Agricultural development as a factor in ensuring import substitution and strengthening the country's food security

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Abstract. The issue of the need to develop agriculture and import substitution has become particularly relevant after the beginning of mass imposing economic sanctions by the West against Russia, as well as a result of oil prices downturn and shortfall of budget revenues from the sale of energy sources. The policy of import substitution affects the areas of the agro-industrial complex to varying degrees. First of all, these measures affect all areas of agricultural production – crop production, animal husbandry and fisheries. In addition, they apply to the final products of the agro-industrial complex, that is, they regulate the food industry, thus affecting the issue of the country's food security. The purpose of the study is to identify problems in the development of the country's agriculture based on the study of Russian and international experience, to consider them in a complex, as well as to assess the impact of the import substitution policy on the development of the industry, to propose measures for the further development of the agro-industrial sector aimed at strengthening the country's food security.

1. Introduction

Agriculture is the main direction in our country's economic development, particularly in the context of import substitution. Agro-industrial production is a complex and high-risk business, dependent on natural and climatic conditions, requiring careful planning and calculation, using a scientific approach to solving the tasks set. In modern conditions, every country needs both economic and food security. Food security is defined as the state of the country's economy, aimed at ensuring food independence, guaranteeing physical and economic availability of foodstuff [1-3].

In recent years, the issues of ensuring food security in various regions of the world have been considered in the works of scientists both in Russia and abroad. These studies share the starting positions: food security issues are examined from the point of view of being influenced by climatic conditions, the seasonal nature of agricultural production and the COVID-19 pandemic.

Agriculture, nutrition and food security nexus is recognized in various conceptual frameworks. So, C F Nicholson, et al. [4] give four generally accepted aspects of food security: availability of foodstuff as one of important of food security indicators, access to food, nourishment, stability over time. Accessibility is most often measured at the level of territories, at the level of households or an individual.

E Workie et al. [5] in their study conduct a comprehensive assessment of COVID-19 impact on food security. The authors propose a mechanism for overcoming and mitigating the consequences that can be used to maintain livelihoods. The authors believe that the introduction of quarantine measures due to COVID-19 disrupted the supply chain of the most important goods, especially foodstuff. The consequences of COVID-19 are particularly negative for vulnerable segments of the population. In these conditions, the authors offer survival strategies: 1) within the framework of the food aid program, it is
necessary to expand the social program in the direction of providing food to low-income households; 2) supply chain management, encourage mobile purchase of perishable products; 3) fair trade policy, etc.

L Bizikova, et al. [6] review intervention measures aimed at improving the level of food security (subsidies, consulting services, etc.). Studies have shown positive, neutral and even negative food security.

U Sekaran and others [7] consider integrated systems of crop production and animal husbandry as one of the directions for improving food security. They can also be resistant to climate change. Diversified farming systems can increase crop yields, increase food security by increasing the amount of nutrients.

Studying the impact of the COVID-19 pandemic and climate change on food security in South Asia, G Rasul [8] points out that South Asia is one of the most densely populated regions of the world. With only 5% of the world's agricultural land, the region's farmers must feed more than 20% of the world's population. At the same time, South Asia is one of the poorest regions, where 1/3 of the world's poor live. Along with COVID-19, climate change has become a threat to food security for the territories, destroying agriculture.

Agriculture for South Asia not only provides food, but is also a source of livelihood for millions of people. According to Steven Lam et al., unsustainable farming practices also increase health risks [9]. P L Pingali [10] states that excessive use of agrochemicals and irrational use of water and energy result in many global problems. G Rasul [8] believes that solving the problems of food security will make it possible to improve the environment, and, consequently, the health of the population.

That is why agriculture, foodstuffs, the coronavirus, and climate change are linked both directly and indirectly. Climate change reduces the yield capacity of grain crops, rice (the main foodstuff of the Asians). As indicated by Rawal V, Verma A [11], the impact of COVID-19 on agriculture in South Asia was significantly greater than in other developed countries.

