

ISSN 2224-5294

ҚАЗАҚСТАН РЕСПУБЛИКАСЫ  
ҰЛТТЫҚ ҒЫЛЫМ АКАДЕМИЯСЫНЫҢ

Абай атындағы Қазақ ұлттық педагогикалық университетінің

# ХАБАРЛАРЫ

## ИЗВЕСТИЯ

НАЦИОНАЛЬНОЙ АКАДЕМИИ НАУК  
РЕСПУБЛИКИ КАЗАХСТАН  
Казахский национальный  
педагогический университет им. Абая

## NEWS

OF THE NATIONAL ACADEMY OF SCIENCES  
OF THE REPUBLIC OF KAZAKHSTAN  
Abay Kazakh National  
Pedagogical University

SERIES  
OF SOCIAL AND HUMAN SCIENCES

4 (332)

JULY – AUGUST 2020

PUBLISHED SINCE JANUARY 1962

PUBLISHED 6 TIMES A YEAR

ALMATY, NAS RK

Б а с р е д а к т о р

фил. ф. докторы, проф., КР ҰҒА корр. мүшесі  
**Қажыбек Е.З.**

Р е д а к ц и я алқасы:

эк. ф. докторы, проф., КР ҰҒА академигі **Баймуратов У.Б.**; филос. ф. докторы, проф., КР ҰҒА академигі **Есім Г.Е.**; фил. ф. докторы, проф., КР ҰҒА академигі **Кирабаев С.С.**; эк. ф. докторы, проф., КР ҰҒА академигі **Қошанов А.К.**; филос. ф. докторы, проф., КР ҰҒА академигі **Нысанбаев А.Н.**; заң ф. докторы, проф., КР ҰҒА академигі **Сәбікенов С.Н.**; заң ф. докторы, проф., КР ҰҒА академигі **Сүлейменов М.К.**; эк. ф. докторы, проф., КР ҰҒА академигі **Сатыбалдин С.С.**; тарих ф. докторы, проф., КР ҰҒА академигі **Әбжанов Х.М.**; тарих ф. докторы, проф., КР ҰҒА корр. мүшесі **Әбусеитова М.Х.**; тарих ф. докторы, проф., КР ҰҒА академигі **Байтанаев Б.А.**; филол. ф. докторы, проф., КР ҰҒА корр. мүшесі **Жақып Б.А.**; фил. ф. докторы, проф., КР ҰҒА академигі **Қалижанов У.К.**; филол. ф. докторы, проф., КР ҰҒА академигі **Қамзабекұлы Д.**; тарих ф. докторы, проф., КР ҰҒА академигі **Қожамжарова Д.П.**; тарих ф. докторы, проф., КР ҰҒА академигі **Қойгелдиев М.К.**; фил. ф. докторы, проф., КР ҰҒА академигі **Құрманбайұлы Ш.**; тарихи ф. докторы, проф., КР ҰҒА корр. мүшесі **Таймағанбетов Ж.К.**; социол. ф. докторы, проф., КР ҰҒА корр. мүшесі **Шәуқенова З.К.**; фил. ф. докторы, проф., КР ҰҒА академигі **Дербісәлі А.**; саяси ф. докторы, проф., **Бижанов А.К.**, тарих ф. докторы, проф., **Кабульдинов З.Е.**

Р е д а к ц и я к е н е с і:

Молдова Республикасының ҰҒА академигі **Белостечник Г.** (Молдова); Әзіrbайжан ҰҒА академигі **Велиханлы Н.** (Азербайджан); Тәжікстан ҰҒА академигі **Назаров Т.Н.** (Тәжікстан); Молдова Республикасының ҰҒА академигі **Рошка А.** (Молдова); Молдова Республикасының ҰҒА академигі **Руснак Г.** (Молдова); Әзіrbайжан ҰҒА корр. мүшесі **Мурадов Ш.** (Әзіrbайжан); Әзіrbайжан ҰҒА корр. мүшесі **Сафарова З.** (Әзіrbайжан); эк. ф. докторы, проф. **Василенко В.Н.** (Украина); заң ф. докторы, проф. **Устименко В.А.** (Украина)

**«Қазақстан Республикасы Үлттық ғылым академиясының Хабарлары. Қоғамдық және гуманитарлық ғылымдар сериясы».**

**ISSN 2224-5294**

Меншіктенуші: «Қазақстан Республикасының Үлттық ғылым академиясы» РКБ (Алматы қ.).

Қазақстан республикасының Мәдениет пен ақпарат министрлігінің Ақпарат және мұрагат комитетінде 30.04.2010 ж. берілген № 10894-Ж мерзімдік басылым тіркеуіне қойылу туралы күалік.

Мерзімділігі: жылдан 6 рет.

Тиражы: 500 дана.

Редакцияның мекенжайы: 050010, Алматы қ., Шевченко көш., 28; 219, 220 бөл.; тел.: 272-13-19, 272-13-18  
<http://soc-human.kz/index.php/en/archiv>

---

© Қазақстан Республикасының Үлттық ғылым академиясы, 2020

Типографияның мекенжайы: «NurNaz GRACE», Алматы қ., Рысқұлов көш., 103.

Главный редактор

доктор филол. н., проф., член-корр. НАН РК  
**Қажыбек Е.З.**

Редакционная коллегия:

докт. экон. н., проф., академик НАН РК **У.Б. Баймуратов**; докт. филос. н., проф., академик НАН РК **Г.Е. Есим**; докт. фил. н., проф., академик НАН РК **С.С. Кирабаев**; докт. экон. н., проф., академик НАН РК **А.К. Кошанов**; докт. филос. н., проф., академик НАН РК **А.Н. Нысанбаев**; докт. юр. н., проф., академик НАН РК **С.Н. Сабиженов**; докт. юр. н., проф., академик НАН РК **М.К. Сулейменов**; докт. экон. н., проф., академик НАН РК **С.С. Сатубалдин**; докт. ист. н., проф., академик НАН РК **Х.М. Абжанов**; докт. ист. н., проф., чл.-корр. НАН РК **М.Х. Абусеитова**; докт. ист. н., проф., академик НАН РК **Б.А. Байтанаев**; докт. фил. н., проф., чл.-корр. НАН РК **Б.А. Жакып**; докт. филол. н., проф., академик НАН РК **У.К. Калижанов**; докт. фил. н., проф., академик НАН РК **Д. Камзабекулы**; докт. ист. н., проф., академик НАН РК **Д.П. Кожамжарова**; докт. ист. н., проф., академик НАН РК **М.К. Койгельдиев**; докт. филол. н., проф., академик НАН РК **Ш. Курманбайулы**; докт. ист. н., проф., чл.-корр. НАН РК **Ж.К. Таймаганбетов**; докт. социол. н., проф., чл.-корр. НАН РК **З.К. Шаукенова**; докт. филол. н., проф., академик НАН РК **А. Дербисали**; доктор политических наук, проф., **Бижанов А.К.**; доктор ист. наук, проф., **Кабульдинов З.Е.**

