RUSSIAN-UKRAINIAN CONFLICT AND ARMENIA'S FOOD SECURITY RISKS[1]

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Introduction: In international relations, the world's superpowers use their economic and geographical advantages as a weapon in accordance with their interests. In the current environment, more emphasis is placed on economic and political sanctions. The instrument of economic sanctions is primarily the restriction of international finan-cial transactions, mutual visits, as well as trade in food and fuel. Here, we are seeing its material manifestations in 2022 in the context of the Russian-Ukrainian crisis that began on February 24. Since globalization has wrapped the world in a web of political and economic integration between countries, interstate conflicts affect not only the direct participants, but also their allies. By the way, the Russian-Ukrainian conflict affects trade and economic relations with Russia, including with the EAEU countries. In this case, a more difficult situation is created for countries that are closely interconnected with the center and have relatively few alternatives. By the way, in such a situation, countries that do not have access to a wide range of food and fuel imports and affordable logistics are especially vulnerable. The article, based on current information and retrospective analysis, assesses the threats to the food security of Armenia and possible ways to overcome them in the context of the Russian-Ukrainian military crisis.

Literature review: Food security is one of the most important components of economic security and is always in the focus of attention of foreign and domestic economists. With the rapid growth of the world's population, the demand for food is increasing. Meanwhile, natural and man-made factors reduce the resource potential of the agri-food sector and reduce the world's ocean fish stocks. The Food and Agriculture Organization of the United Nations (FAO) is working hard to address and address these issues. The FAO's annual analysis of The State of Food Security and Nutrition in the World, published by FAO in 5 languages, provides FAOSTAT statistics and a variety of studies, especially as a methodological basis for food research. The economic literature pays special attention to the evolution of the concept of food security [Belugin, 2019, 122-143], state food security models [Plotnikov, Suleimanova, 2019, 7-12], integral indicators

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[Zhiryaeva, 2020, 49-67] of food security assessment, forecast of food demand related to demographic developments, alternative opportunities to meet that demand and other issues [Avetisyan, 2014, 96].

Research methodology: In order to present the issues discussed in this article in more detail, we have used the Food and Agriculture Organization of the United Nations, the Eurasian Economic Commission, the Statistics Committee of the Republic of Armenia, as well as the CIS food security database, food and foreign trade statistics and the Russian-Ukrainian crisis current analysis.

Scientific novelty: The Russian-Ukrainian crisis has created very realistic conditions for assessing Armenia's food security risks, when the potential for food self-sufficiency has become more than obvious. The scientific novelty of the article is that in the conditions of geopolitical conflicts the importance of diversification of the RA foreign food markets is revealed. The need to expand state support for strategically important areas of local agricultural production, economical use of food and reduction of losses is substantiated.

Analysis: Currently, when the Russian-Ukrainian crisis is on a large scale, when the number of people killed and injured is increasing, when new cities and settlements are being destroyed and the end of that catastrophe is not visible, world analysts predict a famine war and a bread crisis. It is already clear that this war is leading to a shortage of food and rising prices in the world. Due to the ongoing conflict, Ukraine is losing crops and Russia is losing export markets. In fact, sharp inflation is expected for rich countries, and poor countries for inflation and riots. Such a conclusion has good grounds, as Russia and Ukraine account for about a third of the world's wheat exports. To be more precise, Russia was the first among the countries exporting wheat in 2021, and Ukraine was the fifth[1]. The latter also had a leading position in the export of corn, especially sunflower oil (about 80%)[2].

