ISSN: 0975-8585

Research Journal of Pharmaceutical, Biological and Chemical Sciences

Diagnostics And Priorities Of Food Security Regulation In The Region.

Oksana Viktorovna Takhumova[1]*, Anna Alexandrovna Hramchenko[1], Galina Alekseevna Narozhnaya[2], Elena Sergeevna Nemtsova[3], and Elena Alekseevna Batisheva[4].

[1]Kuban State Agrarian University named after I.T. Trubilin, 13 Kalinina str., Krasnodar 350044, Russia.
[2]MIREA - Russian Technological University, branch in Stavropol, Russian Federation, Kulakova avenue, 8, Stavropol 355000, Russia.
[3]North-Caucasus Federal University, Pushkin str., 1, Stavropol 355009, Russia.
[4]Stavropol State Agrarian University, Zootekhnicheskiy lane 12, Stavropol, 355017, Russia.

ABSTRACT

Food safety issues have always been at the center of attention of global regional systems. This issue is particularly relevant in the period of financial instability, reducing the quality of consumed products, reducing the production of domestic agricultural products. In this regard, the work examines the constituent elements of food security as a complex system that characterizes the national interests of the state. Analyzed and identified the most dangerous types of threats. The criteria and thresholds of food security for the Russian regions and the impact on it of production, social and financial spheres are disclosed. The main parameters of measuring the level of food security are considered, a criterion assessment based on the most significant criteria is proposed. The necessity of state support to maintain an optimal level of food security is substantiated.

Keywords: food security, financial crisis, state program, import substitution.

Corresponding author

ISSN: 0975-8585

INTRODUCTION

In the context of the global consequences of the financial crisis, the problem of providing food to the regional world systems becomes more acute. This problem is also relevant for the Russian Federation, as it is a condition for the preservation of statehood and sovereignty, a constituent element of the demographic policy. Providing the population with high-quality, healthy agricultural, fish and other products from aquatic biological resources and food is a strategic goal of any region of the world economy. The guarantee of its achievement is the stability of domestic production, as well as the availability of the necessary reserves and reserves [1].

Table 1: Matrix of indicators of food security in the region

Subsystems	Single indicators	Regulatory evaluation intervals	Integral indicators
Social welfare index Ix1	Per capita income level, thousand rubles	50-100%	Welfare indicator
	Unemployment rate	0-50%	Employment Indicator
	The proportion of the population with cash incomes below the subsistence minimum	50-85 years (acceptable optimal indicator: 7-10%)	Poverty indicator
	Lifespan	45-100 years	Vitality indicator
Food security index Ix2	The purchasing power of the average monthly wage	0-100%	Yield level
	The share of own agricultural, fish products and food in the total volume of commodity resources	85-100%	Consumption level
	The level of production of agricultural products and food per capita	50-100%	Level of security
	Level of consumption of main types of food per capita	50-100%	Level of security
	The share of imports in the total share of commodity resources	0-100%	Level of security
Political sustainability Index Ix3	Level of public confidence	0-100%	Political stability
	Crime level	0-30 crimes per 1000 people	Life safety Indicator

Modern geopolitical and economic challenges that Russia is facing in the field of the country's food independence put forward among the topical issues the acceleration of the formation of the commodity sphere and the definition of rationalization directions for import substitution in agriculture [5-8]. Despite the importance of this problem, it is still insufficiently studied, which makes it necessary to conduct comprehensive studies in the formation of the commodity composition of import substitution of food products and identify key factors of its regulation, increase the level of rationalization and ensure the activation of effective filling processes in the domestic food market.

MATERIALS AND METHODS

For an integrated assessment, it is of interest to use an index assessment based on a group of food safety indicators [3]:

$$I_{sdi} = \frac{1}{3}\sum \mathrm{I_{xi}}$$

where I_{sdi}– food safety index;
I_{x1}– food security index;
I_{x2}– social welfare index;
I_{x3}– political index.

