086,2	5,8	28372,5	16,3
2015	163907,7	100	109,6	0,1	134073,2	81,7	5609,8	3,4	24115,1	14,7

Note - calculated by the authors on the basis of data from the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan

In the structure of sources of financing of agriculture, the main share is occupied by own resources, in addition, by 5 years there has been a tendency to increase the share of own means of financing. There is a decrease in the share of other sources of financing, despite the general picture of growth in the volume of investment in agriculture, and the volumes of bank lending are insignificant.

The share of annual government subsidies is extremely low and tends to decrease. According to the Committee on Statistics of the Republic of Kazakhstan in 2015, state funds allocated from the republican and local budgets amounted to about 109.6 million tenge or 0.1% of the total investment. The volume of annual investments is increasing, with the exception of 2015, where the reduction was 3.6%. In 2015, agriculture received an investment of about 164.1 billion tenge. [12]

In comparison with other branches of the republic, agriculture in Kazakhstan is profitable, although in different periods the values of this indicator are uneven. At the same time, the profitability of the crop sector, the average annual value of which is about 27%, is much higher than in the livestock sector, where profitability varies at a level of 14% for the period from 2010 to 2014.

In our opinion, the key to the structure of the agricultural sector is the development of agriculture, livestock and crop production represented, as they allow for the production of agricultural raw materials, its safety and recycling. We calculate the share of funding in the gross output of agriculture in the context of 5 years.

Table 2 - Share of financing in the gross output of agriculture of the Republic of Kazakhstan in the period from 2011 to 2015

Years	The volume of financing of crop and livestock production, mln. tenge	The gross output of crops and livestock in agricultural enterprises, mln. tenge	The share of funding in the gross output of crop and livestock production, %
2011	109,423.5	664,554.4	16.4
2012	133,944.4	389,464.2	34.4
2013	139,626.7	563,241.3	24.7
2014	173,208.5	576,372.9	30.1
2015	163,907.7	668,552.6	24.5

Note - Calculate the authors on the basis of the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan

The share of financing of the gross output of agriculture is quite high is 26.1% on average, this indicator shows the release of the dependence of agricultural production on funding.

Based on the analysis carried out between domestic investments and the gross output of agricultural products (services), a correlation is observed. The correlation analysis was conducted using the official website of the Committee of Statistics of the Ministry of National Economy of the Republic of Kazakhstan, namely using the Taldau information and analytical system. Coefficient of correlation was 0.85.

This indicator is quite high for humanities, and characterizes a rather high dependence between volumes of domestic investment and grosses output of agricultural products. Thus, on the strength of the evaluation of development of this branch from the volume of financial support for agriculture, we can make a conclusion, that development of agricultural sector depends from the financing of the activities of the subjects of the agro-industrial complex, and this dependence is high enough to influence the development of the industry.

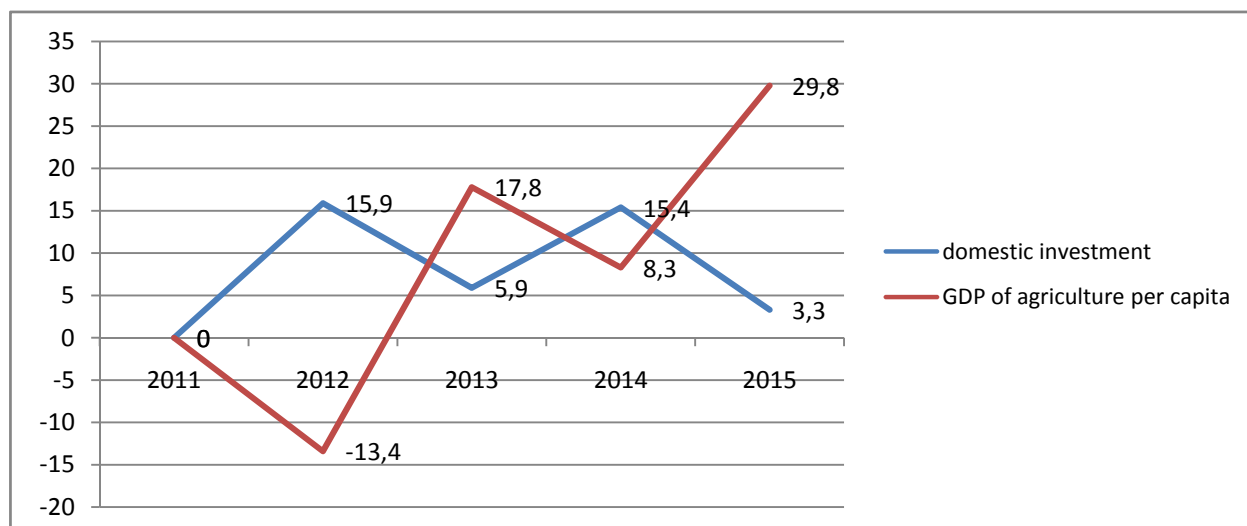


Figure 2 - Dependence between domestic investments of the Republic of Kazakhstan and gross output of agricultural products (services) per capita [15].

