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FOOD SECURITY OF KAZAKHSTAN AT THE PRESENT STAGE OF DEVELOPMENT

The current state of food security in Kazakhstan is considered. Today, the population still faces food insecurity, namely the consumption of so much food when a person is hungry. The authors found that in the context of recent events, the severity of food insecurity is getting worse. Therefore, Kazakhstan is focusing more and more on food security issues in the context of innovative development. The article analyzed the profile of Kazakhstan according to the global food security index and found that the achieved level of economic development of Kazakhstan, which is based more on traditional production technologies, including processing of raw materials, can not sufficiently meet the requirements and demands of the international market, which is a limiting factor for more intensive development of the Republic. The global food security index, which includes the level of food availability and consumption, the availability and availability of food, and the level of food quality and safety, is also reviewed in more detail. A comparative analysis of the food security index between Kazakhstan, China and the Asia-Pacific region is given. In the course of the analysis the main directions of ensuring food security such as: increase of competitiveness of agriculture and product quality, the development of export-oriented production, the development of selection-genetic and technological modernization of agriculture, the introduction of high technology, etc.

Keywords: food security, consumption, quality, index, agriculture, economic development, accessibility, infrastructure, public expenditure, nutrition surveillance.

Кілт сөздер: азық-түлік қауіпсіздігі, тұтыну, сапа, индекс, ауыл шаруашылығы, экономикалық даму, қолжетімділік, инфрақұрылым, мемлекеттік шығындар, тамақтануды қадағалау.

Ключевые слова: продовольственная безопасность, потребление, качество, индекс, сельское хозяйство, экономическое развитие, доступность, инфраструктура, государственные расходы, надзор за питанием.

JEL classification: A11

Introduction. At the present stage of development, more than 700 million people lack food, which suggests that the amount of food consumed has decreased to the level of food shortage among the population in some countries. If we look at food security more broadly than acute shortage and hunger, it turns out that about 17.2% of the world's population, or 1.3 billion people, experience moderate food shortages, that is, they do not have regular access to a full and balanced diet [1]. This trend may become a wake-up call for many countries and as a result, today there is a need to pay more attention to food security issues.

It is also worth noting that during the crisis and the economic damage caused by it, the importance of food security issues has increased, which affected approximately 96 million people in the world. Since 2015, the level of food shortage has been increasing, for example, in 2019-2020 it increased from 8.0% to 9.3%, and in 2021 it reached 9.8%. In 2021, there were from 702 to 828 million hungry people in the world, and since the beginning of the COVID-19 pandemic, their number has increased by 150 million: by 103 million people in 2019-2020 and by another 46 million in 2021. It is important to note that in the near future around the world about 670 million people, or 8% of the world's population will suffer from hunger and by 2030 this figure will not change much compared to 2015 [2].

It is also worth considering such factors as the consequences of the escalation of the Russian-Ukrainian conflict have affected global supply chains and created a wide range of problems, which include rising prices for raw materials and goods, reorientation of transport corridors in the region. At the same time, even before the conflict in Ukraine, world food prices reached a historic record level. So in February 2022, the average value of the FAO food price index was 140.7 points, which is as much as 20.7% higher than in January last

year and exceeded the previous record figure of February 2011 by 3.1 points. By the end of March, an even greater increase in prices is expected, so in the European Union, inflation in annual terms is expected to reach a record level of 7.5%, in the United States at a level of more than 8%. International experts almost unanimously declare that in the coming months the price increase will continue and this will lead to an increase in the cost of living around the world. The rapidly changing world has shown that there is a problem of assessing the real state of stocks of products as vital consumer goods in the regions and in the republic as a whole. And as a result, in modern conditions, Kazakhstan has begun to pay more and more attention to issues of sustainable development and food security of the country. Which ultimately determines the relevance of the topic and makes it necessary to conduct more in-depth research on assessing food security in the country.

