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## Food Security as a Component of Economic Security System of Russia

Alina Battalova<sup>a,\*</sup>

<sup>a</sup>*The Institute of Management, Economics and Finance, Kazan Federal University, Russia*

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### Abstract

Against the background of a rapidly changing world development brings us not only certain benefits, but in accordance with the dialectic of the development, a variety of new threats. Humanity has come to such a trait that continues to ignore the new and old threats becomes impossible and the problem of supplying the safe development of the modern world dominates, including food security problem. It is difficult to solve other pressing economic and social problems without a problem solution of food security. It should be considered at different levels: global, national, regional, household level and certain personality level.

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### 1. Introduction

Supporting of food security is considered as a set of measures serves to meet the challenges of development systematically and effectively not only of production, foreign trade, storage and processing, but equitable distribution of basic food products, as well as social development of rural areas.

Unfortunately, it is necessary to establish the fact that Russia is still not fixed by legislation and regulations aspects of food security, even despite the fact that the draft of this document was developed and then adopted by the State Duma of the Federal Assembly of the Russian Federation in December 1997. In 1998, was developed Food Security Doctrine of the Russian Federation, which was approved by the Interdepartmental Commission on the economic

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\* Corresponding author. Tel.: + 898 761.642.11

E-mail address: [alina.sr@mail.ru](mailto:alina.sr@mail.ru)

security of the Russian Security Council in September 4, 1998. However, food security is not entered further in the National Security Concept of the Russian Federation, approved by Russian Federation Presidential Decree (December 17, 1997 number 1300). It has not been reflected in the Federal Law "On the development of agriculture" (December 29, 2006 № 264-FL). However, food security threats are not even reduced, but due to internal and external factors are increasingly growing. This is particularly evidenced by the concern of the world community, which was forced to take "Rome Declaration on World Food Security" in 13 November 1996.

Threats to food security in Russia are:

- Deterioration of the internal and external world prices situation for individual Russian exports and price raising for imported food, that will strengthen the dependence of agriculture on public investment, will reduce the real incomes of the rural population;
- Climatic threats in the decrease in the intensity of agriculture reduces its investment attractiveness;
- The threat of a social nature, which are determined by social unattractiveness of rural areas and the increasing gap between the standard of living in the countryside and in the city;
- Dependence on delivery of technology from abroad for agricultural producers;
- The threat of a change of control of the market of agricultural products and agricultural land in the hands of foreign organizations;
- Threats associated with the imperfection of the legislative framework in the field of regulation of agro-industrial complex and difficulties in registration of land ownership;
- The level of corruption in decision-making in the top echelons of power, as well as government relations of individual producers and importers.

## 2. Research of performance results of the Russian Federation agro-industrial complex

Over the last decade there was a reduction of areas in tillage by 5.3%, of agricultural land - by 7.2%, so it is the process of irretrievable loss of productive land. Disposal of agricultural land out of circulation occurs in the process of being transferred to other categories of land, mostly in land settlements for future residential or industrial construction.

The reduction of workplaces number in agriculture is also important. Activity in setting up control of foreign organizations over separate branches of the Russian agricultural business causes reasonable alarm. For example, about 40% of the domestic grain market control such large companies as "Glencore", "Louis Dreyfus", "Cargill", "Bunge", "WJ group", "Souffle". Current situation can lead to the creation of artificial shortage of grain in Russia, and with a significant increase in world prices - even price increase of grain and basic agricultural products on the domestic market of the state.

The current state of the Russian domestic market is already characterized by a high level of dependence on imports. It is formed up to 40% of food resources due to high level of dependence on imports.

Meat import share is estimated at 41%, milk - at 26%. The upward trend in food imports is not only preserved but also enhanced especially in livestock products. Unfortunately, the growth rate of domestic production of agricultural products, raw materials and food are lower than the import of food products, which exceed limit value of food security by 10-15%.

We know that if imports exceed 20%, the cumulative effect is terminated, that is, the industry is no longer a major impact on the economy in the direction of maintaining its growth.

The 20% is considered as the economic level value predetermining stagnation. At the level of 20%, imports are not complementary, but only suppresses domestic production. Especially dangerous situation with providing large cities and industrial centers of individual regions, the supply of which depends on imported food by 50-70%. In addition, the dependence of imports of domestic agricultural production on agricultural engineering is high: on tractors – by 80%, on tractors – by 50% [1].

Table 1. The structure of tractors and combine harvesters acquisition in 2013.