According to [12] food security includes the following components:

- economic, which directly includes direct production, processing and marketing of agricultural products. A characteristic property of the Russian agro-industrial complex is its dependence on imported seed varieties and various breeds of pedigree animals, which significantly reduces the level of food security.

- political, which manifests itself in a stable geopolitical situation, which is not typical for Russia.

- scientific and innovative, which ensure the creation of new agricultural machinery, improving the quality of agricultural products.

- infrastructural, which is particularly relevant due to Russia's significant dimensions.

The relevance of the issue under consideration for Russia is manifested in the fact that large-scale changes are taking place in the field of foods in our country due to the introduction of sanctions against us by Europe and the United States. Food security, according to Osmanov Z D, Moiseev P S [13], is associated with such a concept as “consumer goods basket”. The amount of the subsistence minimum depends on the size of the consumer goods basket and the cost of products, in turn, the subsistence minimum determines the minimum wage amount. The author considers that negative factors include a significant saturation threshold crossing by the domestic market with imported products, a low level of effective demand of the population for foodstuffs, price distortion in the market, moral and physical ageing of agricultural material and technical facilities, a gap in the innovation sphere.

In recent years, Russia has fully provided itself with basic types of food. From a depressed industry that agriculture was at the end of the last century, it has turned into one of the drivers of the domestic economy. If at the end of the 90s Russia had to be dependent on other countries and buy grain abroad, today Russia ranks second in the world among the largest grain exporters.

But at the same time, the Russian Federation, unfortunately, does not fully ensure the food security of its citizens. The country can not only fully provide the population with basic types of food, but become one of the guarantors of world food security as well. Russia has all the necessary natural resources for this: 9% of the world's productive arable land (1.43 ha of farmland per capita), more than 50% of chernozem, 20% of fresh water, etc.
Import substitution is a tool to restore and create food independence of the country, it acts as an economic strategy for the national development. Import substitution is based on industrialization of the economy by reducing the value of imports, that is, expansion of domestic goods share in the domestic market of specific industries and agriculture and their development to increase competitiveness.

Under the conditions of aggravated contradictions between different groups of countries in their struggle for access to the resource markets, target markets, and the unfolding information warfare, food security is becoming one of the urgent tasks of ensuring the country's national security [14].

In order to ensure the necessary level of food security, it is required to make arrangements within the framework of a systematic approach, that is, to use arrangements of an organizational, economic, regulatory, logistical, social and informational nature [15].

Economic recession caused by the sanctions wars, a significant fall in the exchange rate of the national currency against the key currencies, introduction of quarantine measures in connection with the spread of the coronavirus infection, do not allow us to talk about any high results in implementing the import substitution strategy in the agricultural sector of the country. Despite some success in import substitution in agriculture, there are significant problems in achieving the goals set.

2. Financial performance of agricultural organizations

Agriculture accounts for an insignificant share of total sales revenues. Meanwhile, the profitability of agricultural production is higher than the economy-wide rate. The economy-wide production output has a multiple-valued dynamics. If we consider the dynamics of this indicator in agriculture, we observe a stable positive trend.

As follows from the data in table 1, in 2019, compared to 2017, the economy-wide sales revenue decreased by 10.4%, however in agriculture, forestry, hunting, fishing, fish farming (hereinafter referred to as agriculture) it increased by 19.0%. While the cost of production decreased by 16.8% over the specified period, commercial and management expenses increased by 15.2%, which provided a 38.4% industry-based profit improvement. Meanwhile, the profitability of agricultural products for the period under review was higher than the profitability of products in the economy (in 2019 – 17.2% and 10.8%, respectively).

The share of agricultural products in total sales revenue for the analysed period increased by 1/3. Despite this, this indicator continues to be insignificant (in 2019 – 1.55%), while the share of the property in the agricultural sector in 2019 makes 1.95% of the total value of corporate property.

