The state and problems of food security ensuring in Russia

Tatiana Bukhtiyarova¹, Irina Artamonova² and Irina Baturina²,*

¹Russian Academy of National Economy and Public Administration under the President of the Russian Federation Chelyabinsk Branch, Chelyabinsk, Russia
²Kurgan State University, Kurgan, Russia

* E-mail: baturina76@mail.ru

Abstract. Most researchers adhere to the opinion that food security is the ability of the state, independently from other states and international organizations, to provide its citizens with safe and quality products that are enough for an active and healthy life. At the same time, sufficient food self-provisioning of the state increases the level of national security and ensures independence from other states. Achieving an optimal level of food security always relates to the need to level out and eliminate the consequences of various threats and risks. Threats to food security often arise simultaneously with a decline in revenue of most of the population, poorly developed social infrastructure, imbalances in the development of the agricultural and industrial sectors of the economy, etc. These positions define the research topic, the relevance of which is determined by the current implementation of food security and the identified problems of its provision.

1. Introduction

In the current economic conditions, global economy functioning is carried out in the context of globalization of all spheres of human activity. Integration processes in the economics of various states have led to an increase in the dependence of the national security system on the food self-sufficiency capabilities of individual states. Based on this, ensuring food security can be considered as one of the basic strategic tasks, both for Russia and for any other state [1]. The relevance of the present article is explained by the constant threat of a food crisis, both in individual countries and in the world as a whole, due to environmental degradation, climate change, natural disasters, and other similar factors [2, 3].

In every country in the world ensuring food security is a significant part of its international and socio-economic policy. It contributes to the trend development formation of the national economy towards its ideal state and, first of all, is connected with the agrarian policy of the country. Therefore, many researchers insist that food security policy should include the whole set of measures and actions that will not only promote effective development of the manufacturing sector, but also the development of FEA, storage, processing, fair distribution of basic foodstuffs, and stable socio-economic development of the village [4].

2. Methodology

The object of the present article is the Russian Federation's food security as an integral part of its national security. While studying and processing the collected materials, the authors used monographic research methods and techniques, comparative analysis, and analysis of the dynamics of
individual indicators, etc. The methodological basis of the study was the Russian Federation Food Security Doctrine issued in 2020, the purpose of which is to provide the domestic population with safe food in the sufficient volumes. The most noticeable sources are included in the references. The collected information was systematized, analysed, and presented by the authors in the form of abstracts, tables, and figures.

For the first time, the definition of "food security" was announced at the World Food Conference (Rome, 1974) and it implied "the ability of the state on a regular basis to provide each citizen with the basic foodstuffs that they need for their vital function" [5].

The first attempts to study the problems of food security in Russia were made in the early 20th century by Kondratiev N. D., Chayanov A. V., Bukharin N. I., and other significant scientists [6]. The term "food security" has been used most widely in Russian official documents and scientific literature since the second half of the 1990s [2]. At the present time, food security in Russia is carried out in accordance with the Russian Federation Food Security Doctrine, approved by the Decree of the President of the Russian Federation No. 20 dated 21.01.2020. The main provisions of the "Strategy of Russian Federation Economic Security for the period up to 2030" (approved by Decree of the President of the Russian Federation dated 13.05.2017 No. 208) were taken into account in the Doctrine, as well as the Food and Agriculture Organization of the United Nations (FAO) recommendations on the marginal share of imports and food stocks. The Food Security Doctrine has become the basis for the development and adoption of regulatory legal acts aimed at solving the problems of food security and the development of agriculture. The Doctrine relates to strategic planning documents and represents an official opinion on the goals, objectives, and trends of the state's social and economic policy in food security in Russia. Apart from that, the document defines the concept of "food independence of the Russian Federation" as the state's self-sufficiency "with the main types of domestic agricultural products, raw materials, and food" [7].