ISSN: 0975-8585

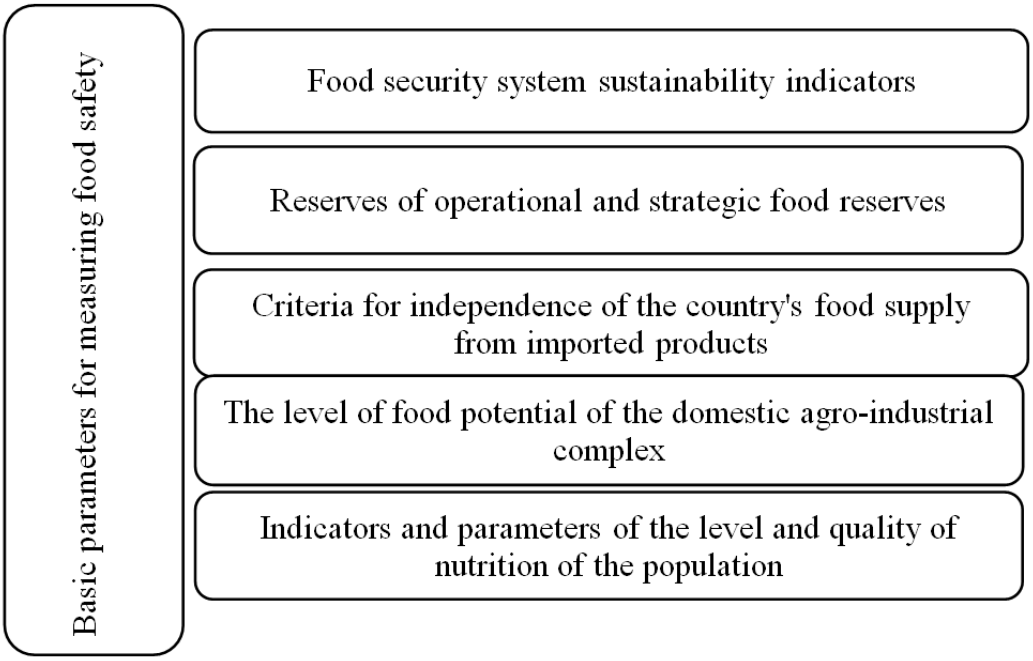

Figure 1: Basic parameters for measuring food security

Further, when calculating each parameter of the composite index, fixed standards of minimum and maximum values are used with which actual indicators for one or another country are compared:

$$I_{xi}=\frac{actual\ value\ xi-minimum\ value\ xi}{maximum\ value\ xi-minimum\ value\ xi}$$

For indicators characterizing the positive dynamics of the level of development of the regional system:

$$MI=\frac{i_{act}}{max_i},$$

where i_{act} —value of the actual indicator for a particular subject of the regional system;
max_i— maximum index value by region;
For indicators of negative impact:

$$MI=\frac{min_i}{i_{act}},$$

where min_i— the minimum value of the indicator for the region [3].

RESULTS AND DISCUSSION

Agriculture is an important element of the country's economy and the basis of the life style of food supply of the population. The modern vector of the country's policy is largely aimed at the development of an import-substituting strategy. In 2014-2018 in the context of the import substitution policy, the role of the agricultural sector in the country's economy is increasing.

Domestic agricultural products so far do not withstand competition due to the impact of imports on the domestic market, both in quality and price. However, in spite of the sanctions and the embargo, food imports in Russia are optimally distributed among other foreign countries (Table 2).

ISSN: 0975-8585

Table 2: International diversification of Russian imports of food and agricultural raw materials for their production in terms of sanctions and embargo

	2015		2016			including December 2016	
	in % by 2014	% of total	million USD	in % by 2015	% of total	million USD	million USD in% by December 2015
Food products and agricultural raw materials for their production - total	66,5	100	24902	93,7	100	2624	94,9
including: foreign countries	65,1	83,5	20407	91,9	81,9	2259	95,2
EU countries	48,3	21,4	5632	99,0	22,6	624	108,5
Argentina	79,1	2,8	616	83,0	2,5	40,4	61,8
Brazil	71,1	9,6	2189	85,7	8,8	239	97,5
Egypt	81,4	1,4	288	79,8	1,2	16,7	63,4
China	80,3	5,8	1621	105,3	6,5	186	101,1
Turkey	79,3	5,2	625	44,8	2,5	144	66,2
Ecuador	92,3	4,3	1211	105,8	4,9	109	96,2
CIS member states	74,8	16,5	4496	102,6	18,1	365	93,0
Azerbaijan	88,9	1,0	324	119,8	1,3	35,4	105,8
Belorussia	86,0	12,1	3236	100,3	13,0	254	99,5

In 2016, meat, fish, dairy products, fruits, vegetables, and alcoholic and non-alcoholic beverages remained the largest imports. But compared to 2013, imports of fruits, including grapes, decreased by 17.1%, alcoholic and non-alcoholic beverages, including grape wines, by 11.1%. And the import of vegetables, on the contrary, increased, an increase of 2.4%.