Economic security is traditionally considered as the most important qualitative characteristic of the economic system, which determines her ability to support normal conditions of vital activity of population sustainable provision of resources for the development of the national economy, and also the realization of national-state interests.

One of the main directions of ensuring the economic security of the state is ensuring food security. However, in many works dealing with problems of economic security, food security is not even included in the components of national security. It can also be said that there is no multilateral definition of food security with well-defined quantitative parameters. In the economic literature, food security is a relatively new economic category. In 1974, the UN General Assembly approved the "International Commitments to Ensure Food Security in the World" developed on the basis of the recommendations of FAO, where there is a definition: "Food security is a system of measures to ensure the production and satisfaction of the quantitative and qualitative needs of the country's population in highly competitive domestic food products of a wide range" [17].

According to FAO standards, the country's food security is ensured if it produces about 80% of consumed food, or when the country specializes in the production of a particular type of food, the export of which allows it to receive a surplus of the foreign trade balance for food i.e. the volumes of world trade largely depend on the realization of this commodity and the country can influence the world market. Food security is considered to be secured if, in addition to producing the required amount of food, also there is an additional output, which made in the amount of the replenished insurance stock at the level of the developed countries of the world (20%). In the event that certain types of food are not produced in the country or their production is limited, food security in them is ensured by purchasing in other countries. At the same time, it is important to prevent the emergence of food, political or other dependence on exporting countries with regard to missing food [18].

As can be seen, from the information in Table 3, almost all types of agricultural products, domestic needs are fully provided. Problematic are the production of vegetables, potatoes, fruit and berry crops and vineyards, sugar beet, fresh, chilled and frozen fish, livestock products. The availability of these types of agricultural products ranges from 43% to 98% in 2015.

In 2015, the sown area of potatoes was 190 thousand hectares, the gross harvest - 3 521.0 thousand tons, which is more than the level of 2011 by 3.4% and 14.5%, respectively. Internal demand of the republic is provided by 98% due to large agricultural producers. At the same time, potatoes of industrial production completely go to the markets of cities, processing, seeds and for export. The production capacities of potato processing enterprises are loaded by 23%. In 2015, the sown area of sugar beet was 9.2 thousand hectares, which is 49% less than in 2011. Over the period 2011-2015, the average annual sugar beet production amounted to 122.9 thousand tons, which is 99.5 thousand tons or 45% less compared to 2006-2010. Due to the inadequate volumes of sugar beet production, an average of 255,000

tons of cane sugar is imported annually to the republic. In 2015, the share of sugar production from imported raw sugar cane in domestic consumption was 55%, the share of imports of finished sugar - 42%. Production capacities of existing sugar mills are loaded by 37.1%. In 2015, the area of fruit and berry crops and vineyards amounted to 57.1 thousand hectares, gross harvest - 280.3 thousand tons, which is more than in 2011 by 4.6% and 20.1%, respectively. This volume allows to meet the demand of the population of the republic by 43%, the deficit is covered by import products. No garden areas are identified, with reference to the regions.

Table 3 - Provision of the domestic market with food products

Years	Domestic production	Import	Export	Demand by the population	Provision of domestic production, in%
1	2	3	4	5	6
Refined products, thousand tons					
2011	5296,7	597,6	2010,13	3884,17	136
2012	5469,7	624,3	2364,59	3729,41	147
2013	5687,3	511,1	2007,33	4191,07	136
2014	5841,6	560,1	2000,9	4400,8	133
2015	5565,6	623,1	1955,54	4233,16	131
Cereals thousand tons					
2011	26 547,10	94,10	3 493,20	23 148,00	115
2012	12 426,40	88,40	7 880,40	4 634,40	268
2013	17 772,30	42,60	5 330,40	12 484,50	142
2014	16 726,90	56,20	5 008,00	11 775,10	142
2015	17 910,80	129,60	4 298,30	13 742,01	130
Oilseeds, thousands tons					
2011	2 257,00	19,40	340,90	1 935,50	117
2012	1 948,90	193,20	879,50	1 262,60	154
2013	2 985,70	64,20	650,00	2 399,90	124
2014	3 075,20	71,00	1 122,70	2 023,50	152
2015	3 080,40	50,20	1 101,00	2 029,60	152
Vegetables, thousands tons					
2011	2 877,7	292,2	24,6	3 145,3	91
2012	3 061,5	281,9	65,9	3 277,5	93
2013	3 241,5	517,1	39,5	3 719,1	87
2014	3 469,9	445,8	42,6	3 873,1	90
2015	3 564,9	438,9	48,8	3 955,0	90
Potatoes, thousand tons					
2011	3 076,10	165,8	1,3	3 240,60	95
2012	3 126,40	78,7	5,1	3 200	98
2013	3 343,60	112,3	8,4	3 447,50	97
2014	3 410,50	57,4	6,3	3 461,60	99
2015	3 521,00	78,4	2,9	3 596,50	98
Fruit and berry crops and vineyards, thousand tons					
2011	233,3	440,4	4,3	669,4	35
2012	276,1	510,8	5,4	781,5	35
2013	280,5	407,3	3,1	684,7	41
2014	303,3	432,4	6,9	728,8	42
2015	280,3	371	4,7	646,6	43
Sugar beet, thousand tons					
2011	200,4	224,0	-	424,4	47
2012	151,6	135,3	-	286,9	53
2013	64,6	362,2	-	426,8	15
2014	23,9	326,2	-	350,1	7
2015	174,1	226,0	-	400,1	44
Cotton, thousand tons					
2011	336,0	6,0	82,6	259,4	130
2012	379,7	14,9	150,0	244,6	155

