

MPHTI 06.61.33

JEL E2: Macroeconomics: Consumption, saving, production, employment, and investment

УДК 338.4439

## CURRENT STATE OF FOOD SECURITY IN THE REPUBLIC OF KAZAKHSTAN

**Zh.S. Bulkhairova,**

Doctor PhD, senior lecturer, Department of department «Management»,  
S.Seifullin Kazakh-agro technical university,  
Astana, Kazakhstan

**Z.P. Aidynov,**

Candidate degree in of economic science, senior lecturer, department of Management»,  
S.Seifullin Kazakh Agro-technical university,  
Astana, Kazakhstan

**N.S. Nurkasheva,**

Candidate degree in of economic science, associate professor of department «Accounting, audit and  
evaluation» of the «University Narxoz»  
Almaty, Kazakhstan

---

### ABSTRACT

*Purpose of research* – The main purpose of the article is to analyze the current state of food security and identify the main parameters that affect it.

*Methodology* - In the process of research general scientific methods were used: analysis, synthesis, comparison. The solution of the tasks was performed using technological and situational approaches in the economy.

*Originality* – is to identify existing problems of food security in the Republic of Kazakhstan and to identify possible solutions.

*Summary* - At the present stage, the food security problem is one of the most researched problems. Deterring factors of food production development in the Republic of Kazakhstan include a low level industrial processing of agricultural raw materials, which is due to the low level development of technical and technological security in the food industry, including the quality supply of agricultural raw materials; relatively high food prices, lack of safety requirements in the agricultural production, lack of compliance with the declared properties of agricultural products, and often misleading the consumer, etc.

Today the reliability level of food security in the country is achieved thanks to the necessary volumes of food production in the country, the availability of financial resources for the import of the necessary food, with a slight degree of vulnerability supply in case of any complications and disruption in the international supply of food.

*Key words* - food security, agro-industrial complex, needs, food, quality level, agricultural raw materials, natural resources.

### INTRODUCTION

At the present stage, the problem of sustainable food security is one of the most researched problems, including Kazakhstan. The message of the President of Kazakhstan N.A.Nazarbayev «Strategy «Kazakhstan-2050»: new political course of the established state» refers to the importance of food security for the country: «the high growth rate of the world population aggravates the food problem. Already today, tens of millions people are hungry in the world, about a billion people are constantly suffering from food shortages... We have vast green areas and can produce organic food. We are quite capable of making a qualitative leap in agricultural production» [1].

The level of food security depends primarily on the current state of the country's agro-industrial complex. To date, the current state of agriculture in the country is characterized by the following points: the decline in the quality of land fertility, the deterioration of the material and technical base agricultural producers, low yields, low productivity of animals [2]. Therefore, this topic requires more in-depth and detailed research, as the food market is subject to constant changes and depends on many factors. All of the above and determines the relevance and need to research and write this article.

Therefore, the main purpose of this article is to analyze the current state of food security and identify the main parameters that affect it.

### THE MAIN PART OF THE STUDY

The importance of food security became more actively addressed in 1948, the post-war period after the adoption of the «Universal Declaration of Human Rights», that is, three years after the Great Patriotic War. The concept of «food security» became officially widespread after 1973 - the world economic crisis, and was officially enshrined in 1974 in the «Universal Declaration on the Elimination of Hunger and Malnutrition».

In the international community the problem of food security was first formulated not only in economic and political terms, but also in the international legal aspect in 1974 - at the World Food Conference in Rome. The World Food Conference in Rome (1996) was a significant milestone in the further definition of food security problems, development of recommendations and finding ways to solve them. The outcome of this conference was the adoption of the Rome Declaration about World Foods. The conference also adopted a Declaration about International Food Security and signed a Plan of Necessary Action until 2015.

The adoption of this Declaration has made this problem mandatory at the world level, namely, food security is considered from the perspective problems of all countries and States in the world. In this Declaration the concept of «food security» is interpreted as «the state of the economy in which the population in the country as a whole and each citizen individually is guaranteed access to food, drinking water and other food products in quality, variety and volume necessary and sufficient for physical and social development of the personality, health and expanded reproduction of the population» [3, 4]. In this case, the Declaration was based on the level of consumption, which allows to maintain only the physiological processes in the person, without taking into account his activity and performance.