Therefore, the main purpose of the article is to assess food security in Kazakhstan and offer recommendations aimed at improving the country's food security. The scientific novelty of the article lies in the fact that the authors assessed the country's food security according to the data of the Bureau of National Statistics of the Republic of Kazakhstan and supplemented with data from the global food security index report, the authors also gave the main directions for ensuring the country's food security

Literature review. The methodological basis of this study was the scientific works of leading scientists in the field of food security, the results of applied research on the current state of food security and the problems of its development in the world [3]. The role of food security is very important in the works and a lot of domestic and foreign scientists research this theme. For example, according to Tai-Yu LinYung-ho ChiuWei-Ze Xu, about 88 million tons of food is wasted in Europe every year, which makes it one of the most serious regions for food waste in the world [4]. It is also worth paying attention to the definition of food security, which was proposed at the World Food Summit in Rome in 1996: "food security exists when, at any time of the day, all people have physical and economic access to a sufficient amount of safe and nutritious food that allows them to meet their nutritional needs and preferences for active and healthy lifestyle".

In turn, in works Yovok K. and Gnedeka T. decided that The problem of food security at the household level is recognized as a global health concern, particularly in developing countries. Ensuring food security, at the macro level, should aim at expanding production through agricultural supply. However, variability in agricultural supply can lead to food insecurity, hence the need for buffer stocks, balance-of-payments stabilization, and food aid policies and programmes [5]. As for the interpretation from the point of view of the Food and Agriculture Organization of the United Nations (FAO), this organization gives the following interpretation - food security is a functioning system that provides the population of the country with all the necessary food according to physiological standards. FAO experts determine the degree of food security according to the assessment of grain reserves in the world, grain production per capita.

It is worth noting that when writing the article, the information base of this study was the data of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan - the Bureau of National Statistics, plans of the Government of the Republic of Kazakhstan, reference materials and reports - FAO, IFAD, UNICEF, WHO, as well as materials that were collected and processed by the authors.

In the course of writing the article, the classical general scientific methodology of analysis was used, namely general and special methods of scientific analysis, such as: induction and deduction, analysis and synthesis, a systematic approach, a graphical method - visualization of the image of the results. Historical and comparative analysis of the development of food security in the country is also applied. The scientific and methodological apparatus of the study included a causal relationship, an ongoing analysis of the ongoing changes in food security in the country.

Results. Today, the country's food security issues are considered one of the most important aspects that has a significant impact on ensuring the preservation of sovereignty and governance of the country. Currently, Kazakhstan has a high potential for the development of the agro-industrial complex and the ability to provide the population of the republic with almost all types of food products in accordance with scientific nutrition standards [6, 7].

At this point in time, it is worth noting that the economic consequences of the COVID-19 epidemic and the measures taken to prevent it have led to an increase in food prices and as a consequence, one can observe the economic unavailability of healthy nutrition in many countries in the world [2]. As a result, to a large extent, the government's success in increasing the level of food security depends on the country's ability to withstand various types of threats and disasters, the level of agricultural development, the growth of basic agricultural indicators, for example, the gross harvest of major crops, the production of certain types of livestock products, etc. [9]. Therefore, let's consider the gross harvest of agricultural crops in the Republic of Kazakhstan, the data of which are presented in Figure 1.