Редакционный совет:

академик НАН Республики Молдова **Г. Белостечник** (Молдова); академик НАН Азербайджанской Республики **Н. Велиханлы** (Азербайджан); академик НАН Республики Таджикистан **Т.Н. Назаров** (Таджикистан); академик НАН Республики Молдова **А. Рошка** (Молдова); академик НАН Республики Молдова **Г. Руснак** (Молдова); чл.-корр. НАН Азербайджанской Республики **Ш. Мурадов** (Азербайджан), член-корр. НАН Азербайджанской Республики **З. Сафарова** (Азербайджан); докт. экон. н., проф. **В.Н. Василенко** (Украина); докт. юр. н., проф. **В.А. Устименко** (Украина)

**Известия Национальной академии наук Республики Казахстан. Серия общественных и гуманистических наук.**

**ISSN 2224-5294**

Собственник: РОО «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 № 10894-Ж, выданное 30.04.2010 г.

Периодичность 6 раз в год.

Тираж: 500 экземпляров.

Адрес редакции: 050010, г. Алматы, ул. Шевченко, 28; ком. 219, 220; тел. 272-13-19, 272-13-18  
<http://soc-human.kz/index.php/en/archiv>

---

© Национальная академия наук Республики Казахстан, 2020.

Адрес типографии: «NurNaz GRACE», г. Алматы, ул. Рыскулова, 103.

## Chief Editor

doctor of philology, prof, corresponding member of NAS RK  
**Kazhybek E.Z.**

## Editorial board:

Doctor of economics, prof, academician of NAS RK **Baimuratov U.B.**; doctor of philosophy, prof, academician of NAS RK **Esim G.E.**; doctor of philology, prof, academician of NAS RK **Kirabayev S.S.**; doctor of economics, prof, academician of NAS RK **Koshanov A.K.**; doctor of philosophy, prof, academician of NAS RK **Nyssanbayev A.N.**; doctor of law, prof, academician of NAS RK **Sabikenov S.N.**; doctor of law, prof, academician of NAS RK **Suleymenov M.K.**; doctor of economy, prof, academician of NAS RK **Satybaldin S.S.**; doctor of history, prof, academician of NAS RK **Abzhanov H.M.**; doctor of history, prof, corresponding member of NAS RK **Abuseitova M.H.**; doctor of history, prof, academician of NAS RK **Baitanaev B.A.**; doctor of philology, prof, corresponding member of NAS RK **Zhakyp B.A.**; doctor of philology, prof, academician of NAS RK **Kalizhanov U.K.**; doctor of philology, prof, academician of NAS RK **Hamzabekuly D.**; doctor of history, prof, academician of NAS RK **Kozhamzharova D.P.**; doctor of history, prof, academician of NAS RK **Koigeldiev M.K.**; doctor of philology, prof, academician of NAS RK **Kurmanbaiuly Sh.**; doctor of history, prof, academician of NAS RK **Taimaganbetov J.K.**; doctor of sociology, prof, corresponding member of NAS RK **Shaukenova Z.K.**; doctor of philology, prof, academician of NAS RK **Derbisali A.**; doctor of political science, prof **Bizhanov A.K.**; doctor of History, prof **Kabdulinov Z.E.**

## Editorial staff:

Academician NAS Republic of Moldova **Belostechnik.G** (Moldova); Academician NAS Republic of Azerbaijan **Velikhanli N.** (Azerbaijan); Academician NAS Republic of Tajikistan **Nazarov T.N.** (Tajikistan); Academician NAS Republic of Moldova **Roshka A.** (Moldova) Academician NAS Republic of Moldova **Rusnak G.** (Moldova); Corresponding member of the NAS Republic of Azerbaijan **Muradov Sh.** (Azerbaijan); Corresponding member of the NAS Republic of Azerbaijan **Safarova Z.** (Azerbaijan); Associate professor of Economics **Vasilenko V.N.** (Ukraine), Associate professor of Law **Ustimenko V.A.** (Ukraine)

## News of the National Academy of Sciences of the Republic of Kazakhstan. Series of Social and Humanities.

**ISSN 2224-5294**

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 **10894-Ж**, issued 30.04.2010.

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://soc-human.kz/index.php/en/archiv>

---

© National Academy of Sciences of the Republic of Kazakhstan, 2020

Address of printing house: «NurNaz GRACE», 103, Ryskulov str, Almaty.

**N E W S**

OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN

**SERIES OF SOCIAL AND HUMAN SCIENCES**

ISSN 2224-5294

Volume 4, Number 332 (2020), 20 – 28

<https://doi.org/10.32014/2020.2224-5294.98>

UDC 338.439.02

GRNTI 06.75

**T. Ya. Nurymbetov<sup>1</sup>, A.U. Abishova<sup>1</sup>, G. Baibosynova<sup>2</sup>,  
G.Zh. Urazbaeva<sup>1</sup>, I.E. Kozhamkulova<sup>1</sup>**

<sup>1</sup>M. Auezov South Kazakhstan state University, Shymkent, Kazakhstan;

<sup>2</sup>A. Yasavi International Kazakh-Turkish University, Turkestan, Kazakhstan.

E-mail: gulya@mail.ru

**THEORETICAL AND PRACTICAL BASES OF FOOD SECURITY**

**Abstract.** Currently, the main problem in modern society is food security. First, this is due to the fact that providing people with food from a physiological position determines their life activity. Secondly, it determines the political independence of the state and ensures its economic stability. Therefore, it should be noted that it is impossible to talk about the economic, political or national security of society if each state does not fully ensure the food security of its people. Food security is the state of the economy, including its agriculture, whereby it becomes possible stable supply through domestic production of basic foodstuffs of the total population under the mandatory priority to the most vulnerable, the poor of its layers and provided physical and economic availability of food in such quantity and quality necessary to preserve and maintain the life and capacity of the people, full or maximum possible independence from external sources of food.