Продолжение таблицы 3					
1	2	3	4	5	6
2013	396,7	0,03	194,6	202,2	196
2014	320,7	2,0	47,9	274,8	117
2015	273,9	9,1	112,6	170,5	161
Fresh, chilled and frozen fish, tons					
2011	35754	61998	25425,5	72326,5	49
2012	37365	61426	25356	73435	51
2013	35503	59094,7	24092,2	70505,5	50
2014	37547	48432,7	24798,9	61180,4	61
2015	42219	52234,3	24879,4	69573,7	61
Livestock products, thousands tons					
2011	933,2	184,77	0,528	1117,6	84
2012	927,9	231,2	1,5007	1157,8	80
2013	864,7	210	1,6	1073,1	81
2014	892,7	189,2	12,8	1069,1	84
2015	903,3	183,1	16,2	1070,2	84
Egg of chicken, mln.					
2011	3718,4	56,8	0,126	3775,2	98
2012	3673,4	39,2	0,303	3712,4	99
2013	3 895,9	42,9	0	3 938,8	99
2014	4 272,5	43,2	50,2	4 265,5	100
2015	4 719,4	34,8	112,4	4 641,8	102
Note - calculated by the authors on the basis of data from the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan					

There is a threat of loss of the gene pool of the wild apple tree - the progenitor of all cultivars due to poor accounting, control and penetration of especially dangerous pests. The workload of enterprises for processing fruits and vegetables was 27%. The domestic market for fresh, chilled and frozen fish is estimated at 70,000 tons. The share of imports in domestic consumption is 75%. The capacity of fish processing plants for fish processing is 64 thousand tons per year. The workload is 43%. Placing of processing capacities is confined to large fishing reservoirs. The bulk of the output falls on the Atyrau and Kyzylorda oblasts [19].

The production of raw cotton is concentrated in the South-Kazakhstan region. As part of the measures taken to diversify the period from 2011 to 2015, the reduction of cotton planted areas amounted to 61.3 thousand hectares or 38.2%, the gross harvest of raw cotton decreased by 62.1 thousand tonnes or 18.5% yield of 26 centner / ha.

As of January 1, 2016, the production of all types of meat amounted to 931.0 thousand tonnes, a decrease of 0.9% compared to 2011. In the structure of consumption, by the end of 2015, the share of beef imports was 3.7%, pork - 3.9%, horse meat - 3%, mutton - 0.01%, which indicates a high export potential of these products. Despite the growth in poultry meat production, the degree of import dependence on this product remains high [15]. To calculate the dependence of Kazakhstan on imports and imported food products from other regions, we calculate the coefficient of food dependence (K):

$$K = I / D, \quad (1)$$

where I - the volume of imports of these products;

D is the volume of the demand for this product.

To calculate the dependence, we used statistical data on the volume of imported basic food products, including imports, and the republic's demand for this product. At the same time, four levels of food dependence if the coefficient of food dependence is in the range from 0.1 to 0.2, then the level of food dependence is safe;

- If the coefficient of food dependence is from 0.2 to 0.5, then the level of food dependence is proposed to be called a threshold

- If the coefficient of food dependence is from 0.5 to 0.6, then the level of dependence is dangerous
- If the coefficient of food dependence is higher than 0.6, then the level of dependence is critical [20].

Table 4- Coefficients of food dependence of the Republic of Kazakhstan for 2015

Name	Import	Volume of demand	Coefficient of food dependence
Refined products, thousand tons	623,1	4233,16	0,15
Cereals thousand tons	129,60	13 742,01	0,01
Oilseeds, thousands tons	50,20	2 029,60	0,02
Vegetables, thousand tons	438,9	3 955,0	0,11
Potatoes, thousand tons	78,4	3 596,50	0,02
Fruit and berry crops and vineyards, thousand tons	371	646,6	0,57
Sugar beet, thousand tons	226,0	400,1	0,56
Cotton, thousand tons	9,1	170,5	0,05
Fresh, chilled and frozen fish, tons	52234,3	69573,7	0,75
Livestock products	183,1	1070,2	0,17
Egg of chicken, mln.	34,8	4 641,8	0,01

Note - calculated by the authors on the basis of data from the Committee on Statistics of the Ministry of National Economy of the Republic of Kazakhstan.

Consequently, in the Republic of Kazakhstan there is a high degree of dependence of the region on imported food products on three of the considered indicators (fruit and berry crops and vineyards, sugar beet, fresh, chilled and frozen fish) and approaches a critical value (1.0). Dependence of the region on a safe level is found in the following products: cereals, olive crops, potatoes, chicken eggs. The dependence of the region on other indicators can be considered average or threshold. All these phenomena and indicators indicate that the country needs to develop an internal market that can limit the import of food and agricultural products. At the same time, it is necessary to direct efforts to expand the range and increase production of locally produced goods, which will contribute to the development of internal turnover of funds and increase the profitability of rural commodity producers and to ensure employment of the population.