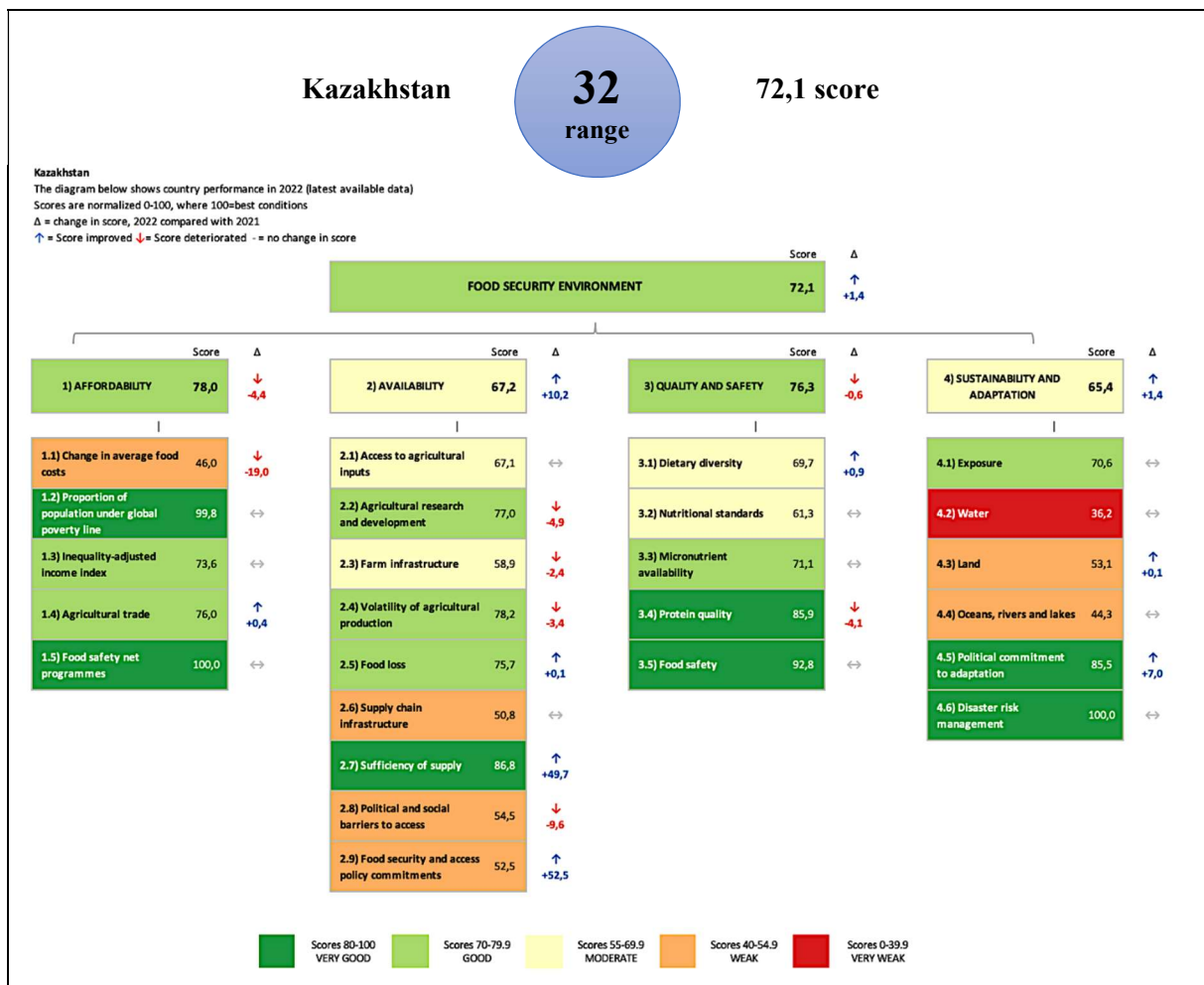


Figure 1. Profile of Kazakhstan according to the global Food Security Index for 2021*

* Compiled by the authors based on the source [9]

According to Figure 1, at the present stage of development, the Republic of Kazakhstan ranks 32nd in the global food security index – 72.1 points, while the strengths of the country's food security include: the proportion of the population below the global poverty line 99.8 points; the food security program 100.0 points; sufficiency of supplies 86.8 points, protein quality – 85.9 points etc. At the same time, the weaknesses include: water - 36.2 points.

At the same time, it should be borne in mind that the achieved level of economic development of Kazakhstan, which is based more on traditional production process technologies, including processing of raw materials, cannot sufficiently meet the requirements and demands of the international market, which is a deterrent for more intensive development of the republic.

As a result, the level of competitiveness of domestic goods produced in the country does not fully meet the modern requirements of world markets.

Let's take a closer look at the global food security index of Kazakhstan: its constituent elements according to Figure 2. To date, the index includes:

- the accessibility index is in 49th place and is 78 points, which is an increase of 9 points compared to the global average. It is also worth noting that the highest increase compared to the average level in the world is the food program program: by 27.6 (100 points – rating 1), the decrease occurred in the proportion of the population that is below the global poverty line – (-24.7) – 99.8 points and is in 12th place;

- the assortment is 67.2 points and is in 23rd place, which is 9.4 points higher than the global average. The highest increase in the index is agricultural research and development compared to the global average – by 29.9, which is 77.0 points (7th place). The most significant decrease occurred in the following index: political and social barriers to access – (-4.2) – 54.5 points (62nd place) and compared to the previous year, this indicator decreased by (-9.6);

- the quality and safety index is in 32nd place, which is 76.3 points and fell by (-0.6) compared to the previous year, but at the same time it is 10.4 points higher than the global average index. It is also worth noting that the highest increase is in protein quality and food safety, which is 17.4 and 16.4, respectively, compared to the global average index. The decrease is observed in the index of the standard of nutrition – by (-2.4) compared to the average index in the world;

- the index of sustainability and adaptation is 65.4 points and is on the 22nd place and compared to the global average index. The highest index here is disaster risk management, which is 100 points and is in 1st place. The lowest water index, which is only 36.2 points and is in 57th place and also lags behind the world average index by (-5).