The Financial Times cites that at the beginning of the Russian-Ukrainian events, the price of wheat on the Chicago Board of Trade immediately increased by 50%. As of March 9, the price of wheat in the world market was already more than 60% higher than at the beginning of the year.Prices have fallen slightly since March 10, but analysts expect them to rise again[3]. The export of grain from Ukraine has now been practically stopped. Moreover, even if the hostilities end at this point, spring sowing and food exports are still seriously endangered. "It is unclear what the condition of the crop collection, storage, transportation and export infrastructure will be. Besides, the opportunities

[1] https://www.kp.ru/daily/27375.5/4557207/
[2] https://latifundist.com/analytics/23-obzor-rynka-zernovyh-kultur-2021-eksport-proizvodstvo
[3] https://www.kp.ru/daily/27375.5/4557207/

for exporting agricultural products from the Ukrainian ports of the Black Sea are already few or even completely zero"[1]. Russian deliveries continue, but due to economic sanctions, there are failures that create problems not only for Russia, but also for countries that import food and mineral fertilizers from this country. In addition to the reduction of physical exports, the Russian-Ukrainian conflict due to insufficient fertilizer exports will have a negative impact on agricultural production in the European Union and a number of other countries. The price of fertilizers has also risen sharply, as the main suppliers of cheap fertilizers so far have been Russia and Belarus. Forecasts show that "the costs of farmers around the world will increase. Famine can threaten some of the poorest countries. The situation is already complicated by the coronavirus epidemic. A number of experts are already recalling the Arab revolutions of 2011, one of the reasons for which was the rise in the price of bread"[2]. Nevertheless, it should be noted that in the 2020/21 agricultural year, the world wheat harvest set a new absolute record 776.5 million tons. According to an April report by the US Department of Agriculture, this result was made possible by an increase in harvest area of 5.02 million hectares or 2% and a higher average yield of 3.5 t/ha. Harvest areas increased especially in Australia (+2.8 million hectares), India (+2.0 million hectares) and Russia (+1.4 million hectares). At the same time, the largest reduction of the area took place in EU countries (-1.5 million hectares). India is in the top five in terms of wheat sown area 31.4, Russia 28.7, China 23.4, the USA 14.9 and Australia 13.0 million hectares. The following countries have the highest yield of wheat: Germany 7.53 t/ha, France 6.8 t/ha, Egypt 6.4 t/ha, China 5.7 t/ha. Leading countries in wheat production are China, India and Russia. However, their total share has decreased from 46% in the agricultural year 2019/20 to 42% in 2020/21[3].

This threat became more substantial when on March 10, 2022, the Russian Customs Subcommittee approved a decision to temporarily ban the export of grain crops to the EEU countries. "Prime Minister Mikhail Mishustin has signed a decree temporarily banning the export of grain to the Eurasian Economic Union (EEU), as well as the export of white sugar and cane raw materials to third countries. This decision was made to protect the domestic food market in the face of external restrictions. The ban on grain exports will last until June 30, on the export of sugar until August 31, 2022. Exports of grain crops are limited to wheat and meslin, rye, barley and corn. Exceptions are humanitarian aid and international transit supplies. "Deputy Prime Minister Abramchenko has previously clarified that exports under the quota will be possible under the licenses of the Russian Ministry of Industry and Trade, and sugar exports will be possible in accor-

[1] https://www.dw.com/ru/vojna-vedet-k-globalnomu-deficitu-pshenicy-i-rezkomu-rostu-cen
[2] https://www.kp.ru/daily/27375.5/4557207/
[3] https://latifundist.com/rating/top-10-stran-proizvoditelej-pshenitsy-v-202021-mg

dance with separate decisions of the Ministry of Agri-culture"[1]. In terms of this decision, it is clarified that "the temporary ban on exports will prevent the resale of agricultural products, given that the EEU countries have already made the necessary purchases in the current season in the duty-free regime"[2].

Armenia, as shown in Table 1, imported about 266 thousand tons of wheat in 2021, 99.7% of which came from Russia. The country also accounted for 99% of the imported 24.6 thousand tons of flour, 88.58% of pasta and 32.7% of rice. As the Russian-Ukrainian crisis has shown, such a monopoly position of the exporting country is risky. Therefore, it is necessary to look for sensible ways to diversify it, at the same time to stimulate local production and increase the self-sufficiency of food items, especially the essentials.