3. Results and discussion

It is possible to assess the citizens' food satisfaction by examining the data on agricultural production in the Russian Federation (Table 1).

| Foodstuff                        | 2016  | 2017  | 2018  | 2019  | 2020  | 2020 as % by 2016 |
|---------------------------------|-------|-------|-------|-------|-------|-------------------|
| Meat and meat products including by-products of category II and raw fat | 9853.9 | 10319.5 | 10629.7 | 10866.5 | 11222.0 | 113.88            |
| Milk                           | 29787.3 | 30185.0 | 30611.1 | 31360.4 | 32225.1 | 108.18            |
| Eggs, million pcs.             | 43514.5 | 44829.1 | 44900.9 | 44857.5 | 44909.6 | 103.21            |
| Potatoes                       | 22463.0 | 21707.9 | 22395.0 | 22074.9 | 19607.2 | 87.29             |
| Vegetables and gourds          | 15064.4 | 15426.7 | 15655.0 | 15889.7 | 15448.1 | 102.55            |
| Fruits and berries             | 3656.0  | 3262.1  | 3964.3  | 4178.5  | 4344.2  | 118.82            |

According to the source [8]

During the analysed period, there was a significant increase in the production of meat and meat products, as well as fruits and berries. The production of vegetables and eggs grew slightly. That happened against a drop of a decline in potato production, the second traditional food product for the Russian population, by almost 13%. The last was conditioned by the difficult weather conditions in 2020 that led to a decrease in potato yields in almost all farms of the country, except for the southern
regions, where the irrigation system was actively used. However, a number of researchers noted an imbalance in the structure of the "Milk" food group – with the current constant growth in milk production and, accordingly, an increase of milk and dairy products self-sufficiency, the Russian Federation remains dependent on imports of cheese, milk powder, cream, etc. [8, 9].

Changes in the dynamics of basic foodstuffs production led to a similar change in the volume of their consumption per capita. As for sugar consumption, the researchers noted that instead of the permissible 8 kg of sugar per year, the average resident of our country consumed 31…39 kg per year (this includes sugar used for cooking and contained in food and beverages). It also happened due to the decline in the real disposable income of the majority of the Russian population. That decline of the last few years resulted in shifting the focus from rising in price fruits to more affordable confectionery products [10].

In today's economy, monitoring the current state of food supply and determining the level of food self-sufficiency has become particularly relevant. Throughout the analysed period self-sufficiency level of the Russian Federation with fruits and berries remained low (36.5... 42.4 %), which was primarily due to the natural and climatic features of Russia. It is impossible to underestimate the fact that the quantitative targets of the 2020 Food Security Doctrine had been fully achieved for meat, practically achieved for potatoes, milk, and vegetables (Table 2).

| Table 2. The level of self-sufficiency in basic foodstuffs in the Russian Federation, %. |
|--------------------|--------|--------|--------|--------|--------|-----------------|
| Foodstuff          | 2016   | 2017   | 2018   | 2019   | 2020   | Deviation 2020 from 2016, (+,-) |
| Meat               | 90.6   | 93.5   | 95.7   | 97.4   | 100.1  | 9.5             |
| Milk               | 80.7   | 82.3   | 83.9   | 83.9   | 84.0   | 3.3             |
| Eggs               | 97.1   | 97.9   | 97.7   | 97.1   | 97.4   | 0.3             |
| Potatoes           | 93.2   | 91.1   | 95.3   | 95.1   | 89.2   | -4.0            |
| Vegetables and gourds | 87.4   | 87.6   | 87.2   | 87.7   | 86.3   | -1.1            |
| Fruits and berries | 36.5   | 33.1   | 38.8   | 40.2   | 42.4   | 5.9             |

According to the source [8]

That peculiar situation in the domestic food market was since, despite the consumption growth of most basic foodstuff (Table 2), the population was forced to spend a significant part of their income on purchasing it (Table 3).

| Table 3. Consumer spending dynamics of the Russian Federation's population (on average per household member), roubles/month. |
|-------------------------------|--------|--------|--------|--------|--------|--------|
| Indicator                      | 2016   | 2017   | 2018   | 2019   | 2020   | 2020 as % by 2016 |
| Consumer spending, total      | 16085.7| 16770.3| 17488.2| 19169.1| 18583.1| 115.53  |
| including food, soft drinks   | 5193.0 | 5230.3 | 5287.8 | 5 700.1 | 6 177.7 | 118.96  |
| The share of food expenses in total consumer spending, % | 32.3   | 31.2   | 30.2   | 29.4   | 33.2   | x       |

According to the source [8]
Interestingly, during 2017-2019, the share of consumer spending on food decreased with a gradual increase in their total amount. This phenomenon can be explained by the fact that the prices of food and other goods and services were growing at approximately equal rates and the population spent the bulk of their income on food. But in 2020, due to the coronavirus pandemic, the situation changed dramatically. The total disposable income of the population decreased, while food prices kept rising. The constant increase in food prices leads to their reduced availability, and, as a result, the weakening of Russia's food independence. It is necessary to take into account the fact that in the last ten years the growth of prices for food products has consistently been higher than prices and tariffs for other goods and services provided to Russians; what again clearly illustrates the upward trend in the share of spending on products (Figure 1).