Financial investments of organizations in absolute terms in 2019 compared to 2017 increased by 49.2%, including those in agriculture – by 88.1%, which makes 0.72% of investments amount in the economy in 2019. When considering the indicator "financial investments" per 1 Rub of sales revenue, it is clear that the efficiency of investments in agriculture is much higher than the economy-wise one. In 2018-2019, the value of investments in the economy outstrips the value of sales revenue, that is, for example, in order to get a ruble in revenue in 2019, it was necessary to invest 1 ruble 42 kopecks, while in agriculture – only 66 kopecks.

With an increase in the population, the share of the rural population decreases, the share of those employed in agriculture decreases to a far greater extent. Accrued wages in agriculture, despite their growth, are far behind the economy-wide level of wages.

As follows from the data in table 2, in 2019, compared to 2010, the country's population increased by 2.7% or 3.9 million people, which includes decrease of the rural population by 0.8%. At the same time, the number of people employed in the economy decreased by 0.6%, including in agriculture – by 17.9%. A sharp decrease in the population employed in agriculture has been observed since 2017.

The amount of economy-wise accrued wages in 2019 compared to 2010 increased by 2.2 times, in agriculture – in a larger amount. Despite this, wages in agriculture are far behind the economy-wise level of wages. Thus, in 2019, the salary in crop production is 28,396 Rub, or 59.3% of the economy-wise salary level.
Table 1. Individual financial performance indicators of organizations by the type of their economic activity [16].

| Indicator                                         | Economy-wide total | Agriculture, forestry, hunting, fishing, fish farming |
|---------------------------------------------------|--------------------|------------------------------------------------------|
|                                                   | 2017 2018 2019     | 2019 to 2017, % 2017 2018 2019 2019 to 2017, %      |
| Sales revenue, Rub., 10⁹                           | 193,613 168,451 173,498 | 89.6 2,255 2,596 2,685 119.0 |
| Product cost, Rub., 10⁹                            | 163,635 132,417 136,126 | 83.2 1,794 2,037 2,118 118.0 |
| Commercial and management expenses, Rub, 10⁹       | 17,744 19,709 20,443 | 115.2 149.2 166.9 173.2 116.1 |
| Profit, Rub, 10⁹                                   | 12,233 16,325 16,928 | 138.4 311.7 393.0 393.5 126.2 |
| Product profitability, %                          | 6.7 10.7 10.8 | 161.2 16.0 17.8 17.2 107.5 |
| Return on assets, %                                | 3.8 4.7 5.8 | 152.6 5.4 5.8 4.2 77.8 |
| Property of organizations, Rub, 10⁹               | 239,870 264,257 289,043 | 120.5 4,538 5,204 5,628 124.0 |
| Financial investments of organizations, Rub, 10⁹  | 165,669 246,503 247,228 | 149.2 944.8 1,364 1,777 188.1 |
| Financial investments per 1 Rub. of sales revenue, Rub | 0.85 1.46 1.42 | 167.0 0.42 0.52 0.66 157.1 |

Table 2. The average annual number of employees in the economy and the average monthly nominal accrued salaries of corporate employees [17, 18].

| Years     | Population, millions people | Employed, millions people | Accrued salary, Rub. |
|-----------|-----------------------------|---------------------------|-----------------------|
|           | Total                       | Rural Total               | Agriculture            | In the economy | Agriculture, hunting and forestry | Crop and animal husbandry, hunting and related areas | Forestry and timber cutting |
| 2010      | 142.9                       | 37.6 71,476 5,822 20,952 | 10,668                | -              | -                                  | -                              |
| 2012      | 143.0                       | 37.3 71,979 5,692 26,629 | 14,129                | -              | -                                  | -                              |
| 2014      | 143.7                       | 37.1 71,815 5,500 32,495 | 17,724                | -              | -                                  | -                              |
| 2016      | 146.5                       | 37.9 72,065 5,503 36,709 | 21,755                | -              | -                                  | -                              |
| 2018      | 146.9                       | 37.6 7,1561 4,936 43,724 | -                     | 25,820         | 32,701                             | -                              |
| 2020      | 146.7                       | 37.2 69,550 4,553 51,344 | -                     | 31,058         | 37,855                             | -                              |
| 2020 to 2017, % | 102.3                        | 98.9 97.3 82.1 > 2.5 times | -                     | -              | -                                  | -                              |

Since 2017, information on accrued wages is published by the main ("economic") types of economic activity in accordance with OKVED2 (Russian National Classifier of Economic Activities2) groupings.
3. Impact of import substitution policy

The growth in the production of basic food products at an accelerated pace has provided the country with import substitution for the main types of food. In addition, Russia has become a leader in wheat exports and has entered the top five world pork producers.