Thus, according to the global food security index of Kazakhstan, there is an improvement and growth compared to the previous year, in other categories, according to the analysis. Now we will conduct a comparative analysis between Kazakhstan and Germany, according to the data of the global food security index for 2020 (Figure 2).

According to Figure 2 and the report on the global food security index, Kazakhstan received 72.1 points in the overall situation in the field of food security and lags behind Germany - 77 points, but at the same time exceeds the world average by 9.9 points (62.2 points in total) and takes 32nd place as a result. Let's take a closer look and start with the availability index. According to this index, Kazakhstan is lower than Germany – 78.0 points and 87.9 points, respectively, but above the world average – 69.0 points and eventually ranks 49th. Regarding the assortment index, Kazakhstan is higher than Germany – 67.2 and 67.0 points, respectively, also higher than the world average – 57.8 points and ranks 23rd, which compared to last year remained in the same place. As for the quality and safety index, Kazakhstan is 76.3 points behind Germany in these parameters – 79.9 points, but above the global average – 65.9 points and ranks 32nd – the same as last year. Also, according to the sustainability and adaptation index, Kazakhstan has 65.4 points, which is lower than the German index – 70.8 points, but higher than the global average – 54.1 points and ranks 22nd. Ultimately, Kazakhstan has a good position on the global food security index, but at the same time there are areas of activity where it is possible to improve its indicators.

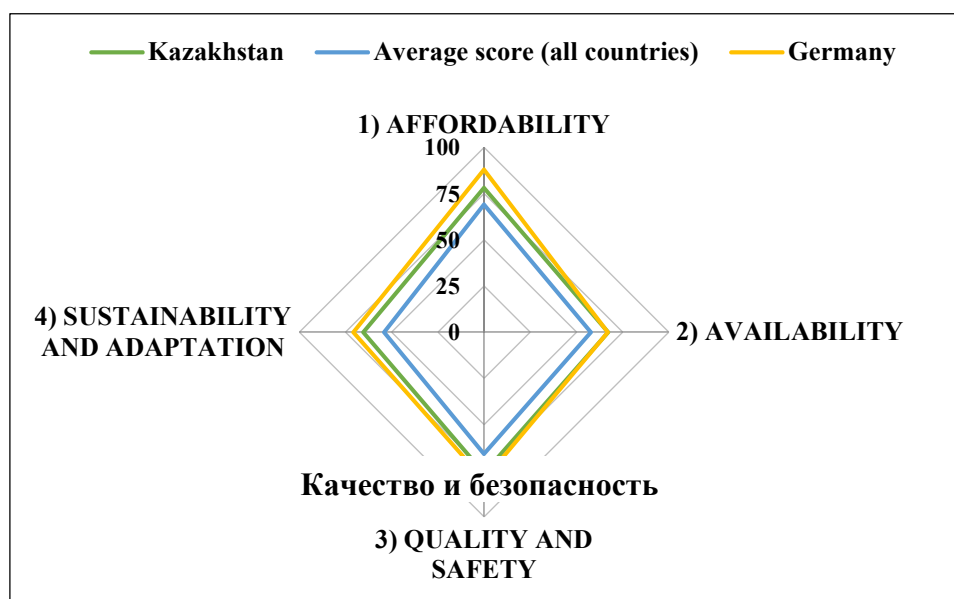


Figure 2. Global Food Security index of Kazakhstan, Germany and the average score for the world*

* Compiled by the authors based on the source [9]

Discussion. Therefore, Figure 3 shows the main directions of ensuring the country's food security, according to a brief overview of food security and nutrition in the world – 2022.