Thus, following the results of the conducted research, the following conclusions are formed:

- in the light of the country's integration into the world economic space, as well as the historical aspect of the development of the agro-industrial complex, is one of the most important tasks facing the Government. Moreover, one can not ignore the fact that the agricultural sector plays an important role in ensuring the country's food security, as it forms raw materials, processes and ensures its safety for further processing.

- taking into account the specifics of the development of the agro-industrial sector, its dependence on natural and climatic conditions and the large production gap between financing and obtaining finished products, it can be said that, on the basis of the study, there is a correlation between the gross output of agricultural products and the amount of financing. The correlation coefficient was 0.85, which is a sufficiently high index, and the share of financing in gross output is very high.

- in the Republic of Kazakhstan there is a high degree of dependence of the region on imported food products on three of the considered indicators (fruit and berry crops and vineyards, sugar beet, fresh, chilled and frozen fish) and approaches a critical value (1.0). Dependence of the region on a safe level is on the following products: cereals, olive crops, potatoes, chicken eggs. The dependence of the region on other indicators can be considered average or threshold.

All these phenomena and indicators indicate that the country needs to develop an internal market that can limit the import of food and agricultural products. At the same time, it is necessary to direct efforts to expand the range and increase production of locally produced goods, which will contribute to the development of internal turnover of funds and increase the profitability of rural commodity producers and to ensure employment of the population.

REFERENCES

- [1] The Law of the Republic of Kazakhstan "On State Regulation of the Development of the Agro-Industrial Complex and Rural Territories" of July 8, **2005** No. 66.
- [2] S.Y. Umirzakov Peculiarities of the formation and development of the agro-industrial complex in the region., // Scientific Notes **2009** № 3 Izd. NSUEU.
- [3] N.A. Umbetaliev Agro-industrial complex of the Republic of Kazakhstan: development strategy and prospects. Almaty. // Bulletin of KazEU, **2011**.
- [4] A.Zh. Rakhimzhanova. The state and problems of the development of the agroindustrial complex of Kazakhstan. // Economy and Power Engineering, **2011**. Kazakhstan Institute for Strategic Studies under the President of the Republic of Kazakhstan.
- [5] A.Zinchenko Economic and statistical analysis of agriculture. Sat. Art. Moscow: Publishing house RGAU-MAHA, **2012**. 457 p.
- [6] Obolentsev I. Agriculture should become a permanent priority of the state policy // Industrialist of Russia. **2007**. № 1.
- [7] Bashmachkov V.F. The plight of agriculture in Asian countries. // Economics of agricultural and processing enterprises, **2012**.
- [8] Kenikstul V., Konstantinovich V. To improve the economic vertical of management of the agro-industrial complex. // AIC: economy, management. **2008**, № 7, 18-21 with.
- [9] AA Kaygorodtsev Economic and food security of Kazakhstan (issues of theory, methodology, practice). Scientific monograph / A.A. Kaygorodtsev. - Ust-Kamenogorsk: Media Alliance, **2006**. 384 p. ISBN 9965-704-87-2
- [10] Aimurzina B.T. Abstract for the degree of Doctor of Economic Sciences. "Financial support of activities of enterprises of the agro-industrial complex of the Republic of Kazakhstan: state, financing and regulation mechanisms", **2010**.
- [11] Reports of the Ministry of National Economy of the Republic of Kazakhstan.
- [12] Committee on Statistics of the Ministry of National Economy of the Republic
- [13] Kitiyeva MI, Kumykova A.Kh., Guleiev I.Yu. Increasing the efficiency of resource use in agriculture in the region. // Economics of agricultural and processing enterprises. **2008**, No. 3. 48-51 p.
- [14] Draft Decree of the President of the Republic of Kazakhstan "On Approval of the State Program for the Development of the Agro-Industrial Complex of the Republic of Kazakhstan for 2017 - 2021"
- [15] Reports of the Ministry of Agriculture of the Republic of Kazakhstan
- [16] Polulyak Yu.G., Adadimova L.Yu., Bryzgalin T.V. Model of sustainable development of agricultural organization and assessment of risk situations. // Problems of the agricultural market №3, **2015**.
- [17] The State of Food Insecurity in the World, **2015**. FAO Recommendations "International Commitments to Ensure Food Security in the World"
- [18] AK Dzhusibalieva Food security is the most important direction of agrarian policy. Materials of the XI International Scientific and Practical Conference, Prague, Czechoslovakia, Volume 3, 27.10.2015-05.11.11.2015.
- [19] Suvorova S.S., Toslunova E.I. Agro-industrial complex: concept, formation and development. International Scientific and Research Journal. Series of economics. April **2016**.
- [20] D.G. Badmaeva, I.V. Panenshtil Methods of analysis of investment attractiveness of agricultural enterprises. Collection of scientific works of the international scientific and practical conference of faculty "Agroindustrial complex of Russia: past, present, future", Ch 2 // St. Petersburg., **2015**. 357 c.