According to the data shown in table 3, in 2019, compared to 2017, production in absolute terms increased for all import-substituting food products, with the exception of fresh sea fish (a decrease by 3.3%), frozen fish (by 2.2%), cottage cheese (by 3.5%), condensed milk products (by 14.3%), fermented milk products (by 3.6%). In 2020, compared to 2019, the production of unfrozen crustaceans decreased by 30.0%, and that of frozen crustaceans by 13.1%.

Table 3. Production of the main types of import-substituting food products in the Russian Federation, thousands tons [19].

| Food products                          | 2017   | 2018   | 2019   | 2020   | 2019 to 2017, % | 2020 to 2019, % |
|----------------------------------------|--------|--------|--------|--------|----------------|-----------------|
| Cattle meat, fresh, chilled            | 205    | 227    | 242    | 248    | 118.0          | 102.5           |
| Fresh, chilled pork                    | 2,171  | 2,415  | 2,491  | 2,788  | 114.7          | 111.9           |
| Poultry meat and by-products           | 4,839  | 4,877  | 4,840  | 4,768  | 100.0          | 98.5            |
| Sausage products                       | 2,259  | 2,282  | 2,282  | 2,361  | 101.0          | 103.5           |
| live sea fish                          | 112    | 154    | 127    | 154    | 113.4          | 121.2           |
| Fresh sea fish                         | 855    | 847    | 827    | 815    | 96.7           | 98.5            |
| Non-frozen crustaceans                 | 45.8   | 52.5   | 49.6   | 34.7   | 108.3          | 70.0            |
| Fish fillet, fish flesh                | 17.3   | 17.4   | 17.5   | 19.3   | 101.1          | 110.3           |
| Frozen fish                            | 3,057  | 3,056  | 2,989  | 2,996  | 97.8           | 100.2           |
| Frozen fish fillet                     | 146    | 155    | 163    | 174    | 111.6          | 106.7           |
| Fish air-dried, salted, unsalted, brined fish | 106   | 112   | 120   | 124   | 113.2          | 103.3           |
| Frozen crustaceans                     | 69.9   | 82.4   | 100    | 86.9   | 143.1          | 86.9            |
| Vegetables (except potatoes)           | 62.6   | 55.9   | 83.7   | 100    | 133.7          | 119.5           |
| Fresh fruits, berries and nuts         | 15.6   | 16.8   | 22.2   | 24.7   | 142.3          | 111.3           |
| Liquid processed milk                  | 5,390  | 5,457  | 5,425  | 5,514  | 100.6          | 101.6           |
| Cream                                  | 133    | 150    | 163    | 188    | 122.6          | 115.3           |
| Cottage cheese                         | 486    | 501    | 469    | 491    | 96.5           | 104.7           |
| Butter                                 | 270    | 267    | 269    | 282    | 99.6           | 104.8           |
| Cheese                                 | 464    | 467    | 540    | 566    | 116.4          | 104.8           |
| Condensed milk products, millions of cans | 837  | 806    | 717    | 717    | 85.7           | 100.0           |
| Fermented milk products                | 2,896  | 2,819  | 2,793  | 2,751  | 96.4           | 98.5            |

As follows from the data in table 4, the content of imported meat and meat products in the total amount of resources decreased from 7.1% in 2018 to 5.1% in 2020. The share of own production increased from 85.9% to 87.3%. Taking into account the export of meat and meat products, the balance of stocks for the period under review exceeds the value of imports, which indicates that the country could do at all without imports of meat and meat products.