In recent years, the Republic of Kazakhstan began to pay great attention to the problems of food security. At the same time, the main issues of food security relate mainly to the level of self - sufficiency in food of the country's population - up to 80%, that is, an active aspiration for the development of the agricultural sector in the economy and agricultural protectionism [5]. The level of food security is achieved through the necessary levels of food production in the Republic, the availability of financial resources for the import necessary food, with a low degree of vulnerability of supply in the event of any complications (e.g., increase in food prices, currency shortage, etc.) and violation of inter-state food supply (embargo).

### LITERATURE REVIEW

The state of scientific development of this topic is characterized by an insufficient number of researches devoted to the substantiation of conceptual proposals in the food security field using various mechanisms that take into account the existing foreign experience and the specifics of domestic conditions.

Researches, which dedicated to issues of food security, include the works of foreign and domestic scientists such as: G.M. Rakhimzhanova, Zh.M. Adilov, K. Akhmetova, L.I. Abalkina, S.Dzhailov, A.Kalabaeva, E.V. Kenduh, K.A. Abdumalikov, A.U. Oruzbaev, O.K. Karatalov, T.K. Koichuev, S.S. Bekenov, D.A. Musaeva, A.Z. Zakirov, K.U. Kaseinov. Also made a significant contribution to the development of theoretical and methodological foundations of provisions and development of food security such researchers as S.V. Kiselev, P.T. Burdukov, V.S. Balabanov, A.A. Kaygorodtsev, Y.S. Khromov, E.K. Serov, V.V. Maslakov, D.V. Zerkalov, and M.E. Kazembaev, B.A. Chernyakov, S.U. Nuraliev, E.S. Ospanov and others.

The analysis of the conducted research has shown that the most complete complex works, which are devoted to the theoretical and practical justification of modern concepts, taking into account the existing foreign experience and the specifics of the domestic conditions, are relatively small and insufficient. Many

authors under «food security» concept interpret the country ability, regardless of internal and external threats to meet the emerging needs of the population in food in the required amounts, range and quality that meet accepted norms and standards.

Different scientists and practitioners have different approaches to solving food security. For example, A.Kaigorodtsev under food security refers to a state of protection against internal and external threats to vitally important interests and principles of human existence, community, and country that are associated with the provision of essential food items through their own production of the population taking into account the poor and vulnerable segments of the population in terms of economic and physical food availability in such quality and quantity that you want to maintain and further the preservation of life of the population, including the full or maximum possibility of country independence from food imports [6].

The basic concepts of «food security» are presented in figure 1.

Thus, in the economical scientific works, the following definition of «food security» concept is quite often found - this is «self-sufficiency of the population of the Republic in food products in accordance with physiological norms» [8]; «the availability level for the main part of the population of food necessary to maintain a normal lifestyle» [9]; «an important part of national security, it is not limited to the economic security of the state or community in countries» [10]; «stable provision of the population with quality food and the necessary range» [11]. Thus, the main goal of food security is to ensure a guaranteed and sustainable supply of raw materials to processing organizations, the population – the necessary amount of food, while will not be affected by adverse internal and external factors.

A. Belyakova, O. Maiveichev	<ul style="list-style-type: none"> <li>Food security of the country - the constant ability of the state and society to ensure the availability of food to the entire population in the quantity and quality necessary for an active and healthy life</li> </ul>
E. Serova	<ul style="list-style-type: none"> <li>Food security means the level of access to food for the main part of the population to maintain a normal lifestyle</li> </ul>
B.A.Chernyakova	<ul style="list-style-type: none"> <li>Food security - providing vital food from its own sources, and their availability to all citizens of the country in the amount and range, to meet the necessary and useful needs</li> </ul>
K.A.Ahmetova	<ul style="list-style-type: none"> <li>Food security is a state of the economy in which the population's food needs are met in accordance with physiological norms, and food security is part of the country's national security. Ensuring food security depends largely on the development of agriculture.</li> </ul>
A.A.Kudryasheva, O.P.Presnyakova	<ul style="list-style-type: none"> <li>Food-independent countries are those that fully meet the current needs of the population for the main products of their own production and create the necessary reserve for unforeseen purposes.</li> </ul>

Figure 1 – concepts of food security given by different authors

Note-compiled by the author on the basis of sources [7, 8, 9, 10, 11]

## RESULTS AND REASONING.

The global crisis, which is now observed in the modern food market, focuses on the issues of food supply in the country on the formation of certain conditions in order to intensify the national agricultural production, identify and search for certain ways to solve the existing problem. Let's start the analysis of food security with the rating of the world countries for 2017, the data of which are presented in table 1.