А. Уахитжанова¹, А. Байдалинова², Б. Аймурзина³, А. Дарибаева⁴

¹PhD докторанты, «Қаржы академиясі» АҚ;

²PhD докторанты, «Қаржы академиясі» АҚ;

³Э.ғ.д., асс.профессор, Қазақ экономика, қаржы және халықаралық университеті;

⁴Э.ғ.к., асс.профессор, Қазақ экономика, қаржы және халықаралық университеті

**АГРОӨНЕРКӘСІПТІК КЕШЕНДІ ҚАРЖЫЛЫҚ ҚАМТАМАСЫЗ ЕТУ ҚАЗАҚСТАН
РЕСПУБЛИКАСЫ АЗЫҚ-ТҮЛІК ҚАУІПСІЗДІГІНІҢ КЕПІЛІ РЕТІНДЕ**

Аннотация. Аталмыш мақалада елдің азық-түлік қауіпсіздігін қамтамасыз ету қажеттігі және Қазақстан Республикасы ауылшаруашылық кешенінің қаржыландыру көлеміне тәуелділігі туралы сөз жүреді. 2011-2015 жылдар аралығындағы саланың ағымдағы жағдайына талдау жүргізілген, әлсіз және күшті жақтары, мүмкіндіктері мен қатерлері зерттелген. АӨК қаржылық қамсыздандырудың қайнар көздері мен олардың құрылымына назар аударылған. Ауыл шаруашылығы өнімі жалпы өндірісіндегі қаржыландырудың үлесі көрсетілген. Қазақстан Республикасының 2015 жылға азық-түлік тәуелділігі коэффициенттері есептелген. Мемлекеттік органдар алдына жаңа міндеттер қоятын сала дамуының ағымдағы үрдістері қарастырылған. Бұл міндеттер орташа мерзімде нарықта талап етілген бәсекеге қабілетті АӨК өнімдерінің өндірісін қамтамасыз етуге мүмкіндік беретін тиісті шараларды әзірлеуді қажет етеді. Жүргізілген талдау негізінде АӨК субъектілерінің қызметін қаржыландыруға ауылшаруашылық саласының дамуы тәуелді, ал бұл

тәуелділік саланың дамуы үшін шамадан тым жоғары деген қорытынды жасауға болады. Республикада азық-түлік тауарлары мен ауылшаруашылық өнімдерін шеттен әкелуді шектеуге қабілетті ішкі нарықты дамыту қажеттігін дәлелдейтін көрсеткіштер анықталған. Сонымен қатар, жергілікті өндіріс тауарларын өндіруді жоғарылату және оның ассортиментін кеңейтуге күш салу қажет, ал бұл өз кезегінде қаражаттардың ішкі айналымының дамуына және ауылшаруашылық тауар өндірушілердің табыстылығын жоғарылатуға, халық жұмысбастылығын қамтамасыз етуге мүмкіндік береді.

Тірек сөздер: агроөнеркәсіп кешені, азық-түлік қауіпсіздігі, қаржылық қамтамасыз ету, ауыл шаруашылығы, ауылшаруашылық өнімі, ауылшаруашылық өндірушілердің тиімділігі, қаржыландыру көздері, инвестиция өсімі

А. Уахитжанова¹, А. Байдалинова², Б.Аймурзина³, А.Дарибаева⁴

¹Докторант PhD, АО «Финансовая академия»;

²Докторант PhD, АО «Финансовая академия»;

³Д.э.н., асс.профессор Казахский университет экономики, финансов и международной торговли;

⁴К.э.н., асс.профессор, Казахский университет экономики, финансов и международной торговли

ФИНАНСОВОЕ ОБЕСПЕЧЕНИЕ АГРОПРОМЫШЛЕННОГО КОМПЛЕКСА КАК ЗАЛОГ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ РЕСПУБЛИКИ КАЗАХСТАН

Аннотация. В данной статье говорится о необходимости обеспечения продовольственной безопасности страны и зависимости агропромышленного комплекса Республики Казахстан от объемов финансирования. Проведен анализ текущего состояния отрасли за период с 2011 по 2015 год, изучены слабые и сильные стороны, возможности и угрозы. Уделено внимание источникам финансового обеспечения АПК и их структуре. Представлена доля финансирования в валовом выпуске продукции сельского хозяйства. Оценена обеспеченность внутреннего рынка продовольственными товарами. Рассчитаны коэффициенты продовольственной зависимости Республики Казахстан на 2015 год. Рассмотрены текущие тенденции развития отрасли, которые ставят перед государственными органами новые задачи. Эти задачи требуют разработку соответствующих мер, позволяющих обеспечить производство востребованной на рынках конкурентоспособной продукции АПК на среднесрочную перспективу. На основании проведенного анализа проведенного при написании статьи, зависимости развития отрасли от объемов финансового обеспечения сельского хозяйства можно сделать вывод о том, что развитие сельскохозяйственной отрасли зависит от финансирования деятельности субъектов АПК и эта зависимость достаточно высока, что бы влиять на развитие отрасли. Выявлены показатели свидетельствующие о том, что в республике необходимо развивать внутренний рынок, способный ограничить ввоз продовольственных товаров и продукции сельского хозяйства. При этом необходимо направить усилия на расширение ассортимента и увеличение производства товаров местного производства, что будет способствовать развитию внутреннего оборота средств и повышению доходности сельских товаропроизводителей, обеспечению занятости населения.