The share of own milk and dairy production decreased from 79.0% in 2018 to 78.5% in 2020. The import content increased from 16.8% to 17.1%, respectively. The export content increased from 1.5% to 1.7%. Thus, if we refused to export, the need to import milk and dairy products would still remain.

On the other hand, "the growth of agriculture due to state support measures and private investment has revealed the main problem of import substitution – the potential opportunities of the Russian agro-industrial complex are huge, but the food market of the Russian Federation is limited to 145 million consumers and is doomed without the development of the export component" [21]. According to the Federal Customs Service of Russia and operational data, Russia in 2020 for the fifth year in a row was the world's largest wheat exporter (38-38.5 millions of tons), ahead of Canada (27 millions of tons) and the United States (26 millions of tons).
Russia, according to Gazprombank's Centre for Economic Forecasting, in 2020 entered the top 5 world producers of pork with a volume of 4.276 million tons in carcass weight equivalent. Thus, Russian swine husbandry, which has a history of only 15 years, rose a step in the world ranking and was ranked the 5th after China, the United States, Germany and Poland. It should be noted that until 2017 Russia annually bought about 300 thousand tons of pork from Brazil, now import is equal to zero, and exports are increasing from year to year.

| Table 4. Resources and the use of meat and meat products, milk and dairy products in the Russian Federation [20]. |
|---------------------------------------------------------------|
| **Indicator** | **Use of products, thousands of tons** | **% to resources** |
| **Meat and meat products** |  |  |  |  |  |  |  |  |
| **1. Resources** |  |  |  |  |  |  |  |  |
| Inventory at the beginning of a year | 862.0 | 912.0 | 977.6 | 7.0 | 7.3 | 7.6 |
| Production | 10,629 | 10,866 | 11,219.0 | 85.9 | 86.6 | 87.3 |
| Import | 879.7 | 771.8 | 648.0 | 7.1 | 6.1 | 5.1 |
| Total resources | 12,371 | 12,550 | 12,844 | 100 | 100 | 100 |
| **2. Utilisation** |  |  |  |  |  |  |  |  |
| Industrial consumption | 29.1 | 26.9 | 28.4 | 0.2 | 0.2 | 0.2 |
| Losses | 18.3 | 20.5 | 20.2 | 0.1 | 0.2 | 0.2 |
| Export | 354.4 | 415.3 | 609.0 | 2.9 | 3.3 | 4.7 |
| Personal consumption | 11,057 | 11,110 | 11,233.5 | 89.4 | 88.5 | 87.5 |
| Inventory at the end of reporting period | 912.0 | 977.6 | 953.5 | 7.4 | 7.8 | 7.4 |
| **Milk and dairy products** |  |  |  |  |  |  |  |  |
| **1. Resources** |  |  |  |  |  |  |  |  |
| Inventory at the beginning of the year | 1,638 | 1,680 | 1,798 | 4.2 | 4.2 | 4.4 |
| Production | 30,611 | 31,360 | 32,215 | 79.0 | 78.9 | 78.5 |
| Import | 6,493 | 6,727 | 7,009 | 16.8 | 16.9 | 17.1 |
| Total resources | 38,743 | 39,768 | 41,023 | 100 | 100 | 100 |
| **2. Utilisation** |  |  |  |  |  |  |  |  |
| Industrial consumption | 2,903 | 2,992 | 3,017 | 7.5 | 7.5 | 7.4 |
| Losses | 31.3 | 38.0 | 29.4 | 0.1 | 0.1 | 0.1 |
| Export | 576.3 | 611.0 | 706.5 | 1.5 | 1.5 | 1.7 |
| Personal consumption | 33,552 | 34,328 | 35,261 | 86.6 | 86.4 | 85.9 |
| Inventory at the end of reporting period | 1,680 | 1,798 | 2,008 | 4.3 | 4.5 | 4.9 |

Speaking about further development of import substitution, it should be borne in mind that for the development of agriculture, it is necessary to update fixed assets: in 2018, the share of old tractors was 73%, grain harvesters – 61.5%, forage harvesters – 65.3%.