State of origin	Tractors		Combine harvesters	
	Quantity, items.	Share of acquisition, %	Quantity, items.	Share of acquisition, %

Russia	7452	20	4538	64
Republic of Belarus	17130	48	150	2
Ukraine	1593	4	-	-
non-CIS countries	9735	28	2357	34
Total	35910	100	7045	100

The situation in the processing and food industries is not so good. In the country it is produced only 2307 from 6620 items of equipment needed to ensure the competitiveness of the industry and only 19% of them meets international standards. Russian machine-building enterprise is able to equip the food and processing industries only by 35%, but far from the most modern equipment, and as a result - complete industry dependence on foreign supplies [6].

In the domestic agricultural production, there are positive developments, which have a beneficial effect on the country's food security. In the last ten years the situation in the agrarian sector of the country managed to improve and ensure a marked increase in production. Thus, in the period 1990-1998 years decrease in agricultural production fell by 44% and in 1999-2007 years it increased by 39.3%. In 2007 the volume of crop production exceeded the benchmark in 1990 and amounted to 107%, and livestock - 58%. The number of profitable operating agricultural organizations increased to 77%.

In fact the growth of meat production was 13%, milk - 4%, but the number of cattle decreased by 0.4%, cows - by 2.1%.

2007 marked with improvement in the ratio of prices in favor of agriculture, although it reimburses less than half of the losses from price disparities, which was formed on the basis of only one of 2006 [4].

In 2005 the total volume of attracted credits in agriculture reached 192 billion rubles, in 2007 - 615 billion rubles, or increased by 3.2 times. The amount of investment loans increased almost 10 times - from 26 bln. to 252 bln. rubles. During this period, the amount of borrowed funds increased by 3.2 times, including the small forms of management - by 287 times. Since 2006, investment loans on favorable terms for up to 8 years have become available for agricultural producers.

For many years, the share of agriculture in the expenditure side of the budget does not exceed one percent, and its share in the GDP is 4.4%. The growth rate of gross agricultural output and wages in the industry is almost twice lower than in the whole economy. Since 2002, there has been a downward trend in the rate of development of agriculture. If in 1999-2001 average annual growth rate in agriculture was 6.8%, in 2002-2007 it is only 2.3%. Agriculture in recent years has reached a positive growth trend. It should be recognized that the volume of gross production has not reached the pre-reform level yet, although it has been completely restored in crop, but its growth rate was one and a half times higher than the average on agriculture [2].

As for the grain, the problem of food security is guaranteed in providing the population with bread and bakery products in all conditions, improve the quality and structure and feed production capacity needed for developing livestock breeding. Although in 2003-2007 gross grain harvest amounted to 76.8 million tons this amount of grain was sufficient to provide the population with grain products, livestock production in the current volumes and exports.

But this is not all right. The wholesale price of 1 ton of wheat premium is 5-6 thousand rubles for growing crops and therefore half a kilo of loaf of bread should cost no more than 5-7 rubles. In fact, in central and southern Russia kilogram of bread costs 20-30 rubles. Residents of the northern areas need to acquire it by almost 80 rubles. In an emerging financial crisis is likely to rise in price of bread by 40-50%. However, the situation is changing rapidly, and it is necessary to take measures to ensure food security.

This problem will be facilitated by the adoption of laws and regulations of the federal and local levels, especially the development of federal and regional laws "On guaranteed level of maintenance of the population in food products."

The targets necessary to ensure food security in Russia must be presented on this document:

- Standards of physical and economic availability of food with account of a regional special aspects and for different categories of citizens, as in Russia, with its diverse climatic conditions and traditions of food consumption in different regions can and should develop a variety of models of consumption;
- The size of the strategic, operational and carryover food stocks versus to their specified levels;

- The necessary share of domestic agricultural products and foodstuffs in the total volume of consumption and commodity resources;
- Ensuring a guaranteed level of presence of local food products and domestic manufacturers in the trade and distribution networks in the region and in the country;
- The degree of satisfaction of physiological needs in the components and the energy content of the food ration;
- Food quality assurance and their maximum allowable regularity of substances destructive to health.

A necessary condition is the annual monitoring of food security. The inclusion of current and medium-term balance of production and consumption of basic foodstuffs should be an indispensable condition for predicting the socio-economic development of Russia [5].