Table 1. Data on wheat, flour, pasta and rice imported to Armenia (2020 and 2021)[3]

Name	2021 annual total	Exporting country	2020 annual total
Wheat	265599	264863 from Russia, 736 from Georgia	356329
Flour	24625	24345 from Russia, 64 from Italy, 134 from Belarus, 1 from Greece, 81 from Kazakhstan	23953
Pasta	10324	9138 from Russia, 1003 from Italy, 28 from PRC, 2 from France, 1 from Thailand, 10 from Belarus, 94 from Iran, 48 from Kazakhstan	11029
Rice	7596	3264 from Thailand, 946 from Iran, 2483 from Russia, 763 from India, 5 from Spain, 34 from Italy, 2 from Paraguay, 45 from the USA, 2 from Vietnam, 52 from the UAE	7118

The study shows that especially in recent years, the resource potential of the RA agriculture has not been fully used. For a sparsely populated country like Armenia, it is intolerable that only 50% of arable land is sown, and only 26% of total sowing is allocated to the main food crop, wheat (Table 2). Of course, this is mainly due to the low level of income from cereals. In grain-rich countries, the guarantee of a farmer's income is high yields and large-scale cultivation. Especially in the last two decades, the debate over the two main positions on the terms "food security" and "food self-sufficiency" has been ongoing. Without going into the details of the views of the parties, it should be noted that one group believes that food security is to satisfy the population with the necessary quantity and quality of food products at the expense of imported and domestically produced products, while the other side prioritizes local production. In our opinion, in order to give preference to this or that point of view, it is necessary to give a realistic assessment of the economic and geopolitical position of the country. Some of our partners point to Singapore's high food security record, claiming that the country has no agricul-

[1] https://rg.ru/2022/03/16/kabmin-zapretil-vyvozit-zerno-v-eaes-i-sahar-v-treti-strany.html
[2] https://www.kommersant.ru/doc/5251229
[3] Source: RA Ministry of Economy

ture but has the highest food security rates. In 2019, Singapore was the first of 113 countries in the world in terms of food security, and in other years, the rating of this country was quite high. At the same time, the "World Food Security Ranking" states in brief information: "In the first place, unexpectedly, is Singapore. A small country with an economy not based on agriculture at all. "But due to the high availability (both financial and technical: logistics, supply chain, etc.),

Table 2. Area of RA main agricultural crops, yield and gross harvest

Indicators	Area, thousand hectares		Yield, c / ha		Gross harvest, thousand tons	
	2020	2021	2020	2021	2020	2021
1. Total arable lands	444.0	444.0				
2. Total sown area	222.7	227.2				
of which						
2.1. Cereals and legumes	121.7	124.9	20.5	12.9	246.1	153.2
2.2.Including wheat	59.4	59.1	22.5	16.8	132.0	97.2
3. Potatoes	20.5	20.1	212.8	179.3	437.2	364.6
3. Vegetable and vegetable crops	25.3	24.0	323.8	313.0	819.4	751.2
4. Other crops	55.2	58.2				

Singapore was able to come first".Armenia and many other countries do not have the level of access to be able to fully meet the food demand of the population only at the expense of imported food. Finally, the Russian-Ukrainian conflict has once again shown that Armenia is in an unstable region in terms of security, so assessing the competitive advantages, it is necessary to increase the production of basic food products at the expense of our own production. In order not to consider this opinion naked, let us mention that, for example, we do not have a shortage of land and water resources for wheat production [Harutunyan, 2021, 107-111]. We also do not have seed production of high-yielding varieties, we do not have modern high-yield combine harvesters and infra-structure for loss-free and efficient post-harvest processes. We do not have an effective system of state support, which will allow us to partially mitigate the rise in prices for diesel fuel, fertilizers, agricultural maintenance services and insurance due to the rising dollar. Perhaps it is worthy to get acquainted with the cost of cultivating one hectare of wheat under irrigated agriculture (Table 3), calculate the income a farmer can receive in a year. Experience shows that in case of carrying out all technological processes, the ave-rage yield per hectare can be 4 t/ha, and the costs 336 thousand drams/ha (there are farmers providing 6-8 t/ha in the mentioned community). According to previous years, processing companies buy wheat for an average of 130 drams per kilogram of wheat, and this year the price may be 160 drams. Under these conditions, the producer's income from the sale of wheat will be 4000 x 160 = 640000 AMD, and the income 640000-336000 = 304000 AMD. If we take into account that in July 2021 the average monthly salary of 632410 employees of 55910 companies in Armenia was 206297 drams, it is not difficult to calculate that the annual income of a hectare of autumn wheat cultivator is equal to 1.5 months salary of an employee of those companies. This is one of the main reasons why more than half of the arable land is not cultivated. By the way, Akhuryan's example is an exception, as not all regions of the country are irrigated and in case of the mentioned expenses 40 c/ha yield will be provided.