Noting the successes achieved in agriculture in recent years, N V Krivenko notes such problems as the predominance of imported equipment (65-75%) in the number of agricultural equipment, a high share of the herd based on imported livestock in the domestic breeding stock, a low level of domestic compound animal feeding-stuff, an extremely small share of domestic planting potatoes (10%) [22].

4. Agricultural production in the structure of gross domestic product (GDP)
From the data in table 5, it follows that the share of gross value added created in agriculture increases annually, which is facilitated by investments made in the industry. Unlike other industries, in agriculture, most organizations have a profit.
Table 5. Structure of gross value added by economic sectors, as % of total [23].

| Indicator | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2020 to 2014, % |
|-----------|------|------|------|------|------|------|------|-----------------|
| Agriculture, forestry, hunting, fishing | 3.9  | 4.3  | 4.27 | 3.9  | 3.8  | 3.9  | 4.1  | 105.1           |
| Processing industries                  | 13.1 | 13.8 | 13.0 | 13.7 | 14.3 | 14.4 | 14.7 | 112.2           |
| Trade, repair of vehicles              | 16.3 | 15.8 | 14.66| 14.1 | 13.6 | 13.1 | 13.0 | 79.7            |
| Total                                  | 100  | 100  | 100  | 100  | 100  | 100  | 100  | -               |

Table 6. Balanced financial result, the share of unprofitable organizations (in % of the total number of organizations, excluding small businesses) [24].

| Years | GDP, Rub, 10^9 | Investments | Balance of profits (+) and losses (-), Rub, 10^6 | Share of unprofitable organizations, % |
|-------|----------------|-------------|--------------------------------------------------|----------------------------------------|
|       | total,% of GDP | total       | in the agriculture                               | total in the agriculture               |
|       | including in the agriculture, % of all investments |                      |                                                  |                                        |
|       | 2011 | 60114.0 | 18.3 | 4.13 | 7684.3 | -81.0 | 28.5 | 28.8 |
|       | 2013 | 72985.7 | 18.4 | 3.95 | 2458.2 | 308.7 | 29.9 | 26.9 |
|       | 2015 | 83087.4 | 16.7 | 3.73 | -957.7 | 955.0 | 29.2 | 18.2 |
|       | 2017 | 91843.2 | 17.4 | 4.40 | -837088.9 | 773.1 | 30.9 | 27.3 |
|       | 2019 | 109193.2 | 17.7 | 4.37 | 57164.7 | -221.1 | 28.2 | 39.0 |
|       | 2020 | 106967.5 | 18.8 | 4.25 | - | - | - | - |
|       | 2020 to 2011, % | 177.9 | 102.7 | 102.9 | - | - | - | - |

From the data in table 6, it follows that investments in the economy make 17-19% of GDP. In 2020, compared to 2011, the share of investments in agriculture from the total amount of investments increased from 4.13% to 4.25%. Taking into account the fact that the share of agricultural production revenue does not exceed 2.0% of the total economy-wise revenue, it means that investments per ruble of agricultural products are at least twice higher than the amount of investment in the economy.

In the period from 2011 to 2020, during 5 years organizations of other industries had a balanced financial result in the form of a loss, and organizations of agriculture – for 2 years. In agriculture, the number of unprofitable organizations differs insignificantly from other industries.

In the volume of agricultural production, the share of agricultural organizations prevails, and the share of peasant (farm) enterprises is insignificant.

Table 7. Agricultural products by category of enterprises [25].

| Indicator | Rub, 10^9 | 2010 | 2020 | %  | 2020 to 2010, % |
|-----------|-----------|------|------|----|-----------------|
| Agricultural organizations              | 1,102     | 3,784| 44.8 | 58.2 | 3.4 times       |
| Households of the population            | 1,182     | 1,717| 48.0 | 28.2 | 145.3 %         |
| Peasant (farm) enterprises              | 176       | 0,964| 72.0 | 13.6 | 5.5 times       |
| Total                                  | 2,462     | 6,468| 100  | 100  | >2.6 times      |