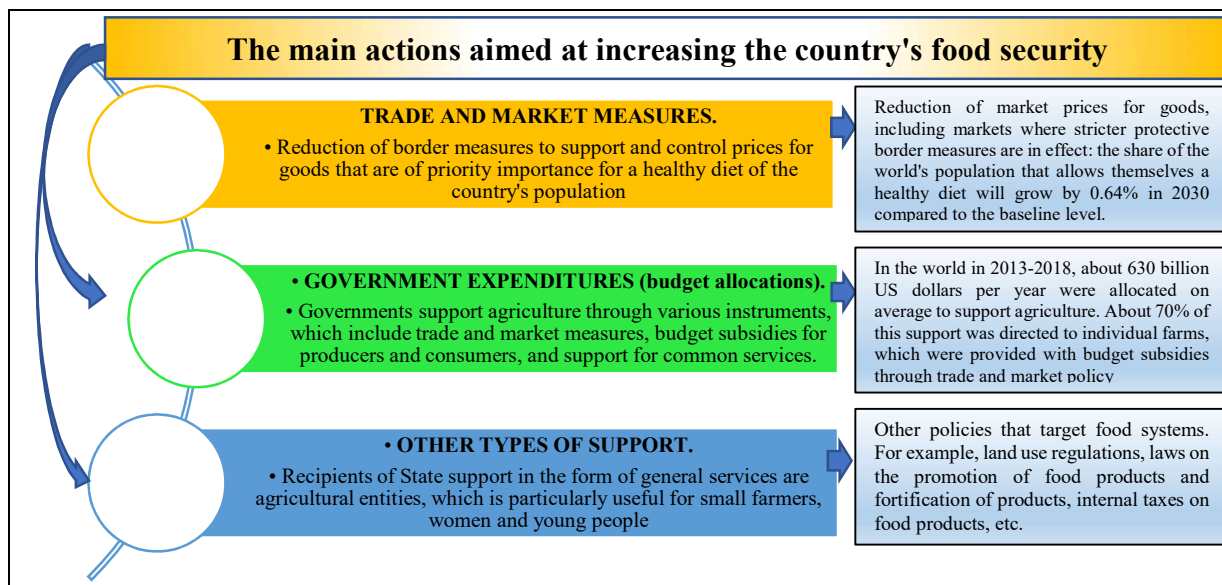


Figure 3. The main actions aimed at improving the country's food security*

* Compiled by the authors

Thus, one of the main directions of ensuring food security can also be the growth of the competitiveness of agriculture and the quality of manufactured products. One of the aspects of this direction can be proposed for the further development of small-scale production of agricultural products in private subsidiary farms. Since it is this aspect that has a simultaneous impact on the growth of employment of the rural population and the further development of food security, which leads directly to an increase in the income of the population, its solvency, and ultimately is a factor in the revival of agricultural production, the engine of trade growth, etc. Also, we should not forget about the formation and further development of export-oriented production, but this is not to the detriment and taking into account the internal needs of the country, not to the detriment of the country's food security. According to the global food security index, in Kazakhstan, public spending on agricultural R&D is only 3.3%, therefore, the development of breeding, genetic and technical and technological modernization of the agro-industrial complex and the introduction of high-tech technologies are becoming particularly relevant and important for the growth of the country's food security. And as a result, we should not forget about the importance of the regions [10] in the development of food security, namely, increasing the contribution of the regions to the formation of the country's food resources.

Conclusions. Today, food security can be compared in importance with environmental and physical security, which guarantees human survival, since food is considered the basic human need, that is, essential products, and without them it is impossible to support the life of the population of the country. Therefore, the most important and responsible task of the country is to maintain food security at the proper level of development. The main conditions for achieving food security in the country are: the availability of food in the required quantity and quality for the population of the country; the use of high-quality products in such quantities as will be sufficient for a full diet; the proper level of turnover of production processes in the agricultural and food industry; for various social groups, economic and financial access to food. It should be noted that the main condition for achieving food freedom of the country and its regions is the creation of conditions for uninterrupted provision of citizens with food, regardless of internal and external threats. Ensuring and creating sustainable food security of the country should be carried out at all levels of government: starting from the republic, district and local authorities and ending with agricultural organizations.

Thus, the authors assessed the country's food security and revealed that today the population of the country has reduced the consumption of food for a certain range of products as a result of the growth of food inflation in the country, the rise in price of products, low wages of the population, etc. It is also worth noting that today Kazakhstan ranks 32nd in the rating of the global food security index, while the strengths of the country's food security include: food security program; sufficiency of supplies, protein quality. At the same time, the weaknesses include: drinking water.

