

Food Security of Russia: Problems and Perspectives of Sustainable Development



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Abstract In the context of the outlined trend of transition to a multipolar world, achieving a high level of food security is one of the main tasks facing the country's leadership at the present stage of development. The Food Security Doctrine of the Russian Federation (developed in 2010) made it possible to take certain steps towards improving food security, as one of the main elements of the state's national security. However, in the context of the constant impact on Russia of a number of Western countries expressed in the form of imposing sanctions, as well as reciprocal counter sanctions imposed by the Russian Federation, the requirements set forth in the Food Security Doctrine need to be reviewed. The current Doctrine of Food Security does not take into account many aspects that may affect the level of food security of a country. In modern conditions of the formation of a socially-oriented economy, it is necessary to take into account a number of positions reflecting the standard of living of the population when developing and updating legislative documents. Economic digitalization requires a transition to a new level of monitoring of the main criteria reflecting not only the level of state food security but also other macroeconomic indicators. Thus, today there is a need not only to adjust the current Doctrine of Food Security but also to amend a number of legislative documents based on large-scale research in this area with the involvement of specialists in various fields, both theorists and practitioners.

Keywords National security · Food security · Food security doctrine · Standard of living

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1 Introduction

In modern geopolitical conditions, ensuring national security and the socio-economic development of Russia is a paramount task of state policy that contributes to the effective protection of the country's national interests. Nowadays, the country has created a basis for the further growth of Russia's potential and its role in the changing polycentric world. The economic potential of Russia, given the instability of the world economy and the sanctions imposed by a number of countries against the Russian Federation, has demonstrated its ability to stabilize and gradually grow.

It is worth noting that the economic processes taking place both within the country and on the world stage are increasingly influenced by the political tools used by a number of countries to solve their geopolitical problems and leading to a decrease in the stability of the system of international economic relations. In order to prevent threats to Russia's national security, it is necessary to focus on strengthening domestic economic potential, as well as on raising the level of such national security subsystems as national defense, state and public security, improving the quality of life of citizens, etc. [5].

Improvement in the quality of life of citizens can be achieved by ensuring food security, which implies the mandatory achievement of food independence of the Russian Federation from other countries.

The Russian and international definitions of the term "food security" do not differ greatly from each other, though the Russian and international criteria for assessing food security differ quite seriously.

The Doctrine of Food Security of the Russian Federation approved by Decree of the President of the Russian Federation (January 01, 2010 No. 120) provides the following definition of food security: "Food security of the Russian Federation is the state of the economy of the country, which ensures food independence of the Russian Federation, guaranteeing physical and economic accessibility for every citizen of the country of food products that meet the requirements of the legislation of the Russian Federation on technical regulation, in volumes not less than the rational norms of food consumption necessary for an active and healthy lifestyle" [3].

However, the international definition of food security is based on the concept adopted at the World Food Summit held in Rome in 2009 and reads as follows: "Food security exists when all people always have physical, social, and economic access to sufficient safe and nutritious food to satisfy their diet needs and food preferences for an active and healthy life" [6].

Thus, it is obvious that the food security of Russia is interpreted mainly as food independence, i.e., "sustainable domestic food production in volumes not less than the established threshold values for its specific gravity in the commodity resources of the domestic market for the relevant products" [3]. It should be noted that in world practice, the main emphasis is made not on independence from food supplies from other countries, but on the ability of the population to have access to food in sufficient quantities and of adequate quality.

2 Materials and Methods

The main criterion for assessing food security in Russia is the share of domestic agricultural products in the total volume of commodity resources of the domestic market.

This criterion and others are presented in the Doctrine of Food Security of Russia until 2020. However, in January 2018, the Ministry of Agriculture, together with other departments, public unions, and associations, made a number of proposals for updating the existing Doctrine. Thus, for the first time, it was proposed to introduce production standards for domestic fruits and vegetables and increase the share of domestic oil, sugar, and fish (Fig. 1).

The calculation of the criteria for achieving the required level of food safety is based on the fulfillment of food consumption standards recommended by the Ministry of Health of the Russian Federation that meet modern requirements for a healthy diet (Fig. 2) [2].

According to the Ministry of Agriculture of Russia, after the introduction of the food embargo in 2014, the level of food security has increased significantly, but in 2018 three segments of the agricultural market still do not meet the criteria laid down in the Food Security Doctrine. Thus, the specific weight of milk equaled to 84.2%, which is 5.8% below the established criterion, the specific weight of potatoes—94.9%, which is slightly (0.1%) below the established criterion, but in terms of edible salt, there is a significant lag from the criterion, by 25.8% (64.2% at the rate of 85%).