According to table 7, the volume of agricultural production in 2019 increased by 2.4 times compared to 2010, including the production of agricultural organizations - by 3.1 times. Despite the 4.5-fold increase in the output of peasant (farm) enterprises over the specified period, its share decreased from 72.0% in 2010 to 13.6% in 2019. The share of population households also decreased from 48.0% to 28.2%, and the share of agricultural organizations increased from 44.8 to 58.2%.
From the data in table 8, it follows that the agricultural organizations are mainly engaged in the production of grain, sugar beet, sunflower seeds, cattle and poultry, eggs. The households of the population mostly produce potatoes, vegetables, fruits and berries. Peasant (farm) enterprises are more involved in the production of grain, sunflower seeds, and their share in keeping cattle, poultry and egg production is low.

Table 8. Production of the main types of agricultural products by categories of enterprises (% to the total production) [20].

| Type of production | Agricultural organizations 2010 | Agricultural organizations 2019 | Households of the population 2010 | Households of the population 2019 | Peasant (farm) enterprises 2010 | Peasant (farm) enterprises 2019 |
|--------------------|-------------------------------|-------------------------------|---------------------------------|---------------------------------|-------------------------------|-------------------------------|
| Grain              | 77.0                          | 70.1                          | 1.1                             | 0.7                             | 21.9                          | 29.2                          |
| Sugar beet         | 88.7                          | 89.1                          | 0.4                             | 0.1                             | 10.9                          | 10.8                          |
| Sunflower seeds    | 72.9                          | 64.5                          | 0.7                             | 0.3                             | 26.4                          | 35.2                          |
| Potato             | 12.0                          | 21.0                          | 81.7                            | 65.7                            | 6.3                           | 13.3                          |
| vegetables         | 18.8                          | 28.1                          | 68.3                            | 51.7                            | 12.9                          | 20.2                          |
| Fruits and berries | 15.5                          | 27.5                          | 81.9                            | 66.3                            | 2.5                           | 6.2                           |
| Cattle and poultry | 60.6                          | 79.8                          | 36.5                            | 17.2                            | 2.9                           | 3.0                           |
| Milk               | 45.4                          | 54.1                          | 49.9                            | 37.4                            | 4.7                           | 8.5                           |
| Eggs               | 76.8                          | 80.6                          | 22.4                            | 18.3                            | 0.8                           | 1.1                           |

5. Discussion

The role and importance of the agricultural sector is that it forms 1/3 of the consumer basket. A consumer basket is a set of necessary products and goods to support natural human life and activities. It is set separately for the working-age population, pensioners and children. The current consumer basket for the working-age population includes (in kg) [26] bread products – 126.5; potatoes – 100.4; vegetables and gourds – 114.6; fresh fruit – 60; sugar and confectionery – 23.8; meat products – 58.6; fish products – 18.5; milk and dairy products; pieces of eggs – 210; vegetable oil, margarine – 11; and other products (salt, tea) – 4.9.

The list of products is compiled to calculate the value of the subsistence minimum, based on the prices of products that are valid for a certain period of time. The calculation takes into account: food products – 37.31%; non-food products – 37.13%; and services – 25.56%.

The consumer basket includes 156 items of goods and services in Russia, 300 in the USA, 350 in England, 475 in Germany, and 250 in France.

The current value of the consumer basket was approved in 2012, and in 2017, taking into account the state of the economy, it was left unchanged. Based on the consumer basket, the analysis of the population living standard is carried out, the indicators of which affect the formation of the subsistence minimum, as well as budgets.

The subsistence minimum reflects the cost of the consumer basket, the value of a set of food products sufficient to ensure normal functioning of the human body and to preserve his health. The minimum subsistence amount is calculated by the Federal State Statistics Service, and approved by the Ministry of Labor and Social Protection of the Russian Federation. The minimum subsistence value is determined on the basis of the consumer basket, data from state statistics on the level of consumer prices for food products, non-food goods and services, expenses on mandatory payments and fees.

The minimum subsistence value and the value of the minimum living wage were first equated in 2019. It is starting from 2019 that the amount of wages cannot be less than the minimum living wage. It should be borne in mind that the amount of the minimum wage is taken into account prior to deducting personal income tax, and therefore the employee will receive an amount reduced by 13%.

