



**The current state of Russian agro-industrial complex**  
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**Abstract**

The paper analyzes the problems of Agrarian industrial complex (AIC), import substitution in this area and results of food safety program. It is important because AIC ensures food safety of Russia. The main goal of research is to figure out the influence of sanctions and import substitution program on AIC. Natural resource potential of Russia affords to grow the major types of agricultural products except for exotic fruits, berries and nuts. The level of productivity is lower than in many developed countries with the same climate. However, one way to help to develop AIC is import substitution. In a short term it should be a good method to solve food safety problem. The results of this paper can be used by further researchers to understand strengths and weaknesses of AIC development program.

*Keywords:* Agrarian industrial complex, import substitution, food safety, self-sufficiency rate;

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**1. Introduction**

AIC is the most important part of Russian economy. But the current state lives much to be desired. The problem of import substitution is relevant, because of foreign policy and sanctions. On the one hand, there is no simple answer, will they damage Russian economy or not? On the other hand it's an attempt to create environment for economic development of agrarian industrial complex (AIC). The subject of the paper is analysis of Russian AIC and efficiency of import substitution. The work is separated in the following parts:

1. Analysis of AIC problems;
2. Analysis of import substitution and food safety programs;
3. Detection the results of programs;

**2. Development and current state of AIC**

*2.1. Problems of AIC*

Natural-resource potential of Russia affords to grow the major types of agricultural products, except for exotic fruits, berries and nuts. The level of productivity is lower, than in many developed countries with the same climate.

The level of grain productivity is 2.8 times less, the level of potato productivity is 2.2 times less and the level of sugar beet productivity is 1.8 times less. As for the work efficiency, it is 3 – 4 times less than in developed countries [1].

Some of the key problems are weak development of the processing industry and high losses. For example, losses of grain were equal to 30% and losses of potato and vegetables were equal to 40% in 2015 [1].

Moreover, the next serious problem is availability of agricultural technique, which was equal to almost 50% [1]. The average availability of cultivated lands by tractors and combines is less than in Canada or Europe.

The degradation of lands is important problem as well. The reasons are reduction of meliorative works and usage of fertilizers.

## *2.2. Import substitution as a strategy to achieve food security*

Import substitution is a process of replacing foreign goods with domestic goods. Import substitution is a serious strategy to solve the food security problem. There are many examples of using import substitution to achieve food security. Import substitution has both advantages and disadvantages. On one hand, reducing the level of competitiveness with foreign companies can help own manufacturer to increase income that can be spend on modernization. On the other hand, companies can set a high price on their goods and not care about quality of goods.

Usually positive effect is observed when population has low income level and weak national currency. As a result, volume of products, number of work places and volume of export rises. Import substitution can reduce our import economy dependence.

However, all positive signs are effective in short term perspective. Usually, the domestic production reaches its maximum after 10 years as it has been in Latin America. Countries missed access to the world technologies and their goods cannot be competitive outside these countries.

## **3. Problems of import substitution in Russia**

### *3.1. Analysis of the goals*

Import substitution in agriculture is a perspective direction to achieve declared goals as fast as possible. The large consumption market in Russia, active economic sanctions make this industry attractive for business's investments.

Moreover, import substitution in agriculture is necessary to ensure food safety. It's planned to provide agriculture products to reach 90% by 2020. According to the «Food safety doctrine», Russia should produce agriculture goods by 2020 in the next volume [3]:

- Grain – 95%;
- Potato – 95%;
- Milk and milk products – 90%;
- Meat and meat products – 85%;
- Food salt – 85%;
- Fish products – 80%;
- Sugar – 80%;
- Vegetable oil – 80%;

Despite specific goals, the realization ways aren't considered completely. Thereby, there is a probability of problems' appearing.

The other document sets the next goals [8]:

- To ensure food safety provision;
- To increase Russian agricultural goods' competitiveness on the internal and external markets;
- To increase financial stability of agricultural manufacturer;
- To stable development of agricultural lands;
- To reproduce and to increase efficiency of land resources using.

### 3.2. Evaluation of import substitution in agriculture

One of the main task for AIC is evaluation of import substitution current situation in the country and level of food safety doctrine realization.

Because of food embargo, import of agricultural goods such as meat, milk, grain, vegetables, fruits, nuts, and fish was forbidden [2, 7, 9].

To calculate Russia's self-sufficiency rate with the main agriculture goods the next formula was used:  $SSR = \frac{\text{Production level}}{\text{National consumption}} * 100\%$ , where SSR is self-sufficiency rate, which characterize food safety. National consumption includes productive consumption, household consumption, loss of production, industrial processing on nonfood purposes [4].

Self-sufficiency rate passed or approximately equals 100% in some categories of goods in 2015.

For example, self-sufficiency rate for potato is equal to 105%, SSR for eggs is equal to 98%. The value of self-sufficiency rate for meat went up to 10% and for vegetables to 5% from 2013 to 2015. It means that self-sufficiency rate has reached a planned value in these categories. Moreover, there is high value of self-sufficiency rate for vegetables. As for the milk, the planning value of self-sufficiency rate isn't reached. If the rate remains the same, it will be equal to 91% by 2022. As for the fruits and berries, self-sufficiency rate is very low, because of lack of suitable territories where they can be grown.

After analyzing the data from UN web-site [10], it can be concluded, that there are two possible situations. The first category of goods shows decrease of import and rise of export. The second category shows decrease of import and export. Milk products, meat products, fish products and vegetables are related to the first group. Sugar, grain and fruits are related to the second group.

It means that the first group self-sufficiency rate has climbed and producers sell goods abroad. There is no need to import such product.

Despite self-sufficiency in some industries, import continues. However, import has fallen from \$43 billion to \$25 billion. For instance, import of dairy cattle has plunged to 40% [5]. Moreover, part of import vegetables was equal to 90 – 95% in winter period. But now it is equal to 60%. However, 80% of potato was imported in winter 2015. This value declined to 40% in 2016 because of building vegetable stores [6].

## 4. Conclusion

The level of productivity in Russia is lower than in developed countries with the same climate.

Government accepts methods to support companies of agriculture industry and to realize the import substitution program for solving food safety problem.

To sum up, the program gives the first results. As for perspectives, the proper government regulation can help to reach the goals. But there are many problems, which haven't been solved yet.

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