Table 1. Ranking of countries by level of food security in 2017.

	Rating	Country	Index	Change in 2017 to 2016 (+/-)
1	2	3	4	5
1	1	Ireland	85,6	-0,2
2	2	USA	84,6	-0,6
3	3	Britain	84,2	+0,2
4	4	Singapore	84,0	-0,6
5	5	Australia	83,3	-0,2
6	....	....	....	....
7	41	Russia	66,2	-0,4
8	43	Mexico	65,8	+0,2
9	....	....	....	....
10	60	Kazakhstan	56,0	+0,6

Note-compiled by the author on the basis of sources [12]

This rating (table 1) includes studies that cover 109 countries of the world and determine the level of food security by four parameters:

- food availability and consumption;
- availability and sufficiency of food
- food quality and safety level.

Each of the above parameters includes twenty-eight different indicators, the values of which are estimated over two years [13].

The index of food security in the countries of the world assesses the countries policies and the degree of their organizations effectiveness in the field of food security [12]. The primary sources of statistics for the research are mainly information that has been obtained from different international agencies, including national statistics from different countries of the world.

According to table 1, Kazakhstan is ranked 60th place in the world food security ranking in 2017 and its food security index is 56.0, compared to 2016, its position improved by 0.6 points. Also, in terms of food security, Kazakhstan lags behind Russia, which is in 41th place.

Let us consider in more detail and analyze the main parameters of food security of the countries of the world, including Kazakhstan, in 2017, the rating and index of which is presented in table 2.

Table 2. Levels of food insecurity according to the basic parameters in 2017

Food availability and consumption			Availability and sufficiency of food		
Rating	Country	Index	Rating	Country	Index
1	Qatar	93,3	1	Great Britain	87,2
2	Singapore	91,3	2	Ireland	86,5
3	USA	85,9	3	Germany	83,1
4	United Arab Emirates	84,9	4	Norway	83,0
5	Ireland	84,4	5	Switzerland	82,7
.....	.....	.....	.....	.....	.....
44	Mexico	66,0	90	Cambodia	46,7
45	Kazakhstan	65,5	90	Kazakhstan	46,7
Food quality and safety level			Sustainability and availability of natural resources		
Rating	Portugal	Index	Rating	Country	Index
1	France	89,7	1	Denmark	82,1
2	USA	88,7	2	Slovakia	81,1

3	Australia	86,6	3	Austria	80,3
4	Greece	86,4	3	Czech Republic	80,3
5	.....	86,3	5	Hungary	79,0
.....	Panama	.....	.....	.....	.....
57	Kazakhstan	58,7	34	Rwanda	68,4
58	Portugal	57,8	35	Kazakhstan	67,7

Note-compiled by the author on the basis of sources [12]

According to table 2, in 2017, Kazakhstan is ranked 45th place among other countries in terms of availability and consumption of food products and the index is 66.5, compared to 2016, this index decreased by 1.7 points. Also, in this index Kazakhstan lags behind such countries as Qatar, Singapore, USA, Germany, Mexico and other countries. As for the index of availability and sufficiency of food, the Republic of Kazakhstan in 2017 is on the 90th place after Cambodia and is 46.7. That is, some researchers believe that one of the holding factors of the development of food production in Kazakhstan can be attributed to the low level of industrial processing of agricultural raw materials, which is due to the low level of development of technical and technological security in the food industry, including the quality of agricultural raw materials supply.

The level and quality of providing the population with the necessary food is not only the basic conditions for the development of the food market, but also is an important factor of social stability, stability of food security without negative consequences in the socio-economic development of the country. To date, the state program of agriculture development in Kazakhstan for 2017-2021 is being implemented, for the implementation of which the Republic allocated funds (the State program of agriculture development).

Over the past five-six years, the growth rate of gross agricultural output has averaged 20 %. Despite the increase in production and stabilization of the economic development rate, the share of agriculture in the GDP structure is only 4-7%. In 2016, the share of agriculture in GDP was 4.6%, which was due to a decrease in exports in nominal terms due to the depreciation of the national currency.