There are measures to support the development of the agro-industrial complex by the state. For example, the state support for expanding the access of agricultural producers to credit financing, reimbursement of part of the direct costs for the creation and modernization of the AIC facilities increased the index of physical volumes of investment in the main industry capital by +27.2 percentage points in comparison with 2015 and by +9.3 percentage points in relation to the target value of the state program indicator in 2016 (Table 3).

Table 3: Results of the implementation of the main indicators of the State Program of the AIC of Russia

Indicators	2013	2014	2015	2016	2016 to 2015
Volume Index s.–. production by farms of all categories,%	105,8	103,5	102,6	104,8	+2,2 pp.
The index of crop production in farms of all categories,%	111,2	104,9	103,1	107,8	+4,7 pp
The index of livestock production in farms of all categories,%	100,6	102,0	102,2	101,5	+0,7 pp
Index of investment in fixed assets with. x.,%	105,1	95,9	86,9	114,1	+27,2 pp
Profitability of agricultural organizations (including subsidies),%	7,3	16,1	20,3	17,3	–3,0 pp
The average monthly salary of workers x.h. (without subjects MFH), rub.	16 853	19 243	21 626	24 106	111,4%

Salary index,%	110,9	114,0	112,4	111,4	1,0 pp
Labor productivity index,%	106,5	103,3	105,0	104,3	– 0,7 pp

The implementation of the regional state program can be monitored by the implementation of the passport of the state program of the Krasnodar Territory for the development of agricultural production. and market regulation s.–. products, raw materials and foodstuffs with a deadline of 2021 without allocating stages with the total amount of financing starting from 2016 from budgets of all levels amounts to 96.3 billion rubles, including at the expense of: regional budget 32.0 billion, federal - 53.4 billion, local budgets - 13.0 and extrabudgetary sources - 9.6 billion rubles (Table 4).

Table 4: Total funding for the Krasnodar Region state program

Year of implementation	Amount of financing, thousand rubles				
	total	in terms of budget sources			
		federal	regional	local	extrabudgetary
2016	10462767,4	5779218,8	3515113,8	30163,0	1138271,8
2017	15575897,4	8365948,8	5190857,9	190266,7	1828824,0
2018	16573046,9	8931643,8	5444393,6	216730,4	1980279,1
2019	16792268,9	9517197,2	5672151,0	251882,7	1351038,0
2020	17966240,5	10099887,6	5982515,6	285148,0	1598689,3
2021	18928984,4	10730097,0	6199935,5	322123,3	1676828,6
Total	96299205,5	53423993,2	32004967,4	1296314,1	9573930,8

The intensification of the process of import substitution in the agri-food market has been going on for several years. At the same time, the fundamental condition affecting sustainable growth of the economy and the ability to solve problems of accelerating and rationalizing import substitution is the development of individual industries and, above all, fruit and vegetable production.

It should also be borne in mind that most of the import-substituting products are already produced by natural means in personal farms. The development of the organic agriculture system in Russia makes it possible to make the agricultural sector more efficient and attractive for foreign investors.

Thus, it became quite obvious, from August 2014 to the present, the pace of import substitution began to increase and the volume of imported food supplies declined. This has become an additional drive for the development of agriculture. But this was made possible thanks to an unprecedented decision on state support - 222 billion rubles were allocated for development. and it is supposed, in spite of the smoothed economic situation in the country, to provide farmers with support in 2018 also in volumes comparable to this figure.

The analysis of food independence for some types of agricultural products is given in table 5.