Ключевые слова: агропромышленный комплекс, продовольственная безопасность, финансовое обеспечение, сельское хозяйство, сельскохозяйственная продукция, рентабельность сельхозпроизводителей, источники финансирования, прирост инвестиций.

МАЗМҰНЫ

Химия

(ағылшын тілінде)

<i>Lomolino G., Алибеков R.S., Уразбаева К.А., Zampieri A., Bottin R., Vegro M., Crapisi A. SOLANUM TUBEROSUM</i> протеин экстрактінің көбігін зерттеу: ақуыз, газ және полисахаридтер әрекеттесу.....	5
--	---

Техникалық ғылымдар

(ағылшын тілінде)

<i>Генбач А.А., Бондарцев Д.Ю.</i> Боктың қозғалысындағы бірлігі маңызды құрылымының жеке кезінде.....	14
<i>Метакса Г.П., Метакса А.С.</i> Екібастұздық күн саңылаулары - болжау және шындық (ағылшын тілінде).....	21

Жер туралы ғылым

(ағылшын тілінде)

<i>Исмаилова А.А.</i> Қарашірінділі көмірден түрлі мақсатты препараттар алу жолдары.....	26
--	----

Физика

(ағылшын тілінде)

<i>Саймбетов А.К., Нұрғалиев М.К., Құттыбай Н.Б., Налибаев Е.Д., Досымбетова Г.Б., Сванбаев Е.А., Түлкібайұлы Е., Ғылымжанова М.М.</i> Мобильді фотоэлектрлік станцияның зертханалық үлгісін дайындау және параметрлерін есептеу.....	31
---	----

Медицина

(ағылшын тілінде)

<i>Локин В.Н., Хорошилова И.Г., Қуандықов Е.У.</i> Ерлі-зайыпты жұптарды қрт бағдарламаларында генетикалық скринингтеудегі дербестендірілген тәсілдеме (Әдебиеттік шолу).....	37
---	----

Қоғамдық ғылымдар

(ағылшын тілінде)

<i>Күшижан Н.В., Әлиев О.Ж.</i> ЕАЭС экономиканың сандық трансформациясы.....	42
<i>Омарханова Ж.М., Мухамбетова З.С., Матаева Б.Т.</i> Ет малшаруашылығы өндірісінің экономикалық тиімділігі...	48
<i>Шадинова Г.А., Джаппарова Р.Т., Яхияева Г.Ш.</i> Қазақстандағы әйел құқықтарының әлеуметтік қыры (отбасы)....	53
<i>Сембиева Л.М., Бекбенбетова Б.Б., Бейсенова Л.З.</i> ЕАЭЖ елдерінде монетарлық саясатты үйлестірудің қажеттілігі.....	60
<i>Жұмабекова Г.Ж., Аманова Г.Д.</i> Ауылшаруашылығы ұйымдарының ішкі бақылау жүйесін ұйымдастыру.....	66
<i>Ибраимова С., Сатымбекова К., Керімбек Ф., Есболова А., Иманбаева З.</i> Қазақстан республикасындағы шағын бизнесті дамыту стратегиясы дағдарыс кезеңінде.....	70
<i>Кайырбаева А.Е., Белгібаев К.М., Бельгібаева Ж.Ж.</i> Қазақстанда тұрғындармен ет және ет өнімдердің тұтыну тенденциялары.....	80
<i>Мауина Ғ.А., Нурпейсова А.А., Дюсембаева Л.Қ., Құрманова Д.С.</i> Инновациялық өнімді құру процесін онтайландырудың математикалық моделін дайындау.....	84
<i>Сабирова Р.К., Мугауина Р.У., Гайсина А.Ж.</i> Аймақтың инновациялық экономикасында дамуды жағдайды қалыптастыру.....	88
<i>Тастанова З.Т., Торланбаева К.У.</i> Қазақстандағы исламға қатысты Ресейдің тарапынан жүргізілген отаршылық саясаты (Орынбор мемлекеттік мұрағатының материалдары бойынша).....	91
<i>Уахитжанова А., Байдалинова А., Аймурзина Б., Дарибаева А.</i> Агроөнеркәсіптік кешенді қаржылық қамтамасыз ету Қазақстан Республикасы азық-түлік қауіпсіздігінің кепілі ретінде.....	97

Техникалық ғылымдар

(орыс тілінде)

<i>Генбач А.А., Бондарцев Д.Ю.</i> Боктың қозғалысындағы бірлігі маңызды құрылымының жеке кезінде.....	108
<i>Метакса Г.П., Метакса А.С.</i> Екібастұздық күн саңылаулары - болжау және шындық (ағылшын тілінде).....	115

Қоғамдық ғылымдар

(қазақ тілінде)

<i>Шадинова Г.А., Джаппарова Р.Т., Яхияева Г.Ш.</i> Қазақстандағы әйел құқықтарының әлеуметтік қыры (отбасы)...	120
<i>Бакирбекова А.М., Нурбаева А.Т., Махатова Н.Л.</i> Қазақстанның бәсекеге қабілеттілігі және инновациялық қызметті дамытудағы шетелдік тәжірибені қолдану.....	128