The main criterion of food security is the production in the agricultural sector, at least 80% of food consumed. In 2016, the industry accounted for a significant share of gross domestic product - 26.1%, while the share of agriculture is only 4.6%. The resource provision of the domestic market in Kazakhstan continues to be almost entirely dependent on the supply of goods from abroad. The formation of the consumer market in the country is 80-90% due to the import of goods from other regions of the country and imports.

Based on the data from table 2, it is clear that Kazakhstan is 58th place in terms of the quality and safety of food products and is 57.8, while Kazakhstan was bypassed by such countries as Portugal, France, Bulgaria, Paraguay, Panama and other countries. As for the index - sustainability and availability of natural resources, Kazakhstan is ranked higher than in the previous indices and is 67.7. This is due to the fact that in some areas of Kazakhstan there is a rich nature, nature reserves, sanatoriums and as a result of great opportunities.

Now let's consider the level of food security in Kazakhstan in 2017 in comparison with the average score of all countries of the world (figure 2).

Based on figure 2, it can be seen that Kazakhstan in 2017 in terms of food level and safety quality almost reached the average level of the world. But it should be borne in mind that in 2016, according to the results of research, the maximum percentage that does not correspond to food products falls on the share of imports – 86%. At the same time, agricultural products of local producers, which do not meet certain requirements, is 14%. Therefore, it is possible to identify the main violations of the technical regulations: 74% cases there is a violation of the established rules by the manufacturers-marking, 21% - lack of compliance with safety requirements, 14.4% - lack of compliance with the declared properties of the products, and often misleading the consumer [14, 15].