**Keywords:** food security, national security, food, internal and external factors, food complex, economic sector, need.

**Introduction.** One of the potentially progressive factors in the development of Kazakhstan as an independent state in the coming years is the problem of improving food security ensuring national security in the context of economic modernization.

Ensuring food security in the context of the development of integration ties between various States and the globalization of the economy is an international problem. Really, the food security of any country are not guaranteed until a stable and adequate medical standards supply the population with necessary products based on their calorie content, energy content, and if balanced nutritious diet in terms of protein content and trace elements in the economic availability of food.

In the current environment of the global economy in General and economies in particular negative impacts of hunger and the instability of the international situation, characterized by conflicts and local wars in various regions of the world, the spread of terrorism. Economic instability, armed conflicts, and the threat of terrorism lead to the disruption of agricultural production, the destruction of crops and the food base of livestock, and the disruption of infrastructure, which in General is particularly harsher in the agribusiness sector.

The food problem has also been exacerbated by emergencies caused by technical disasters and natural disasters, which are primarily a serious cause of rural hunger. In the world, 7 million hectares of agricultural land are lost every year due to drought and desertification. In the XIX-XX centuries, the traditional way to solve food security problems was food aid for poor countries [1].

Therefore, the economic provision of the main factors and conditions for ensuring food security of the Republic of Kazakhstan in the context of economic modernization is one of the urgent problems .

The purpose of the study is to provide theoretical justification and develop practical recommendations for ensuring food security, taking into account the actions of the main factors and conditions for the development of the food sector of the economy.

**Materials and methods of research** is the economic relationship that occurs in the food complex in the process of organizational and economic activities and the forecast of the development of the resource base and economic conditions. The object of research is the agricultural sector of the food complex of the Republic of Kazakhstan.

Theoretical and methodological basis of research are classical and fundamental works of scientists in the field of economic theory, microeconomics, macroeconomics, and scientific developments of domestic and foreign scientists and economists on the problem, scientific methods of study using economic-statistical, monographic, settlement and constructive, economic-mathematical, variable, and factor analysis [8-9].

**The scientific novelty** of the research is as follows: clarification of the content of the concept of food security, taking into account the factors and conditions of economic processes development.

**Research result.** The problem of food security is relevant for every country, is recognized as an important element of national security and therefore has international significance. Ensuring food security of the country is guaranteed with a stable and sufficient supply of necessary food according to medical standards, taking into account their energy content (calorific value) [10-12].

With the mandatory economic availability of food, the need for living resources exists constantly and the satisfaction of these needs must be sustainable for each state. Therefore, all developed countries regulate the situation on the food market to ensure social stability and security, support the effective demand of food buyers, and provide economic assistance to their domestic farmers.

The most important feature of the market economy is the degree of development of any country is the highest level of production of life resources, ensuring food security.

Historically, the development of heavy industry in developed countries was preceded by the saturation of the market with food products. From an economic point of view, the production, exchange and consumption of food is an essential part of the functioning of the economic system and occupies a leading place in the priorities of the social market economy, since it is associated with the life support of people.

Some economists [2, 3, 4, 5, 6] they believe that the solution to the problem of food security is related to the country's macroeconomic development. They were based on the theory of international trade, and they hold the view that no country can be completely self-sufficient. According to them, according to the laws of comparative advantage, it is profitable for a country to produce those goods that are effective for the national economy, and export them in exchange for goods for which its relative advantage in its country is not effective, i.e., unprofitable, low-profitable.

Another group of economists [7, 8, 9, 10, 11] they believe that the problem of food security is the goal of the economy of each state and therefore should be solved by improving the self-sufficiency of the population's own food resources. They believe that a significant level of food consumption (at least 70-80%) was carried out at the expense of food production based on the national agricultural sector of the economy. In General, the world is dominated by the trend of developing its own agro-industrial sector, which will provide up to 55-75% of the country's food needs. These include the Arab oil exporting countries, which have huge (46% of the world's) reserves and the lowest production costs, have developed agricultural development programs for 10 years, which provide for accelerated development of the agro-industrial complex to increase the level of self-sufficiency of these countries with food (up to 60-75%).

Food security of the people is primarily physical access to food, income level of the population provides economic accessibility of food, quality and security involves food availability in the country in all seasons in the right range.

Economic availability of food is characterized by the level of income (regardless of social status and place of residence) of a citizen, which allows you to purchase food, at least at a minimum level of consumption.

Quality and safety of food for consumers-provides for the content of medically necessary calories in food products, prevents the production, sale and consumption of low-quality food products that can harm the health of the population. The population of our country is not fully provided with a normal quality level of nutrition. According to the international classification of the world food organization (FAO), a daily diet of 2150 calories is characterized by a condition of constant malnutrition. The normal level of nutrition for a person is 2600 calories (and we have not reached 2200). In developed countries (USA and EU), the level of caloric intake is 3500-3600 kilocalories.

The national security of Kazakhstan consists of economic, food, social and environmental security. Losing control over one of these areas in a short time can lead to a loss of position in all the others, which is especially important now and in the future of achieving food independence of the country.

Ensuring food security is linked to the influence of various factors and conditions. Political, social, economic, natural and other factors influence food security. Among them, the most important are political, socio-economic and natural factors. The main factor is the international factor, which is due to Kazakhstan's accession to the WTO (world trade organization). At the same time, it is expected to reduce or increase import tariffs for food. What is useful is that it will improve consumers' access to the market in the long run. However, the country must commit itself to reducing the level of state support for agriculture and reducing import tariffs. Most WTO members produce high-quality products with low prices for their sale. A negative external factor of food security in our country is the high degree of dependence of the food market on food imports (more than 1/3 of domestic needs). This makes our country extremely vulnerable in cases of interruptions in the supply of food products from abroad or when international food prices increase. Along with this, the most important factors that negatively affect the food security of our country are: the dependence of the agricultural sector on water sources and water supply systems from the territory of foreign countries; the dependence of livestock on feed imports, unfavorable foreign trade conditions for food; the degree of insufficient development of transport infrastructure providing external political links in food imports, high transport costs; the transition to private ownership of some strategically important food industry facilities [12-14].