All other indicators reach the required criteria level. However, it is worth noting that the definition of criteria at the moment is carried out only on those indicators

| | |
|-------------|---------------------------|
| $\geq 95\%$ | • Grain |
| $\geq 90\%$ | • Sugar |
| $\geq 90\%$ | • Vegetable oil |
| $\geq 85\%$ | • Meat and meat products |
| $\geq 90\%$ | • Milk and Dairy Products |
| $\geq 85\%$ | • Fish and fish products |
| $\geq 95\%$ | • Potato |
| $\geq 90\%$ | • Vegetables and gourds |
| $\geq 70\%$ | • Fruits and berries |
| $\geq 85\%$ | • Edible salt |

Fig. 1 Food security criteria in Russia (draft)

| | |
|-----|--------------------------|
| 96 | • Bread Products |
| 24 | • Sugar |
| 12 | • Vegetable oil |
| 73 | • Meat and meat products |
| 325 | • Milk and milk products |
| 22 | • Fish and fish products |
| 90 | • Potato |
| 140 | • Vegetables and gourds |
| 100 | • Fruits and berries |
| 4 | • Edible salt |
| 260 | • Eggs (pcs.) |

Fig. 2 Recommended rational food consumption standards that meet modern requirements for healthy eating in Russia (kilogram per person)

that are included in the Food Security Doctrine, and the proposed criteria as a project have not yet been investigated.

3 Results

Despite the fact that the data published by the Federal State Statistics Service and the Ministry of Agriculture indicate a positive trend in the criteria for food security in Russia over the past five years, it is worth noting that a number of problems point to several aspects that, in our opinion, are worth paying attention to.

The results of statistical data on the gross production of basic agricultural products are presented in Table 1.

If we consider the dynamics of the gross harvest of basic agricultural products, it is clear that compared with 2013, in 2018, there is an increase in all types of products, with the exception of potatoes. However, if we take into account the fact that in 2014, after the inclusion of the Republic of Crimea and the city of federal significance Sevastopol into the Russian Federation, the population of Russia increased by almost 2.5 million people, then the growth in production per capita becomes less noticeable (Table 2) [1].

If we consider food security in terms of the availability of quality food in order to meet the needs and food preferences of the population to lead an active and healthy life, the picture changes significantly.

Table 1 Gross production of basic agricultural products, thousand tons

| Agricultural products | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|----------------------------------|---------|---------|---------|---------|---------|---------|
| Cereals and legumes | 92419 | 105212 | 104729 | 120677 | 135539 | 113255 |
| Sugar beet | 39292 | 33476 | 38989 | 51325 | 51913 | 42066 |
| Sunflower seed | 9852 | 8481 | 9289 | 11015 | 10481 | 12756 |
| Potatoes | 24021 | 24284 | 25406 | 22463 | 21708 | 22395 |
| Vegetables | 12597 | 12821 | 13185 | 13181 | 13612 | 13685 |
| Gourds | 1492 | 1531 | 1783 | 1884 | 1815 | 1970 |
| Fruits | 2737,8 | 2778,5 | 2675,3 | 3055,1 | 2682,6 | 3337,0 |
| Cattle and poultry for slaughter | 8525,3 | 9026,0 | 9518,5 | 9853,3 | 10319,0 | 10585,4 |
| Milk | 29865,3 | 29995,2 | 29887,5 | 29787,2 | 30184,5 | 30639,7 |
| Eggs, mln. pcs | 29865,3 | 29995,2 | 29887,5 | 29787,2 | 30184,5 | 30639,7 |

Source Developed by the authors based on Federal State Statistics Service [1]

Table 2 Dynamics of production of basic agricultural products, thousand tons

| Agricultural products | 2014 | 2018 | Growth rate 2018/2014, % | Growth rate per capita 2018/2014, % |
|----------------------------------|---------|---------|-----------------------------|--|
| Cereals and legumes | 105212 | 113255 | 107,64 | 105,30 |
| Sugar beet | 33476 | 42066 | 125,66 | 122,92 |
| Sunflower seed | 8481 | 12756 | 150,41 | 147,13 |
| Potatoes | 24284 | 22395 | 92,22 | 90,21 |
| Vegetables | 12821 | 13685 | 106,74 | 104,41 |
| Gourds | 1531 | 1970 | 128,67 | 125,87 |
| Fruits | 2778,5 | 3337,0 | 120,10 | 117,48 |
| Cattle and poultry for slaughter | 9026,0 | 10585,4 | 117,28 | 114,72 |
| Milk | 29995,2 | 30639,7 | 102,15 | 99,92 |
| Eggs, mln. pcs | 29995,2 | 30639,7 | 102,15 | 99,92 |

Source Compiled by the authors based on Federal State Statistics Service [1]

In accordance with Federal Law No. 227, “On the Consumer Basket as a whole in the Russian Federation” (March 12, 2012), the volume of food consumption is set (Table 3).

Thus, the rational food consumption standards recommended by the Ministry of Health that meet modern requirements for healthy eating are higher than the average food basket standards for all categories, with the exception of bread products. It should be noted that the level of consumption of such categories as vegetables, fruits, meat, and eggs is lower than the recommended norms by more than 20%.