Table 3. Costs of wheat cultivation and harvest per hectare in autumn, following the example of Akhuryan settlement, Shirak region[1]

N	Expenses	Price, thousand drams	N	Expenses	Price, thousand drams
1.	Down	30	9.	Fertilizer (6*8000 AMD)	48
2.	Soil compaction	20	10.	Injection	7
3.	Sowing	20	11.	The cost of herbicide	10
4.	The cost of seed (350kg*200 AMD-kg)	70	12.	Spring water	20
5.	Pull a groove	8	13.	Dispenser fee	20
6.	Dispenser fee	20	14.	Harvest	30
7.	Water fee	20	15.	Crop transfer	8
8.	Fertilizer with a tractor	15	16.	Other expenses	20
	Total				366

To sum up, the EU spends more than 50 billion euros a year, or 40.0% of the total EU budget, on agri-food policy measures. The majority of these funds (about 4/5) are directed in the form of subsidies to provide direct financial support to the villagers to maintain prices and, consequently, the required level of income. The remaining 1/5 of the budget's agricultural expenditures are directed to financing the sustainable development of rural settlements, including rural infrastructure[2]".

Conclusions: The analysis shows that the risks of food security in Armenia are obvious; the question "what to do" arises again. In our opinion, the logical way out of this situation, as evidenced by international experience, is the diversification of foreign trade in food products and state support for agriculture with efficient structures. Of course, the Armenian government also implements various state support programs for agriculture. However, due to imperfect structures, they are either not targeted or, due to limited financial resources, are not actually perceived by agricultural producers. Following the experience of EU countries, we offer producers direct financial support per unit of sown area for the production of strategic agricultural products to subsidize the prices of fertilizers, diesel fuel, seeds, necessary services and some other costs. For example, the support of at least 150,000 drams per hectare for the cultivation of grain crops will enable the producers to carry out the most necessary expenses without any problems. In order to

[1] Data provided by Akhuryan resident, experienced agricultural specialist Atom Matevosyan
[2] https://1economic.ru/lib/110746

make the most of the assistance, EU uses a tripartite agreement and a non-cash payment system between the state, the service bank and agricultural producers. In this case, the responsibility of the parties increases, the support costs and the result are weighted.

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Russian-Ukraninian conflict and Armenia’s food security risks

Key words: Russian-Ukrainian special operation, food, restrictions, self-sufficiency, supply, reserves, panic

Armenia is closely connected to the Russian market in terms of almost all imported goods. Although not very close, we also have trade relations with Ukraine. In the structure of Armenia's foreign and mutual trade, the share of Russia in 2021 was 28% of exports and 37.2% of imports, and the share of Ukraine was 0.9 and 2.8%, respectively. In terms of food products, Armenia imports from Russia 99% of wheat, 80% of corn, 97% of vegetable oil, more than 70% of margarine, 40% of sugar, 15% of dry milk, 13% of poultry, and finally about 70% of non-essential products, chocolate. More than 34% of poultry meat, 25% of dry milk, about 15% of butter, about 60% of soybean and 20% of confectionery were imported from Ukraine to Armenia. More than half of the demand for dry milk is met by imports from Belarus. That is why the Russian-Ukrainian crisis is also a threat to Armenia's food security.