Internal factors affecting the food security are: disparity in the industries producing food products; the status of land and water resources, logistical and technological base of industries in the food sector of agriculture; a survey of cropping patterns and availability of livestock feed; efficiency of use of resource potential of agrarian sector, the use of specific advantages of the country; the degree of monopolization in the future, agricultural raw materials processing industry; dynamics of development of market transformation in the agricultural sector and in industries; level of development of industrial and market infrastructure in the food industry; financial condition in the food and processing industries; mechanism of implementation of food policy, organization of food regulation and formation of its legal framework, the degree of depreciation of fixed assets in the food-producing industries; application of public investment in the agricultural sector and the food industry; the minimum level of income of the population and in this regard food provision for the low paid segments of the population.

Economic factors of food security are the conditions, causes, parameters, indicators that influence the impact on the economic process and the result of this process. The most important of them is the factors that stimulate food production and stimulate effective demand. Economic factors are aimed at forming the food market in the following positions: tax policy, financial and credit policy, protectionist policy, structural policy, scientific and technical policy, social policy, quality control.

Economic conditions of food security provide a set of living conditions related to the economy and is implemented through economic factors. The primary goal is to achieve food security, increase income and maintain poverty levels, which ultimately determine the economic availability of food [15-16].

In our opinion, the General conditions that ensure food security are the following: the problems of food supply to the population are recognized as strategic, which determines food security; the problem of food security is an important component of the economy and national security and is considered in deep connection with the problems of food independence and self-sufficiency ; state regulation of the food market is used in a limited number and in unity with the market mechanism.

The Republic has adopted a law on the quality of food safety and is developing a state program to help ensure the country's food independence. State regulation and support of agro-industrial production is the economic impact of state authorities on the production, processing and sale of products, raw materials and food, production and technical maintenance and logistics of agro-industrial production.

Priority areas are: support for investment activities in accordance with target programs; improving soil fertility, livestock productivity and the implementation of works to combat pests of crops and animal diseases, especially dangerous infectious diseases of animals; conducting research and introducing them into production; lending, financing, preferential taxation and insurance of agro-industrial production; subsidizing and compensating part of the costs of production and processing of products; assistance to the development of infrastructure and information support of the agricultural market, development of the social sphere of the village.

The purpose of the adopted state agri-food program is to ensure food security of the country through the formation of an effective system of agro-industrial complex, increase the volume of sales of agricultural products and pre- processing products, rationalize measures of state support for agricultural production, improve land and water relations.

The institutional prerequisite for the development of agribusiness is as follows:

- Measures will be taken to improve the efficiency of agricultural technologies by: optimizing the structure of acreage; introducing science-based crop rotations and new advanced technologies, water-saving technologies ; stimulating the renewal of the seed production base, production and use of mineral fertilizers, protectants and herbicides; updating the machine-tractor fleet of agricultural production; expanding leasing programs and creating a system of machine-technological stations.

The monitoring of infestation of farmlands with pests and diseases will continue, and an effective border and internal plant quarantine service will be formed. In animal husbandry, conditions will be created for the formation of specialized medium - and large-scale production of livestock products on an industrial basis, improving the genetic potential of livestock and poultry through the intensification of selection and breeding work and transferring to a qualitatively new stage of the national veterinary system.

When developing a forecast of food and population security, the degree of satisfaction of functional needs is determined in two ways. The first method provides for direct comparison of the nutrients contained in the per capita daily diet with the standard indicator. According to the second method, the calculation uses rational norms of annual food consumption, which are components of a diet balanced by the most important elements of nutrition.

In General, there are many diets that are equally rich in nutrients. From them, the most appropriate to the traditions and customs of the Kazakh population , as well as the conditions and opportunities for the production of certain types of food that provide a minimum cost to meet the needs are selected.

Among the main elements of the diet, the content of which is assessed by the level of satisfaction of physiological needs are: energy capacity, proteins, including animal fats with carbohydrates, kerotins, vitamins. Comparison of the actual or projected level with the normative level, as well as the corresponding dynamic changes for individual products and food elements, is carried out as part of the forecast calculations. The calculation of recommended nutrition standards for 2020 is shown in table 1.

Table 1-Forecast of food consumption by 2020 per capita per year, kg

No	Name of produce	Option I (medical norm recommended by the Institute of nutrition)	Option II (the level of developed countries of the world)	Option III (diet, while limiting the cost of food)
1.	Bread and bread products	112	105	90
2.	Potato	105	85	95
3.	Vegetables and melons	146	125	90
4.	Fruits and berries	80	90	70
5.	Sugar	38	38	18
6.	Vegetable oil	13	15	8
7.	Meat and meat products	80	95	51
8.	Milk and dairy products	380	380	360
9.	Fish	20	10	8.4
10.	Eggs	280	270	142

For an integral assessment of the compliance of the structure of food consumption with the recommended diet, it is proposed to use a coefficient (K) calculated as follows:

$$K = \sum_{i=1}^n P_i d_i, d_i = \frac{x_i}{x_i^1} \text{ by } x_i \leq x_i^1$$

where  $P_i$  – for  $i$  – product in the total energy value of the recommended diet;  $d_i$  – ratio of actual and normative consumption  $i$  – product's;  $x_i$  – level of consumption per capita  $i$  – product's;  $x_i^1$  – recommended consumption rate  $i$  – product's;  $n$  – amount of food.

This coefficient (K) characterizes the level of satisfaction of physiological needs provided that the energy value of the actual and recommended diets corresponds or is closely related. Otherwise, enter a correction factor:

$$e = \frac{E}{E^1},$$

where E – energy value of the recommended diet.

As can be seen from table 1, option II differs from option I by an increased level of per capita consumption of meat, fruit and berries, and vegetable oil. In option II, due to the growth of per capita meat consumption, fish consumption is reduced by 2 times. Then the coefficient K takes the following form:

$$K = e \sum_{i=0}^n P_i d_i$$

Shifts in the level of consumption are estimated using an index whose components are the K value of the reporting, forecast, and base periods. This coefficient is recommended to be used as an optimality criterion for optimizing the long-term development of the food complex for such a forecast period when rational consumption rates for the entire set of basic food products have not yet been achieved. In this case the maximization of the K coefficient characterizes the maximum possible degree of satisfaction of physiological needs for a given period of time.

All three diets generally meet the requirements of a full-fledged diet. The forecast calculations are shown in table 2.

Table 2-Forecast of average daily food consumption per capita for 2020y.