![Figure 1. Dynamics of the consumer price index, %.

According to the source [8]

In addition to the rising food prices, one of the problems of food security ensuring is that, despite the increase in agricultural production, the demand for the number of food products (potatoes, eggs, bread) is declining due to a decrease in real incomes of citizens (Figure 2).

![Figure 2. Real disposable income of the population (to the previous year), %.

According to the source [8]

The authors of this article adhere to the point of view that the main obstacle to ensuring the food independence of the Russian Federation (through the achievement of the threshold indicators of the Food Security Doctrine 2020) is the overall economic situation in the country, which caused the differentiation of the population in terms of opportunities and needs, a decrease in real disposable incomes of the population, rising food prices, etc. Currently, the existing views on the food security problem indicate that the real incomes of the population should ensure a full and integral life, i.e., food
should be economically accessible. Only in this case can we talk about a satisfactory state of ensuring food security [9, 10, 11].

4. Conclusion
The determining factor in the food market development and ensuring food security is traditionally the level of agro-industrial complex development. Consequently, the stable development of the agricultural sector should be the main priority of state policy for the medium- and long-term [12].

At the meeting on the development of the agricultural industry held on 11.10.2021, President of the Russian Federation Vladimir Putin noted that the increase in indicators characterizing the activities of the agro-industrial complex was the result of systematic changes in that industry. The agricultural complex has become modern, introducing new technologies, and innovations. Considerable financial resources were allocated to the development of agricultural production (both at the expense of federal and regional budgets). The efforts of the state, business and educational organizations were combined to solve several key issues. The concentration of scientific, financial, and industrial resources of the agro-industrial complex, and proper planning of the processes'implementation should make it possible to effectively solve the most daunting challenges in the field of ensuring food security of the Russian Federation.

References
[1] Tikhomirova V A 2015 Bulletin of the REA named after G. V. Plekhanov 6 (84) 123-128
[2] Bukhtiyarova T I, Demyanov D G, Tenetko A A and Nemykina Yu S 2020 IOP Conference Series: Earth and Environmental Science Krasnoyarsk Science and Technology City Hall of the Russian Union of Scientific and Engineering Associations 22002
[3] Sharoshchenko I V, Cherkashina A V 2017 Fundamental research 8-2 458-463
[4] Artamonova I A, Baturina I N 2019 The main directions of agribusiness development in the currentcircumstances Collection of articles based on the materials of the III All-Russian (national) scientific and practical Conference Under the general editorship of S. F. Sukhanova 11-13
[5] Declaration on World Summit on Food Security (Rome, 16–18 November 2009) URL:https://www.un.org/ru/documents/decl_conv/declarations/summit2009_declaration.shtml
[6] Filippov R V 2016 Science Studies 8 4 URL:http://naukovedenie.ru/PDF/83EVN416.pdf.
[7] Decree of the President of the Russian Federation 2021 No. 20 dated January 21, 2020 "On Approval of the Food Security Doctrine of the Russian Federation".URL:https://www.garant.ru/products/ipo/prime/doc/73338425/
[8] Russia in numbers 2020 Short stat. sat. (Rosstat- M) pp 550
[9] Semin A N, Bukhtiyarova T I, Demyanov D G 2018 Agro-food policy of Russia 10 (82) 7-13
[10] Medvedeva T N, Roznina N V, Mukhina E G, Artamonova I A, Baturina I N, Farvazova E A 2019 IOP Conference Series: Earth and Environmental Science The proceedings of the conference AgroCON-2019 012010
[11] Omirbayeva D N 2016 A young scientist 10 (114) 806-809
[12] Kostrova Y B, Shibarshina O Y, Tuarmenskiy V V, Lyaschuk Y O 2020 IOP Conference Series: Materials Science and Engineering International Science and Technology Conference «FarEastCon 2019» 062022