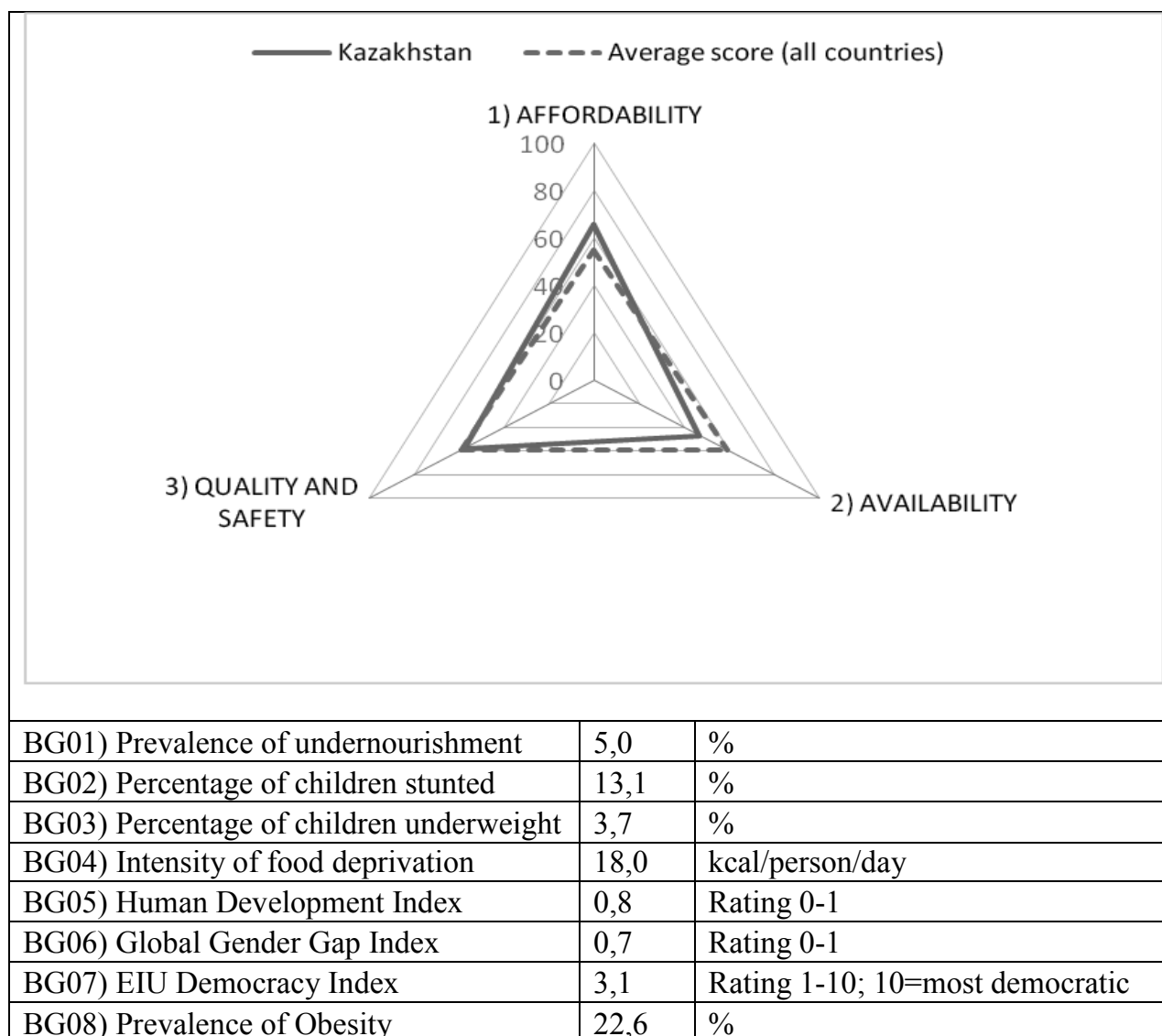


Figure 2 - Level of food security of Kazakhstan in 2017

Note - compiled by the author on the basis of sources [12]

To date, in other parameters, Kazakhstan has not yet reached the average level of the world, that is, there is a situation that the diet of Kazakhstan is not as diverse as before. In 2016, the population of Kazakhstan began to consume more bread, eggs, butter, milk and dairy products, potatoes, while significantly reducing the consumption of meat products, fish, fruits and vegetables. Over the past year, the country also reduced the consumption of sweet. In 2016, Kazakhstan ate bread and bakery products 1% higher than in 2015. Regarding the consumption of milk and dairy products, there was an increase in the year - by 1.2%, eggs - by 0.7%, potatoes by 0.5%. The use of oil and fat in households in Kazakhstan increased quite significantly in 2015 - by 1.9%. Although at the same time in the diet of residents in Kazakhstan has become less «healthy» products. In 2016, the consumption of meat, meat products decreased by 0.6%, vegetables (excluding potatoes) - by 0.5% [12]. This trend was mainly influenced by the increase in prices in 2016 for the following types of food: poultry - by 16.2 % (from 631 to 733 tenges per 1 kg), chicken eggs-by 15.8 % (from 259 to 300 tenges per 10 pieces), butter - by 9.2 % (from 1 572 to 1 716 tenges per 1 kg), sunflower oil-by 10.4 % (from 405 to 447 tenges per 1 liter), sugar-by 14.5 % (from 221 to 253 tenges per 1 kg), potatoes-by 9.8 % (from 82 to 90 tenges per 1 kg), cheese and cheese products-by 6.9 % (from 1,885 to 2,016 tenges per 1 kg), beef – by 5,8% (from 1 177 to

1 245 tenge per 1 kg), wheat flour – by 5,7% (from 141 to 149 tenge per 1 kg), pork meat – by 4,2% (from 1073 to 1118 tenge per 1 kg), rice – by 2,4% (from 286 to 293 tenge per 1 kg), lamb meat – by 2,1% (from 1 172 to 1 197 tenge per 1 kg). Thus, prices in the Republic increased to such an extent that some Kazakhstanis had to abandon the following types of food: fruit – by (-4.5%), fish and marine products - by (-3.7%) for the year, this also includes sweet - by (-3%). That is, there is a tendency that the population of the country begins to buy more and more essential food and their diet becomes poorer. Basically, the preferences of the population of the Republic in food products were influenced by the change in the economic situation in the country and as a consequence, the decline in incomes, the increase in inflation. In Kazakhstan, real cash income in 2016 decreased by 4.5% compared to 2015. This is the first annual decline since 2010. At the same time, it should be taken into account that the increase in prices for food products is breaking the main records and by the end of 2016 the prices for basic food products have risen by 9.7%.