Products	$P_i$	$X_i$	II-option		III-option	
			$X_i$	$d_i$	$X_i$	$d_i$
Bread and bread products (1)	19	642	602	0,94	803	1,25
Potatoes (2)	6,8	230	186	0,81	208	0,81
Vegetables and melons (3)	3,6	120	103	0,86	103	0,86
Fruits and berries (4)	13	438	494	1,15	164	0,38
Sugar (5)	11,4	385	385	1,0	385	1,0
Vegetable oil (6)	9,6	324	369	1,14	356	1,1
Meat and meat products (7)	14,3	482	572	1,23	308	0,64
Milk and dairy products (8)	18	608	608	1,0	572	0,98
Fish (9)	2,6	88	45	0,51	48	0,85
Eggs (10)	1,7	55	53	0,95	28	0,51

The first option provides for 100% provision of food per capita according to medical standards.  $X_i$  is given for 10 main products, caloric content of the daily diet and its structure ( $P_i$ ).

II option:

$$\begin{aligned} K &= 19 \times 0,94 + 6,8 \times 0,81 + 3,6 \times 0,86 + 13 \times 1,15 + 11,4 \times 1 + 9,6 \times 1,14 + 14,3 \times 1,23 + 18 \times 1 + 2,6 \times 0,51 + 1,7 \times 0,95 = \\ &= 102,25 \end{aligned}$$

$$e = \frac{3417}{3372} = 1,14$$

then:  $K=102,25 \times e=102,25 \times 1,14=116,56$

III option:

$$\begin{aligned} K &= 19 \times 1,25 + 6,8 \times 0,81 + 3,6 \times 0,86 + 13 \times 0,38 + 11,4 \times 1 + 9,6 \times 1,1 + 14,3 \times 0,64 + 18 \times 0,98 + 2,6 \times 0,85 + 1,7 \times 0,51 = \\ &= 89,1 \end{aligned}$$

$$e = \frac{2975}{3372} = 0,88$$

then:  $K=89,1 \times e=89,1 \times 0,88=78,4$

In general, according to the First option, the optimal , medically justified rate of nutrition per capita per day is 3372 kilocalories. In the structure of this diet, meat and meat products , milk and dairy products accounted for 14.3% and 18% respectively, or equal to 80 and 380 kg per year, respectively. The coefficient values for the I-variant are equal to 100. Substituting the values given in table 2, we calculate the values of this coefficient for the II and III variants of the daily diet per capita.

The forecast option III is typical for the near-term development of our economy, and the forecast options I and II are acceptable in the long- term perspective. Further calculations showed that in order to achieve the first option of the daily diet of the population of our country, it is necessary to radically modernize all branches of the food complex, which will require 650 billion tenge of investment, and for the third option - 550 billion tenge. at the same time, almost half of the investment will be directed to the technical and technological re-equipment of the country's agricultural and food industries. To achieve the forecast parameter by 2020, it is necessary to increase the production of meat and meat products by 2.2-2.6 times, milk and dairy products-1.6-1.7 times, eggs-2.3-2.6 times, and increase the gross harvest of vegetables by 1.6-1.8 times. This is achieved both by increasing the number of livestock and birds with an increase in their productivity, and by increasing the acreage of crops and productivity. It is advisable to increase the number of cattle for the forecast period in comparison with 2005 by 2.2-2.5 times, the number of sheep and goats – 2.5-2.9 times. Indicators of livestock productivity will increase over this period by 1.7-1.9 times. The acreage of vegetables, oilseeds, sunflowers, orchards and grapes will be expanded. At the same time, the yield of these crops is projected to increase by 1.3-1.7 times.

**Conclusions and suggestions.** Food security as an economic category is characterized by the state of the economy, provided with resources, the level of its development, in which, regardless of external and internal factors, the physical and economic availability of food remains in the volume, quality of the range of availability for the development of each person and the population as a whole in a sufficient parameter to maintain health and performance and in the formation of national food security.

The study showed that the study of productive security should be led from the point of view: sufficiency level of food consumption and nutrition; an assessment of the level of production of food products, the level of food self -sufficiency, the formation of food through imports and its own forms of distribution of food resources based on the national income characteristics of the population.

**Т.Я. Нұрымбетов<sup>1</sup>, А.У. Абишова<sup>1</sup>, Г. Байбосынова<sup>2</sup>,  
Г.Ж. Уразбаева<sup>1</sup>, И.Е. Кожамкулова<sup>1</sup>**

<sup>1</sup>М. Әуезов атындағы Оңтүстік Қазақстан мемлекеттік университеті, Шымкент, Қазақстан;

<sup>2</sup>А. Ясауи атындағы Халықаралық қазақ-түрк университеті, Түркістан, Қазақстан

## **АЗЫҚ-ТҮЛІК ҚАУІПСІЗДІГІНІҢ ТЕОРИЯЛЫҚ ЖӘНЕ ПРАКТИКАЛЫҚ НЕГІЗДЕРІ**

**Аннотация.** Қазіргі уақытта қоғамдағы негізгі мәселенің бірі – азық-түлік қауіпсіздігі. Біріншіден, азық-түлікпен қамтамасыз ету физиологиялық ұстанымы арқылы халықтың тіршілік әрекетін аныктайды. Екіншіден, мемлекеттің саяси тәуелсіздігін айқындауды және оның экономикалық тұрақтылығын қамтамасыз етеді. Сондықтан, егер әрбір мемлекет халқының азық-түлік қауіпсіздігін толық қамтамасыз етпесе, қоғамның экономикалық, саяси немесе ұлттық қауіпсіздігі туралы айтуда болмайды. Азық-түлік қауіпсіздігі дегеніміз – экономиканың, оның агробінеркәсіптік кешенді қоса алғанда, халықты, оның ішінде осал, әлсіз топтардың міндепті басымдықтарын тұрақты өндірісі бар азық-түлік тауарларының негізгі түрлерімен қамтамасыз ету мүмкіндігі және азық-түліктің физикалық, экономикалық қолжетімдігі жағдайында адамдардың өмірі мен сыйымдығын, мемлекеттің азық-түліктің сыртқы көздерінен толық немесе максималды тәуелсіздігін сактау үшін қажетті мөлшер мен сапа.

Таяу жылдары Қазақстанның тәуелсіз мемлекет ретінде дамуының әлеуетті прогрессивті факторларының бірі экономиканы жаңғыру жағдайында ұлттық қауіпсіздікті қамтамасыз етудің азық-түлік қауіпсіздігін жақсарту мәселесі болып саналады.