СОДЕРЖАНИЕ

Химия

(на английском языке)

- Lomolino G., Алибеков R.S., Уразбаева K.A., Zampieri A., Bottin R., Vegro M., Crapisi A.* Исследование пены, полученной из экстракта протеина *SOLANUM TUBEROSUM*: взаимодействие белка, газа и полисахаридов..... 5

Технические науки

(на английском языке)

- Генбач А.А., Бондарцев Д.Ю.* Генерация пара на твердой поверхности в отдельной ячейке пористой структуры..... 14
Метакса Г.П., Метакса А.С. Двойное солнечное затмение – прогноз и реальность..... 21

Науки о Земле

(на английском языке)

- Исмаилова А.А.* Пути получения препаратов различного назначения из бурого угля..... 26

Физика

(на английском языке)

- Саймбетов А.К., Нурғалиев М.К., Куттыбай Н.Б., Налибаев Е.Д., Досымбетова Г.Б., Сванбаев Е.А., Тулкибайұлы Е., Гылымжанова М.М.* Разработка и расчет параметров лабораторного макета мобильной фотоэлектрической станции..... 31

Медицина

(на английском языке)

- Локин В.Н., Хорошилова И.Г., Куандыков Е.У.* Персонализированный подход при генетическом скрининге супружеских пар в программах ВРТ (Обзор литературы)..... 37

Общественные науки

(на английском языке)

- Кушжанов Н.В., Алиев У.Ж.* Цифровая трансформация экономики в ЕАЭС..... 42
Омарханова Ж.М., Мухамбетова З.С., Матаева Б.Т. Экономическая эффективность производства продукции мясного скотоводства..... 48
Шадинова Г.А., Джаппарова Р.Т., Яхияева Г.Ш. Социальные аспекты прав женщин в Казахстане (семья)..... 53
Сембиева Л.М., Бекбенбетова Б.Б., Бейсенова Л.З. Необходимость координации монетарной политики в странах ЕАЭС..... 60
Жумабекова Г.Ж., Аманова Г.Д. Организация системы внутреннего контроля в сельскохозяйственных организациях..... 66
Ибраимова С., Сатымбекова К., Керімбек Ф., Есболова А., Иманбаева З. Стратегии развития малого бизнеса республики Казахстан в кризисный период..... 70
Кайырбаева А.Е., Бельгибаев К.М., Бельгибаева Ж.Ж. Тенденции потребления мяса и мясопродуктов населением Казахстана..... 80
Мауина Г.А., Нурпеисова А.А., Дюсембаева Л.К., Курманова Д.С. Разработка математических моделей оптимизации процесса создания инновационной продукции..... 84
Сабирова Р.К., Мугауина Р.У., Гайсина А.Ж. Формирование полюсов развития в инновационной экономике региона..... 88
Тастанова З.Т., Торланбаева К.У. Колониальная политика России в отношении ислама в Казахстане (по материалам Оренбургского государственного архива)..... 91
Уахитжанова А., Байдалинова А., Аймурзина Б., Дарибаева А. Финансовое обеспечение агропромышленного комплекса как залог продовольственной безопасности Республики Казахстан..... 97

Технические науки

(на русском языке)

- Гебач А.А., Бондарцев Д.Ю.* Генерация пара на твердой поверхности в отдельной ячейке пористой структуры..... 108
Метакса Г.П., Метакса А.С. Двойное солнечное затмение – прогноз и реальность..... 115

Общественные науки

(на казахском языке)

- Шадинова Г.А., Джаппарова Р.Т., Яхияева Г.Ш.* Социальные аспекты прав женщин в Казахстане (семья)..... 120
Бакирбекова А.М., Нурбаева А.Т., Махатова Н.Л. Конкурентоспособность Казахстана и применение зарубежного опыта в развитии инновационной деятельности 128

CONTENTS

Chemistry

(in English)

- Lomolino G., Alibekov R.S., Urazbayeva K.A., Zampieri A., Bottin R., Vegro M., Crapisi A.* Study of foams obtained from *SOLANUM TUBEROSUM* protein extract: protein, gas and polysaccharide interaction..... 5

Technical sciences

(in English)

- Genbach A.A., Bondartsev D.Yu.* Generation of steam on solid surface in separate cell of porous structure 14
Metaxa G.P. Metaxa A.S. Double solar eclipse - forecast and reality..... 21

Earth science

(in English)

- Ismailova A.A.* The ways of output from the humus coal of preparations for various purposes..... 26

Physics

(in English)

- Saymbetov A.K., Nurgaliyev M.K., Kuttybay N.B., Nalibayev Ye.D., Dosymbetova G.B., Svanbayev Ye.A., Tulkibaiuly Ye., Gylmzhanova M.M.* Development and calculation of parameters of the laboratory layout of the mobile photovoltaic station..... 31

Medicine

(in English)

- Lokshin V.N., Khoroshilova I.G., Kuandykov E.U.* Personified approach to genetic screening of infertility couples in ART programs (literature review)..... 37