### 3. Calculation of products provision of Russian regions

- In the Doctrine of food security are critical to Russia lists of the products and the minimum level of their own production, in particular, it is referred to grain (95%), sugar (80%), vegetable oil (80%), meat (85%), milk (90%), fish (80%), potatoes (95%), and edible salt (85%). The calculation of products provision is based on the formula, the essence of which is summarized as follows:

$$a^t = \frac{\left( (1 - k_{\text{corn}}^t) * R_{\text{corn}}^t * \frac{a_{\text{bread}}}{K} + (1 - k_{\text{potatoes}}^t) * R_{\text{potatoes}}^t * a_{\text{potatoes}} + (1 - k_{\text{milk}}^t) * R_{\text{milk}}^t * a_{\text{milk}} \right) * 10^3}{(H_{\text{bread}} * a_{\text{bread}} + H_{\text{potatoes}} * a_{\text{potatoes}} + H_{\text{milk}} * a_{\text{milk}} + H_{\text{vegetables}} * a_{\text{vegetables}} + H_{\text{shell eggs}} * a_{\text{shell eggs}} + H_{\text{meat}} * a_{\text{meat}}) * N^t} * 100 +$$

$$+ \frac{\left( (1 - k_{\text{vegetables}}^t) * R_{\text{vegetables}}^t * a_{\text{vegetables}} + (1 - k_{\text{shell eggs}}^t) * R_{\text{shell eggs}}^t * a_{\text{shell eggs}} + (1 - k_{\text{meat}}^t) * R_{\text{meat}}^t * a_{\text{meat}} \right) * 10^3}{(H_{\text{bread}} * a_{\text{bread}} + H_{\text{potatoes}} * a_{\text{potatoes}} + H_{\text{milk}} * a_{\text{milk}} + H_{\text{vegetables}} * a_{\text{vegetables}} + H_{\text{shell eggs}} * a_{\text{shell eggs}} + H_{\text{meat}} * a_{\text{meat}}) * N^t} * 100\%$$

Where:

- $K_{\text{corn}}$ ,  $K_{\text{potatoes}}$ ,  $K_{\text{milk}}$  and dairy products,  $K_{\text{vegetables}}$ ,  $K_{\text{shell eggs}}$ ,  $K_{\text{meat}}$  = respectively, loss ratios of grain, potatoes, milk and dairy products, vegetables, shell eggs and meat during storage and processing, relative unit (an average taken  $K_{\text{corn}}=0,2$ ;  $K_{\text{potatoes}}=0,5$ ;  $K_{\text{milk}}$  and dairy products  $=0,1$ ;  $K_{\text{vegetables}}=0,5$ ;  $K_{\text{shell eggs}}=0,05$ ;  $K_{\text{meat}}=0,2$ );
- $R_{\text{corn}}$ ,  $R_{\text{potatoes}}$ ,  $R_{\text{milk}}$  and dairy products,  $R_{\text{vegetables}}$ ,  $R_{\text{shell eggs}}$ ,  $R_{\text{meat}}$  = respectively, sizes of own production of grain, potatoes, milk and dairy products, vegetables, shell eggs and meat are thousand tons (for eggs - million pieces);
- $K$  - average conversion factor produced grain in bread and bakery products ( $K = 1,33$ ).
- $H_{\text{corn}}$ ,  $H_{\text{potatoes}}$ ,  $H_{\text{milk}}$  and dairy products,  $H_{\text{vegetables}}$ ,  $H_{\text{shell eggs}}$ ,  $H_{\text{meat}}$  = respectively, established by medical standards supply per capita consumption of bread and cereal products, potatoes, milk and dairy products, vegetables, shell eggs and meat, kg / year (for eggs - pieces / year);
- $a_{\text{corn}}$ ,  $a_{\text{potatoes}}$ ,  $a_{\text{milk}}$  and dairy products,  $a_{\text{vegetables}}$ ,  $a_{\text{shell eggs}}$ ,  $a_{\text{meat}}$  = respectively, average conversion factors are consumed by the population of bread and cereal products, potatoes, milk and dairy products, vegetables, shell eggs and meat, kcal / kg (for eggs - kcal / piece) [3].

For all these products the minimum level of own production is reached or nearly reached. The only point of doctrine, according to which food security is not assured – these are milk and dairy products. Russian production covers 80% of the demand, while the plan needs to cover 90%.

### 4. Conclusions

Russia should speed up the development of an appropriate concept, as well as laws and programs for its implementation. The main sections of this document must contain the following:

- The state and the changing of the role of agriculture of Russia;
- Criteria and indicators for assessing the level of food security of the Russian Federation;
- A set of measures to ensure food security of the country;

- Social and economic efficiency of measures aimed at improving food security. This should include measures of state regulation of agricultural products market, proposals for customs tariff policy, organizational and functional food security, proposals for the development of relevant legislation; food security at national and regional levels; assessment of the socio-economic benefits of ensuring food security of Russia [7].

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