Түрлі мемлекеттің интеграциялық байланыстарын дамыту, экономиканың жаһандануы жағдайында азық-түлік қауіпсіздігін қамтамасыз ету – халықаралық мәселе. Қандай да бір елдің нақты азық-түлік қауіпсіздігіне олардың калориялығын, энергетикалық мазмұнын ескере отырып, халықты қажетті азық-

түлікпен қамтамасыз етудің тұрақты және жеткілікті медициналық нормалары болған жағдайда, сондай-ақ азық-түліктің экономикалық қолжетімдігі кезінде акуыз және микроэлементтер құрамы бойынша халықтың қоректік рационы тендерілген жағдайда ғана кепілдік беріледі. Сондыктан экономиканы жаңғырту жағдайында КР азық-түлік қауіпсіздігін қамтамасыз етудің негізгі факторлары мен шарттарын экономикалық қамтамасыз ету өзекті мәселелердің бірі болып саналады.

Зерттеудің мақсаты экономиканың азық-түлік секторын дамытудың негізгі факторлары мен шарттарын ескере отырып, азық-түлік қауіпсіздігін қамтамасыз ету бойынша практикалық ұсыныстарды теориялық негіздеу және әзірлеу болып саналады.

Зерттеудің ғылыми жаңалығы – экономикалық үдерістердің даму факторлары мен шарттарын ескере отырып, азық-түлік қауіпсіздігін қамтамасыз ету үғымының мазмұнын нактылау.

Азық-түлік қауіпсіздігі экономикалық санат ретінде ресурстармен қамтамасыз етілген экономиканың жай-күйі мен оның даму деңгейі арқылы сипатталады. Бұл ретте сыртқы және ішкі факторларға қарамастан, денсаулық пен жұмысқа қабілеттілікті қолдау және ұлттық азық-түлік қауіпсіздігін қалыптастыру үшін жалпы елдің әр адамы мен халқының дамуы үшін қолжетімдік сұрыпта масының сапасы, тамақ өнімдерінің физикалық және экономикалық колжетімдігі сакталады. Болжанатын параметрге қол жеткізу үшін 2020 жылға қарай ет және май өнімдері өндірісін 2,2-2,6 есе, сүт және сүт өнімдері 1,6-1,7 есе, жұмыртқа 2,3-2,6 есе, көкеністі 1,6-1,8 есе ұлғайту қажет. Бұған мал мен құс санын қебейтумен қатар, ауылшаруашылығы дақылдары мен шығымдықтың егіс алқаптарының ұлғаюы арқылы да қол жеткізіледі. 2005 жылмен салыстырғанда болжамды кезенге ірі кара мал базын 2,2-2,5 есе, қой мен ешкі санын 2,5-2,9 есе ұлғайтқан жән. Мал өнімдігінің көрсеткіші осы кезенде 1,7-1,9 есеге артты. Көкеніс, майлы дақыл, күнбағыс, бақ және жүзімдіктердің егістік аландары кеңейтіледі. Бұл ретте бұл дақылдардың түсімі 1,3-1,7 есеге артады деп болжануда.

Зерттеу жұмыстары өнімді қауіпсіздікті зерттеуді келесі көзқараспен жүргізу орынды екенін көрсетті: халықтың азық-түлік және тамактану тұтыну деңгейінің жеткіліктігі; азық-түлік өнімдерін өндірудің қалыптасқан деңгейін бағалау, азық-түлікпен өзін-өзі қамтамасыз ету деңгейі, импорт және жеке нысандар есебінен азық-түлікті қалыптастыру халықтың ұлттық ерекшеліктерін ескере отырып, азық-түлік ресурстарын бөлу.

**Түйін сөздер:** азық-түлік қауіпсіздігі, ұлттық қауіпсіздік, азық-түлік өнімдері, ішкі және сыртқы факторлар, азық-түлік кешені, экономика секторы, қажеттілік.

**Т.Я. Нұрымбетов<sup>1</sup>, А.У. Абишова<sup>1</sup>, Г. Байбосынова<sup>2</sup>,  
Г.Ж. Уразбаева<sup>1</sup>, И.Е. Кожамкулова<sup>1</sup>**

<sup>1</sup>Южно-Казахстанский государственный университет им. М. Ауэзова, Шымкент, Казахстан;

<sup>2</sup>Международный казахско-турецкий университет имени А. Яссави, Туркестан, Казахстан

## **ТЕОРЕТИЧЕСКИЕ И ПРАКТИЧЕСКИЕ ОСНОВЫ ПРОДОВОЛЬСТВЕННОЙ БЕЗОПАСНОСТИ**

**Аннотация.** В настоящее время в современном обществе основной проблемой является продовольственная безопасность. **Во-первых**, это связано с тем, что обеспечение народа продовольствием с физиологической позиции определяет его жизнедеятельность. **Во-вторых**, определяет политическую независимость государства и обеспечивает его экономическую стабильность. Поэтому нужно отметить, что нельзя говорить об экономической, политической или национальной безопасности общества, если государство полностью не обеспечивает продовольственную безопасность своего народа. Продовольственная безопасность – это такое состояние экономики, в том числе ее агропромышленного комплекса, при котором становится возможным стабильное обеспечение за счет собственного производства основными видами продовольствия всего населения страны при обязательном приоритете наиболее уязвимых, малоимущих его слоев и при условии физической и экономической доступности продуктов питания в таком количестве и качестве, которые необходимы для сохранения и поддержания жизни и дееспособности людей, полной или максимально возможной независимости государства от внешних источников продовольствия.

Одним из потенциально прогрессивных факторов развития Казахстана как независимого государства в ближайшие годы является проблема улучшения продовольственной безопасности обеспечения национальной безопасности в условиях модернизации экономики.

Обеспечение продовольственной безопасности в условиях развития интеграционных связей различных государств, глобализации экономики является проблемой международной. Реально продовольственная безопасность той или иной страны гарантируется только в случае стабильного и достаточного их

медицинским нормам снабжения населения необходимыми продуктами с учетом их калорийности, энергетического содержания, также при сбалансированности питательного рациона населения по содержанию белка и микроэлементов при экономической доступности продовольствия. Поэтому экономическое обеспечение основных факторов и условий обеспечения продовольственной безопасности РК в условиях модернизации экономики является одним из актуальных проблем.