Table 5: Dynamics of the level of food independence of Russia by main products,%

Year	Food independence level			
	Grain (>95%)	Potatoes (>95%)	Milk and dairy products (>95%)	Meat and meat products (>95%)
2002	95,9	101,2	81,6	69,1
2003	103,4	102,4	88,5	63,5
2004	117,7	102,0	88,2	63,8

2005	115,6	101,4	86,6	65,5
2006	105,6	102,2	84,6	65,8
2007	117,5	102,0	32,3	62,0
2008	114,2	102,7	82,1	62,8
2009	125,0	102,6	83,0	64,9
2010	118,7	101,8	82,8	66,6
2011	131,5	103,1	83,5	70,1
2012	122,4	101,0	30,6	72,4
2013	127,0	99,9	81,2	74,2
2014	134,8	103,7	80, 2	75,9
2015	128,9	104,6	77,7	78,4
2016	129,6	103,9	80,4	79,3
2017	129,0	103,0	81,1	79,3

Today, there are problems in areas such as milk, meat products, vegetables and fruits. For the development of these industries need additional investment and priority state support. For a comprehensive analysis of Russia's food supply in 2018, an all-Russian agricultural census will be conducted in all regions of the country, the main purpose of which will be the formation of official statistical information on the state of agriculture, the availability and use of its resource potential.

CONCLUSION

Today, to increase food security, it is necessary to resolve issues related to stimulating the growth of the production of basic agricultural products and food production, it is necessary to provide a high level of support for the development of the infrastructure of the agri-food market, ensure the sale of agricultural products and increase its marketability by creating conditions for its seasonal storage. and part-time job. In addition, in order to achieve food security, it is necessary to create conditions for the effective use of agricultural land, pay attention to the land reclamation of agricultural land, etc. Now the main incentive for Russian agricultural producers should be a program to guarantee the sale of manufactured products, and not by itself participate in import substitution. In conclusion, it should be emphasized that in recent years, the overall growth in the production of its own products, albeit unstable, gives a sure hope of improving Russia's food independence. The positions for further import substitution include cattle meat, fish, dairy products, fruits. In the long term, with sufficient funding for this sector, food with the same amount of investment in these areas, these positions are real and completely import-replaceable. As a result, Russia may well get rid of import dependence on food products, which is considered as the main external factor in food security.

REFERENCES

[1] Reznichenko S.M., Takhumova O.V. Methodological aspects of assessing factors affecting the sustainable development of the region. Modern Journal of Language Teaching Methods (MJLTM). 2018. Vol. 9. Issue 11. December.

[2] Takhumova O.V., Ponomarenko M.V., Tokareva G.V. Information And Analytical Support In Assessing The Region Sustainable Development. Research Journal of Pharmaceutical Biological and Chemical Sciences. 2018. Vol. 9(6). p. 1770-1774.

[3] Vershitskiy A.V., Takhumova O.V. Development Of Entrepreneurial Structures Of Production And Trade Sphere On The Basis Of Integration. Research Journal of Pharmaceutical Biological and Chemical Sciences. 2018. Vol. 9(6). p. 1624-1629

[4] Fursov, V.A., Lazareva, N.V., Solovieva, I.V., Fattakhova, A.R., Vaslavskaya, I.Y. Evaluation of performance of enterprise development strategy implementation. Journal of Advanced Research in Law and Economics . 2015. №6 (1). P. 79 - 87.

[5] Kostyukova E.I., Vakhrushina M.A., Shirobokov V.G., Feskova M.V., Neshchadimova T.A. Improvement cost management system for management accounting. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 2018. T. 9. № 2. P. 775-779.

[6] Gasparyan A.Y., Kitas G.D., Yessirkepov M., Voronov A.A., Trukhachev V.I., Kostyukova E.I., Gerasimov A.N. Specialist bibliographic databases. Journal of Korean Medical Science. 2016. T. 31. № 5. P. 660-673.

[7] Kulish N.V., Sytnik O.E., Tunin S.A., Frolov A.V., Germanova V.S. Approaches to the valuation of biological assets at fair value. Research journal of pharmaceutical, biological and chemical sciences. № 9 (3). 2018. P. 746-750.

[8] Frolov A.V., Kulish N.V., Sytnik O.E., Tunin S.A., Germanova V.S. The development of environmental auditing in Russia and international practice in market conditions. Research Journal of Pharmaceutical, Biological and Chemical Sciences. 2018. T. 9. № 6. P. 1573-1579.