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ДАМУДЫҢ ҚАЗІРГІ КЕЗЕҢІНДЕГІ ҚАЗАҚСТАННЫҢ АЗЫҚ-ТҮЛІК ҚАУІПСІЗДІГІ

Андатпа

Қазақстандағы азық-түлік қауіпсіздігінің қазіргі жағдайы қаралды. Бүгінгі күнге дейін халық азық-түлік қауіпсіздігінің жетіспеушілігімен бетпе-бет келеді, атап айтқанда, адам аштыққа ұшыраған кезде мұндай тағамды тұтыну. Авторлар соңғы оқиғалар жағдайында азық-түлікке сенімсіздік күшейе түсетінін анықтады. Сондықтан Қазақстан инновациялық даму жағдайында азық-түлік қауіпсіздігі мәселелеріне көбірек көңіл бөлуде. Мақалада азық-түлік қауіпсіздігінің жаһандық индексінің деректеріне сәйкес Қазақстанның бейініне талдау жасалды және шикізатты өңдеуді қоса алғанда, өндірістік процестің дәстүрлі технологияларына негізделген Қазақстанның экономикалық дамуының қол жеткізілген деңгейі халықаралық нарықтың талаптары мен сұраныстарына жеткілікті дәрежеде жауап бере алмайтындығы анықталды, бұл республиканың неғұрлым қарқынды дамуы үшін тежеуші фактор болып табылады. Сондай-ақ, азық-түлік өнімдерінің қолжетімділігі мен тұтыну деңгейін, азық-түлік өнімдерінің болуы мен қол жетімділігін, азық-түлік өнімдерінің сапасы мен қауіпсіздігі деңгейін қамтитын азық-түлік қауіпсіздігінің жаһандық индексі егжей-тегжейлі қаралды. Қазақстан, Қытай және Азия-Тынық мұхиты аймағы арасындағы азық-түлік қауіпсіздігі индексіне салыстырмалы талдау жасалды. Жүргізілген талдау барысында азық-түлік қауіпсіздігін қамтамасыз етудің мынадай негізгі бағыттары ұсынылды: ауыл шаруашылығының бәсекеге қабілеттілігін және өнім сапасын арттыру, экспортқа бағдарланған өндірісті дамыту, АӨК-ті селекциялық-генетикалық және техникалық-технологиялық жаңғыртуды дамыту, ғылымды қажетсінетін технологияларды енгізу және т. б.

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ПРОДОВОЛЬСТВЕННАЯ БЕЗОПАСНОСТЬ КАЗАХСТАНА НА СОВРЕМЕННОМ ЭТАПЕ РАЗВИТИЯ

Аннотация

Рассмотрено современное состояние продовольственной безопасности в Казахстане. Сегодня до сих пор население сталкивается с отсутствием продовольственной безопасности, а именно потребление такое количество пищи, когда человек испытывает голод. Авторами было выявлено, что в условиях последних событий усугубляется острота продовольственной незащищенности. Поэтому Казахстан в условиях инновационного развития все больше и больше сосредоточивается на вопросах продовольственной безопасности. В статье было проанализирован профиль Казахстана согласно данным глобального индекса продовольственной безопасности и было выявлено, что достигнутый уровень экономического развития Казахстана, который основан больше на традиционных технологиях производственного процесса, включая обработку сырья, не может в достаточной мере отвечать требованиям и запросам международного рынка, что является сдерживающим фактором для более интенсивного развития республики. Также более подробно рассмотрен глобальный индекс продовольственной безопасности, который включает в себя уровень доступности и потребления продуктов питания, наличие и доступность продуктов питания, уровень качества и безопасности продуктов питания. Дан сравнительный анализ индекса продовольственной безопасности между Казахстаном, Китаем и Азиатско-Тихоокеанским регионом. В ходе проведенного анализа были предложены основные направления обеспечения продовольственной безопасности такие как: рост конкурентоспособности сельского хозяйства и качества продукции, развитие экспортно-ориентированного производства, развитие селекционно-генетической и технико-технологической модернизации АПК, внедрение наукоемких технологии и т.д.