Цель исследования заключается в теоретическом обосновании и разработке практических рекомендаций по обеспечению продовольственной безопасности с учетом действий основных факторов и условий развития продовольственного сектора экономики.

Научная новизна исследования заключается в следующем: уточнение содержания понятия обеспечения продовольственной безопасности с учетом факторов и условий развития экономического процессов.

Продовольственная безопасность как экономическая категория характеризуется состоянием экономики, обеспеченного ресурсами, уровнем развития ее, при котором вне зависимости от внешних и внутренних факторов сохраняется физическая и экономическая доступность продуктов питания в объеме, качестве ассортимента доступности для развития каждого человека и населения страны в целом в достаточном параметре для поддержания здоровья и работоспособности и в формировании национальной продовольственной безопасности. Для достижения прогнозируемого параметра к 2020 году необходимо увеличить производство мяса и масопродуктов в 2,2-2,6 раза, молоко и молочных продуктов – 1,6-1,7 раза, яиц – 2,3-2,6 раза, увеличить валовой сбор овощей в 1,6-1,8 раза. Это достигается как увеличением численности скота и птицы с повышением их продуктивности, так и увеличением посевных площадей сельскохозяйственных культур и урожайности. Целесообразно увеличить поголовье крупного рогатого скота на прогнозируемый период по сравнению с 2005 годом в 2,2-2,5 раза, численность овец и коз – 2,5-2,9 раза. Показатели продуктивности скота увеличиваются за этот период в 1,7-1,9 раза. Расширяются посевные площади овощей, масличных культур, подсолнечника, садов и виноградов. При этом урожайность этих культур прогнозируется увеличить в 1,3-1,7 раза.

Исследование показало, что изучение продуктивной безопасности целесообразно проводить с точки зрения: достаточности уровня потребления продовольствия и питания населения; оценки сложившегося уровня производства продуктов продовольствия, уровня самообеспечения продовольствием, формирования продовольствия за счет импорта и собственных форм распределение продовольственных ресурсов с учетом доходов национальной особенности населения.

**Ключевые слова:** продовольственная безопасность, национальная безопасность, продукты питания, внутренние и внешние факторы, продовольственный комплекс, сектор экономики, потребность.

#### Information about the authors:

Nurymbetov T.Ya., doctor of Economics, Professor of the Department of Finance at the M.Auezov SKSU;  
 Abisheva A.O., candidate of economic Sciences, associate Professor of Department "Economic theory" of M.Auezov SKSU;  
 Urazbaeva G.Zh., candidate of economic Sciences, associate Professor of the Department of "Economic theory" of M. Auezov SKSU;  
 Baibosynova G.Zh., candidate of economic Sciences, associate Professor of the Department of Economics of the A.Yasavi IKTU  
 Kozhamkulova I.E., candidate of economic Sciences, associate Professor of the Department of "Economic theory" of M. Auezov SKSU.

#### REFERENCES

- [1] Macroeconomic support of socio-economic development of Kazakhstan in the context of modernization. Bulletin Of The National Academy Of Sciences Of The Republic Of Kazakhstan. ISSN 1991-3494. Issue 6, No[1]. 358, Almaty, 2015, P. 179-185.. (Mergenbayeva A. T., urazbaeva G. Zh., Abishova A. U.) <https://doi.org/10.32014/2018.2518-1467>
- [2] System diagnostics of the small city of Arys and a proposal for its further development Bulletin of the National Academy of Sciences of the Republic of Kazakhstan. ISSN 1991-3494. Almaty. No. 6, November, 2017. Str. 190-195 (Ondasynov E. Z., Kadirova J. S., Shadiev A. A., Abishova A. U.) <https://doi.org/10.32014/2018.2518-1467>
- [3] Ways of improving strategic management of the region economy. Izvestiya Natsional'noy Akademii Nauk RK. Seriya obshchestvennykh i gumanitarnykh nauk. ISSN 2224-5294. Almaty. NAN RK №1 (317), 2018. Str. 56-63. (Onlasynov Ye.Z., Kydyrova ZH.SH., Urazbayeva G. ZH., Abishova A. U.) <https://doi.org/10.32014/2018.2224-5294>
- [4] Analysis of social development in southern – kazakhstan area. News of the National Academy of Sciences of the Kazakhstan Series of Social and human Sciences. ISSN 2224-5294. ALMATY, NAS RK .Volume 3, Number 319 (2018). P. 93-99. (P. T. Baineva, A. S. Tulemetova, Abishova A. U.) <https://doi.org/10.32014/2018.2224-5294>
- [5] Priorities of social support of the population of the republic of kazakhstan in the conditions of modernization. News of the National Academy of sciences of the Republic of Kazakhstan. Abay Kazakh National Pedagogical University. Series of social and human sciences. ISSN 2224-5294. Almaty. Volume 6, Number 322 (2018), 224-232 p. (T. Ya. Nurymbetov, A. U Abishova, G. Zh.Urazbayeva, ZH. SH. Kydyrova, N. U Abishov) <https://doi.org/10.32014/2018.2224-5294.37>

[6] Research of the situation in the market of milk and dairy products of the south Kazakhstan region. News of the National Academy of sciences of the Republic of Kazakhstan. Series of social and human sciences. ISSN 2224-5294. Volume 6, Number 322 (2018), 79-86. (Zh. Sh. Kydyrova, E. Z. Onlasynov, A. U. Abishova, A. A. Shadieva) <https://doi.org/10.32014/2018.2224-5294.37>

[7] Real estate market research at the international level. Bulletin of the National Academy of sciences of the Republic of Kazakhstan. Series of social and human sciences. ISSN 2224-5294. Volume 1, (2019), 63-68p. (A. U. Abishova, A. T. Mergenbayeva, G. Zh.Urazbayeva)

[8] Ipo market: transformation of savings into investments. Bulletin of the National Academy of sciences of the Republic of Kazakhstan. Series of social and human sciences. ISSN 2224-5294. Volume 1, (2019), 119-126p. (A. T. Mergenbayeva, K. K. Nurasheva, D. A. Kulanova, G. I. Abdikerimova, A. U. Abishova, A. Alibek)

[9] Malthus T. R. an essay on the principle of population. M. 1895, translated by Werner 2002y

[10] Declaration of the world summit on food security. Adopted at the world food security summit  
(Rome, 16-18 November 2009)

[11] Assessment of food insecurity: meaningful concepts and indicators for the adoption of design solutions [Electronic resource]. Access mode: <http://www.fao.org/cfs/cfs-home/cfsroundtable1/ru>. - Data correspond to 15.03.2015.