Social Sciences

(in English)

- Kushzhanov N.V., Aliyev U. Zh.* Digitalization of economics in EAEU..... 42
Omarkhanova Zh.M., Mukhambetova Z.S., Mataeva B.T. Economic efficiency of production of meat cattle breeding..... 48
Shadinova G.A. P., Dzhapparova R.T., Yakhiyayeva G.Sh. Social termination of family municipal in kazakhstan (family)... 53
Sembiyeva L.M., Bekbenbetova B.B., Beisenova L.Z. The need for monetary policy coordination of the member states of the Eurasian Economic Union..... 60
Zhumabekova G.Zh., Amanova G.D. Organization of the internal control system in agricultural organizations..... 66
Ibraimova S., Satymbekova K., Kerimbek G., Yesbolova A., Imanbaeva Z. Strategies of small business development of the Republic of Kazakhstan during the crisis period..... 70
Kaiyrbayeva A.E., Belgybaev K.M., Belgybaeva Zh.Zh. Tendencies of consumption of meat and meat products by the population of Kazakhstan..... 80
Mauina G.A., Nurpeisova A.A., Dyusseмбаeva L.K., Kurmanova D.S. Development of mathematical models optimizing the process of creating innovation production..... 84
Sabirova R.K., Mugaiina R.U., Gaisina A.Zh. Forming the poles of development in the innovative economy of the region (on the example of the Atyrau region) 88
Tastanova Z., Torlanbayeva K. Colonial Russia's policy towards Islam in Kazakhstan (based on the materials of the Orenburg State Archive)..... 91
Uakhitzhanova A., Baidalinova A., Aimurzina B., Daribayeva A. Financial support of the agro-industrial complex as a guarantee of food security of the Republic of Kazakhstan..... 97

Technical sciences

(in Russian)

- Genbach A.A., Bondartsev D.Yu.* Generation of steam on solid surface in separate cell of porous structure..... 108
Metaxa G.P. Metaxa A.S. Double solar eclipse - forecast and reality..... 115

Social Sciences

(in Kazakh)

- Shadinova G.A. P., Dzhapparova R.T., Yakhiyayeva G.Sh.* Social termination of family municipal in kazakhstan (family)..... 120
Bakirbekova A.M., Nurbayeva A.T., Makhatova N.L. Competitiveness of Kazakhstan and application of foreign experience in development of innovative activities..... 128

Publication Ethics and Publication Malpractice in the journals of the National Academy of Sciences of the Republic of Kazakhstan

For information on Ethics in publishing and Ethical guidelines for journal publication see <http://www.elsevier.com/publishingethics> and <http://www.elsevier.com/journal-authors/ethics>.

Submission of an article to the National Academy of Sciences of the Republic of Kazakhstan implies that the work described has not been published previously (except in the form of an abstract or as part of a published lecture or academic thesis or as an electronic preprint, see <http://www.elsevier.com/postingpolicy>), that it is not under consideration for publication elsewhere, that its publication is approved by all authors and tacitly or explicitly by the responsible authorities where the work was carried out, and that, if accepted, it will not be published elsewhere in the same form, in English or in any other language, including electronically without the written consent of the copyright-holder. In particular, translations into English of papers already published in another language are not accepted.

No other forms of scientific misconduct are allowed, such as plagiarism, falsification, fraudulent data, incorrect interpretation of other works, incorrect citations, etc. The National Academy of Sciences of the Republic of Kazakhstan follows the Code of Conduct of the Committee on Publication Ethics (COPE), and follows the COPE Flowcharts for Resolving Cases of Suspected Misconduct (http://publicationethics.org/files/u2/New_Code.pdf). To verify originality, your article may be checked by the originality detection service Cross Check <http://www.elsevier.com/editors/plagdetect>.

The authors are obliged to participate in peer review process and be ready to provide corrections, clarifications, retractions and apologies when needed. All authors of a paper should have significantly contributed to the research.

The reviewers should provide objective judgments and should point out relevant published works which are not yet cited. Reviewed articles should be treated confidentially. The reviewers will be chosen in such a way that there is no conflict of interests with respect to the research, the authors and/or the research funders.

The editors have complete responsibility and authority to reject or accept a paper, and they will only accept a paper when reasonably certain. They will preserve anonymity of reviewers and promote publication of corrections, clarifications, retractions and apologies when needed. The acceptance of a paper automatically implies the copyright transfer to the National Academy of sciences of the Republic of Kazakhstan.

The Editorial Board of the National Academy of sciences of the Republic of Kazakhstan will monitor and safeguard publishing ethics.

Правила оформления статьи для публикации в журнале смотреть на сайте:

www.nauka-nanrk.kz

ISSN 2518-1483 (Online), ISSN 2224-5227 (Print)

<http://www.reports-science.kz/index.php/ru/>

Редакторы *М. С. Ахметова, Т.А. Апендиев, Аленов Д.С.*
Верстка на компьютере *А.М. Кульгинбаевой*

Подписано в печать 13.02.2018.
Формат 60x881/8. Бумага офсетная. Печать – ризограф.
18,3 п.л. Тираж 500. Заказ 1.