It should also be noted that at the present stage, in connection with the above situation, the following situation arises: the inhabitants of rural areas eat much worse than the residents living in the city. In 2016, the population living in cities, was eaten meat and meat products by 9% more than rural areas, although in 2016 the gap was about 10%. In 2015, fish and marine products in the cities of the Republic were consumed only 0.4% higher than in the villages, and in 2015 the difference in consumption of this product's type of was 3% in favor of urban residents.

In the cities of the Republic of Kazakhstan in 2016, fruit consumption was 12% higher than in rural areas, in 2015 this level of consumption of citizens was higher than the villagers - by 21%. At the same time, it should be noted that rural residents began to consume more vegetables in 2016 than citizens – by about 1%, in 2015 this volume of consumption was higher among urban residents - by 0.3% [16].

Now let's analyze the indicators of food security of the Republic in 2017, which were grouped by quartiles and are shown in figure 3.

Indicator scores grouped by quartile  
Score 0-100 where 100=best

VERY GOOD (TOP QUARTILE)	
1.5) Presence of food safety net programmes	100,0
1.4) Agricultural import tariffs	83,8

MODERATE (2ND QUARTILE)	
3.5) Food safety	94,0
2.8) Food loss	85,3
2.7) Urban absorption capacity	64,9
2.3) Agricultural infrastructure	51,9
of household expenditure	48,4
2.2) Public expenditure on agricultural R&D	0,0

GOOD (3RD QUARTILE)	
1.2) Proportion of population under global poverty line	99,7
1.6) Access to financing for farmers	75,0
3.1) Diet diversification	73,2
2.1) Sufficiency of supply	55,6
3.4) Protein quality	55,5
3.3) Micronutrient availability	54,4
1.3) Gross domestic product per capita (US\$ PPP)	16,6

WEAK (BOTTOM QUARTILE)	
2.4) Volatility of agricultural production	56,2
2.5) Political stability risk	23,5
2.6) Corruption	0,0
3.2) Nutritional standards	0,0

Figure 3 - Food Security Indicators of the Republic for 2017, grouped by quartiles (result 0-100, where 100=best)

Note-compiled by the author on the basis of sources [12]

In 2107 year can be attributed to very good indicators: the availability of food programmers – 100 (the best and highest estimate) and tariffs for agricultural imports – 83.8. Good indicators include: the share of the population in the global poverty – 99.7 (also high), farmers access to financing – 75.0, diversification of ration – 73.2 (although in Kazakhstan the ration is becoming less diverse), the adequacy of supply – 55.6, the quality of protein – 55.5, the presence of trace elements - 54.4, GDP per capita – 16.6. Also, according to figure 3, moderate and weak levels are distinguished. To weak level relates primarily to: instability of agricultural production – 56.2 risk political stability is 23.5, corruption - 0.0, food standards – 0.0.

## CONCLUSION

At this stage of development, ensuring the country's food security is one of the most important conditions for the prosperity and well-being of any nation and country. The reliability level of food security is achieved due to the necessary volumes of food production in the country, the availability of financial resources for the import of the necessary food, with a slight degree of vulnerability supply in the event of any complications and violations in the international food supply.

For the Republic of Kazakhstan, the problem of providing food to the population is one of the key and most important tasks. First of all, this is due to the fact that with the increasing influence of the global crisis, the decline of the production process in all sectors of the economy. Therefore, in the context of lower oil and raw material prices in the world markets, one of the most important sectors of the economy in the Republic is agriculture, which contributes to the recovery of the state from the crisis and give a new impetus to the strategy of export diversification. In Kazakhstan the agro-industrial complex has a significant potential, which indicates a significant amount of farmland, a large labor potential of rural areas; favorable climatic conditions for the cultivation of crops; large potential of pasture areas for breeding and livestock.

The creation of such conditions for the further development of a stable food supply to the population in the country, regardless of internal and external threats, will be an important condition for the achievement of food independence by the state or its regions. Ensuring and creating sustainable food security the state should be implemented at all levels of government, that is, from the Republican, regional and ending with local authorities, including economic entities of agriculture; it should take into account all areas that are aimed at increasing the competitiveness of agriculture in the Republic, regions, agricultural sectors and areas, production process, agricultural products (services) and agricultural entities.