[12] Assessment of food security of the Republic of Kazakhstan based on data from household surveys to assess the standard of living in 2009 and 2014. Almaty: Agency of the Republic of Kazakhstan for statistics, 2014. 21 p.

[13] M. N. Namazbekov. Globalization: factors of influence on the development of the agro-industrial complex of the world economy // analytical, 2002. No. 6, PSU. S. Toraigyrova

[14] Lashkareva O. V., kozhakhmetova G. A. Modern state of food security in the Republic of Kazakhstan // Success of modern natural science. 2015. #1-5. Pp. 831-838; URL: <http://natural-sciences.ru/ru/article/view?id=34953> (date accessed: 11.03.2020).

[15] Food security of the Republic of Kazakhstan: current state, problems and main ways out of the food crisis. [Electronic resource]. <https://articlekz.com/article/12127>

[16] The state of Affairs in connection with food insecurity in the world [Electronic resource]. Access mode: <http://www.fao.org/publications/sofi/ru>. Data correspond to 15.03.2015.

**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](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](http://nauka-nanrk.kz)

<http://soc-human.kz/index.php/en/arhiv>

Редакторы: *M. С. Ахметова, Д. С. Аленов, А. Ахметова*  
Верстка на компьютере *A. М. Кульгинбаевой*

Подписано в печать 11.08.2020  
Формат 60x881/8. Бумага офсетная. Печать – ризограф.  
21 п.л. Тираж 500. Заказ 4.

## **Уважаемые авторы научных журналов НАН РК!**

Президиумом НАН РК принято решение, в целях повышения международного рейтинга академических изданий, объединить следующие 3 журнала, начиная с № 5 (сентябрь-октябрь), 2020 г., с высокорейтинговыми журналами НАН РК, входящими в международные базы Scopus, WoS и др.:

1. **«Известия НАН РК. Серия биологических и медицинских наук»** объединить с журналом «Доклады НАН РК»;
2. **«Известия НАН РК. Серия аграрных наук»** – «Доклады НАН РК»;
3. **«Известия НАН РК. Серия общественных и гуманитарных наук»** – с журналом «Вестник НАН РК».

Статьи, которые публиковались в журналах «Известия НАН РК. Серия биологических и медицинских наук» и «Известия НАН РК. Серия аграрных наук», впредь будут публиковаться в журнале **«Доклады НАН РК»**, а статьи, публикуемые в журнале «Известия НАН РК. Серия общественных и гуманитарных наук», – в журнале **«Вестник НАН РК»**.

При подаче статей просим указывать название журнала и отрасль науки, согласно представленного перечня (см. ниже) в данном журнале:

I. Научный журнал **«Вестник НАН РК»** посвящен исследованиям фундаментальной науки (гуманитарные и естественные):

Редакционная коллегия принимает статьи по следующим отраслям науки:

1. Гуманитарные (экономика, юриспруденция, история и археология, политология и социология, философия, филология, педагогика и психология, литературоведение, искусствоведение)

2. Естественные (астрономия, физика, химия, биология, география и технические науки). Примеры технических наук: космонавтика, кораблестроение, машиностроение, системотехника, электротехника, электросвязь, радиоэлектроника, ядерная энергетика и т.д.

Адрес сайта **«Вестник НАН РК»** – <http://www.bulletin-science.kz/index.php/en/archive>

II. Научный журнал **«Доклады НАН РК»** посвящен исследованиям в области получения наноматериалов, биотехнологии и экологии.

Редакционная коллегия принимает статьи по следующим отраслям науки:

1. Получение наноматериалов в области естественных наук, медицины и сельского хозяйства.
2. Биотехнология в земледелии, растениеводстве и зоотехнике.
3. Общая биология и биотехнология в медицине.
4. Экология.

Адрес сайта **«Доклады НАН РК»** – <http://reports-science.kz/index.php/en/archive>

Кроме того, в журналах **«Известия НАН РК. Серия физико-математическая»**, **«Известия НАН РК. Серия химии и технологий»** и **«Известия НАН РК. Серия геологии и технических наук»** также указаны отрасли науки, по которым будут приниматься научные статьи для экспертизы и дальнейшего опубликования:

III. Научный журнал **«Известия НАН РК. Серия физико-математическая»** посвящен исследованиям в области математики, физики и информационной технологии.

Редакционная коллегия принимает статьи по следующим отраслям науки:

1. Математика.
2. Информатика.
3. Интеллектуальный анализ данных и распознавание образов.
4. Математическое моделирование социальных и экономических процессов.
5. Механика.
6. Механика машин и роботов.
7. Теория управления и космические исследования.
8. Физика.
9. Ядерная физика.
10. Теоретическая физика.
11. Астрономия.
12. Ионосфера.

Адрес сайта «**Известия НАН РК. Серия физико-математическая**» –

<http://physics-mathematics.kz/index.php/en/archive>

IV. Научный журнал «**Известия НАН РК. Серия химии и технологий**» посвящен исследованиям в области химии и технологий новых материалов.

Редакционная коллегия принимает статьи по следующим отраслям науки:

1. Органическая химия.
2. Неорганическая химия.
3. Высокомолекулярные соединения.
4. Физическая химия (катализ, электрохимия).
5. Технология новых материалов.
6. Технология органических веществ.
7. Технология неорганических веществ.
8. Технология химических удобрений.
9. Технология полимерных и строительных материалов и силикаты.
10. Технология пищевых продуктов.
11. Фармацевтическая химия.

Адрес сайта «**Известия НАН РК. Серия химии и технологии**» –

<http://chemistry-technology.kz/index.php/en/arhiv>

V. Научный журнал «**Известия НАН РК. Серия геологии и технических наук**» посвящен исследованиям в области геологии и технических наук:

Редакционная коллегия принимает статьи по следующим отраслям науки:

1. Геология.
2. Региональная геология.
3. Петрология.
4. Геология нефти и газа.
5. Геология и генезис рудных месторождений.
6. Гидрогеология.
7. Горное дело и геомеханика.
8. Фундаментальные проблемы обогащения минерального сырья.
9. Инженерная геология.
10. Геофизика и сейсмология.
11. География.

Адрес сайта «**Известия НАН РК. Серия геологии и технических наук**» –

<http://www.geolog-technical.kz/index.php/en/archive>