Table 3 The volume of food consumption

| Name | The volume of consumption (average per person per year) | | | The average consumption | The recommended rate of consumption |
|-------------------------|---|----------------|----------|-------------------------|-------------------------------------|
| | Working age population | Retired people | Children | | |
| Bread Products | 126,5 | 98,2 | 76,6 | 110 | 96 |
| Potatoes | 100,4 | 80 | 88,1 | 93 | 90 |
| Vegetables and gourds | 114,6 | 98 | 112,5 | 110 | 140 |
| Fresh fruits | 60 | 45 | 118,1 | 67 | 100 |
| Sugar | 23,8 | 21,2 | 21,8 | 23 | 24 |
| Meat and meat products | 58,6 | 54 | 44 | 55 | 73 |
| Fish and fish products | 18,5 | 16 | 18,6 | 18 | 22 |
| Milk and dairy products | 290 | 257,8 | 360,7 | 295 | 325 |
| Eggs (pcs.) | 210 | 200 | 201 | 206 | 260 |
| Vegetable oil | 11 | 10 | 5 | 10 | 12 |
| Other products | 4,9 | 4,2 | 3,6 | 4 | 4 |

Source Compiled by the authors based on President of the Russian Federation [4]

Furthermore, considering the possibilities of the population to purchase food products defined in the grocery basket, we can see the following result (Table 4).

As can be seen from the presented material, the standard of living of the population has decreased, and the growth rate of incomes is lower than the growth rate of the cost of the minimum set of products. It is also worth noting that there is a negative trend when considering the average per capita income adjusted for the consumer price index.

4 Discussion

The results presented in the study suggest that food security in Russia at this stage has not been achieved. In the context of the transition to a socially-oriented economy, it is worth paying attention to the possibility of adjusting the criteria reflecting the achievement of the established level of food security in the country, as well as developing methods to monitor the level of food security, especially in the context of the global digitalization of the economy.

Table 4 Indicators of living standards, thousand

| Agricultural products | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|---------|---------|---------|---------|---------|---------|
| The cost of a minimum set of food | 2871,5 | 3297,9 | 3589,9 | 3701,9 | 3749,6 | 3989,2 |
| Non-grocery goods | 1435,7 | 1648,9 | 1794,9 | 1850,9 | 1874,8 | 1994,6 |
| Services | 1435,7 | 1648,9 | 1794,9 | 1850,9 | 1874,8 | 1994,6 |
| Consumer basket | 5742,9 | 6595,8 | 7179,8 | 7403,8 | 7499,3 | 7978,3 |
| The living wage value | 7306 | 8050 | 9701 | 9828 | 10,088 | 10,287 |
| Per capita cash income | 25928,2 | 27766,6 | 30466,6 | 30747 | 31421,6 | 32635 |
| Consumer price index for goods and services | 1,06 | 1,11 | 1,13 | 1,05 | 1,03 | 1,04 |
| Per capita cash income adjusted for consumer price index | 25928,2 | 26079,3 | 25698,4 | 22969,6 | 22273,0 | 22566,7 |
| The proportion of the population with an income below the subsistence level, % | 9,8 | 14,2 | 20,2 | 19,8 | 18,7 | 17,6 |

Source Compiled by the authors

5 Conclusion

Based on the above information, we would like to note that in modern conditions and in light of the requirements of the Russian Federation's President on the formation of a socially-oriented state, there is a need to adjust the Food Security Doctrine in a number of key areas. It is necessary to switch not from an import-substituting to an export-oriented doctrine, but rather from an import-substituting to a socially-oriented one.

First of all, it is necessary to adjust the approach to the very concept of "food security" and include in its definition the availability of agricultural products for various segments of the population.

Further, it is necessary to make changes to the minimum set of products included in the food basket, taking into account the recommendations of the Ministry of Health on the consumption of foods that meet the requirements of a healthy diet.

In order to assess the state of food security, develop and approve criteria that take into account not only the volume of production of products of a particular type but also the economic and physical availability of food.

It is necessary to bring the cost of the consumer basket in line with real prices in the context of each region of the country.

Moreover, there is a need to consider the possibility of redistributing income within social groups by making changes to the tax policy of the state by reducing the tax burden of the poor by increasing taxes on super incomes of certain categories of citizens.

In addition, it is worth paying attention not only to the volume of products produced by Russia's agricultural industry but also to the needs of agricultural organizations in terms of machinery, feeds, fertilizers, planting stocks, etc. This direction is also worth considering from the point of view of the state's ability to import substitution and introduce into the Doctrine of Food Security a criterion determining the level of dependence of agricultural organizations on the import of equipment, technologies, and materials necessary for production.

Thus, without ignoring the merits of the developed Food Security Doctrine, which, in fact, was a huge achievement in ensuring food security, it should be noted that it needs further processing to ensure adequate food security.

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