In Kazakhstan one of the priority directions of ensuring food security should be the strategy implementation, that is, the development of certain areas aimed at improving the competitiveness of the agro-industrial complex. In these areas it is necessary to identify certain (specific) goals and objectives, indicators and indicators that will form a competitive agricultural production with the subsequent implementation of these products, the mechanism of the above processes, the projected results; state support is also provided, which ensures the development of the agro-industrial complex, the growth of its competitiveness and sustainable and reliable food security.

It is necessary to create conditions for strengthening competition in local food markets, where the concentration of resources at the domestic level is of particular importance. Along with the experienced, breeding and breeding centers that provide the necessary level of the gene pool in agricultural production, a significant place in strengthening the competitive position of the agro-industrial complex should be given to agricultural entities of regions and regions that are located in more favorable climatic conditions, using modern resource-saving technologies. Therefore, those agricultural producers, which are already effectively managing, could accumulate financial resources with great effect and return.

## REFERENCES:

- 1 Message of the President of the Republic of Kazakhstan - Leader of the nation N.Nazarbayev to the people of Kazakhstan «Strategy Kazakhstan-2050»: a new political course of the established state», December 14, 2015 (date of the application 20.10.2018).
- 2 Kulikova L.V. (2014) Food security: problems and directions of ensuring. Bulletin of Tver state University. Series: Economics and management. - № 1. P. 226-233.



- 3 Nazarenko V.I. (2011) Food security in the world and in Russia. - M.: Monuments of historical thought. - 286 p.
- 4 Tokobaye, N. K. (2016) Ensuring food security of the Kyrgyz Republic in modern conditions. Author's abstract on competition of a scientific degree of c.e.s. Bishkek.- 28 p.
- 5 Espolov T.I. (2013) Food security: opportunities and priorities. Agroalim.- №3 (44). P. 38-39.
- 6 Kaigorodtsev A.A. (2006) Economic and food security of Kazakhstan. Issues of theory, methodology, practice. Ust-Kamenogorsk: Media Alliance. - 384 p.
- 7 Large political encyclopedias [Electronic resource] / ed. by A. Belyakova and O. Matveycheva. - URL: <http://www.politike.ru/dictionary/839> (date of the application 23.10.2018).
- 8 Serova E., Khramova I. and others. (2001) Food security of the country: agro-economic aspect. Institute of economy of transition.:M.-137 p.
- 9 The agricultural sector of the USA in the late twentieth century (1997). Ed. by, M.: RAS Institute of USA and Canada.-396 p.
- 10 Akhmetov K. (2005) Study of the level of security of the population cream farm in the Republic of Kazakhstan. Karzhy-karazhat. Finance of Kazakhstan.-№ 3. P. 64-66.
- 11 Kudryashova A.A., Presnyakova O.P. (2007) Food security: indicators, criteria, categories and scale. Food industry. - № 8.- P. 18-21.
- 12 Global Food Security Index (2017) Internet source: [http:// foodsecurityindex.eiu.com](http://foodsecurityindex.eiu.com)<http://foodsecurityindex.eiu.com> (date of the application 26.10.2018).
- 13 Analytical portal. (2017) Internet source: [http:// gtmarket. ru/ news / 2016 / 01/29/729](http://gtmarket.ru/news/2016/01/29/729) (date of the application 14.11.2018).
- 14 State program of development of agriculture of the Republic of Kazakhstan for 2017-2021.
- 15 What was the 2017 year for agriculture (2018) Internet source: [hozajstva](http://hozajstva.kz) (date of the application 14.11.2018).
- 16 Consumption of food by the population of Kazakhstan. (2017) Internet source: <http://ranking.kz/ru/a/reviews/potreblenie-produktov-pitaniya-naseleniem-rk-2016-god> (date of the application 14.11.2018).

### РЕЗЮМЕ

Основной целью статьи является анализ современного состояния продовольственной безопасности и выявление основных параметров, оказывающие влияние на нее. В работе были исследованы существующие проблемы продовольственной безопасности в Республике Казахстан и выявлены возможные пути их решения.

### ТҮЙІН

Мақаланың негізгі мақсаты азық-түлік қауіпсіздігінің қазіргі жай-күйін талдау және оған әсер ететін негізгі параметрлерді анықтау болып табылады. Жұмыста Қазақстан Республикасында азық-түлік қауіпсіздігінің проблемалары зерттеліп және оларды шешу жолдары анықталынды.