The consumer basket, as mentioned above, has not been revised for a long time. Its real cost is several times higher than the one established by the country's Government. We will compare the values of the minimum wage and the subsistence minimum (table 9).
Table 9. Comparative table of the ratio between the subsistence minimum and the minimum wage [25, 27].

| Years | Subsistence minimum per capita, Rub. | Minimum wage, Rub. |
|-------|-------------------------------------|--------------------|
| 2015  | 10404                               | 5965               |
| 2016  | 9,776 (1st quarter) – 9,697 (4th quarter) | 6,204, since July – 7,500 |
| 2017  | 9,909 – 10,328 (3rd quarter) – 9,786 (4th quarter) | 7,500, since July – 7,800 |
| 2018  | 10,038, since May – 11,163 | 9,489, since May – 11,163 |
| 2019  | 11,280                              | 11,280             |
| 2020  | 12,130                              | 12,130             |

From the above-given data, it can be seen that until 2019, the value of the subsistence minimum was always higher than the value of the minimum wage. The role of the minimum wage is insignificant in the issues of regulating payment for labour.

It was advantageous for employers when, when hiring an employee, they set the salary in accordance with the minimum wage, without taking into account the subsistence minimum, the value of which is higher. The interrelation between the minimum wage and the subsistence minimum is shown in the fact that, in fact, the federal minimum wage is the same social guarantee as the subsistence minimum. The subsistence minimum acts as a minimum standard by which the citizens' standard of living is estimated, below which it is considered to be below the poverty line and in need of social support from the state.

Thus, the value of the current consumer basket is much underestimated. The list includes a small number of products. It does not take into account the ongoing changes in the prices for agricultural products and in consumer prices, which cause annual inflation, to the amount of which the state indexes the wages of state employees and pensioners, but does not take into account when calculating the subsistence minimum.

The value of the subsistence minimum does not take into account either the cost of a fixed set of consumer goods and services for interregional comparisons of the population purchasing power using the indicator "the ratio of the monetary income of the population to the cost of a fixed set of goods (services)". The cost of a fixed set of goods and services varies by region. So, it was: in the Central Federal District – in December 2019, 18537.9 Rub, in January 2021-19954.3 Rub, in the Volga Federal District - 14345.8 Rub and 15348.3 Rub, respectively when the minimum wage in December 2019 was 12,130 Rub and in January 2021 – 12,792 Rub.

There is another important factor: in Russia, the agro-industrial complex has such specifics that there is a strong difference between wholesale and retail prices for agricultural products, i.e. the prices of commodity producers are significantly lower than the purchase prices of wholesalers, this hinders the development of the industry.

6. Conclusion

Food security today depends less on whether the Earth is able to produce enough food for an increasing population. Rather, the key threat is political factors, inequality in food distribution. In the modern world, mechanisms that threaten global food security often persist in the form of barriers that prevent the effective movement of food from areas with an excess of food to deficient regions.

According to the results of the study, the following can be noted as threats to food security:
- the share of property in the agricultural sector is insignificant, the material and technical base is low;
- low share of agricultural production in GDP;
- insignificant financial investments in agriculture;
- there is a sharp decline in the number of workers in agriculture, the reasons for which are low wages, living conditions in rural areas;
- dependence on imports for certain types of products preserves;
- worn-out state of agricultural machinery, the predominance of imported machinery and raw materials in agricultural production;
– a large gap between retail prices and wholesale prices for agricultural products.

To solve the issue of accelerated agriculture development, including the problem of import substitution in the agricultural sector, it is necessary not only to increase production volumes, but, in fact, to create necessary infrastructure for agricultural production that meets modern requirements.

Under the conditions of foreign economic sanctions and the policy of import substitution, domestic agricultural producers play a key role in ensuring the livelihood of the population and the food independence of the state [28].

To improve food security in the Russian Federation, it is necessary to solve a whole range of problems that have accumulated in the agro-industrial complex:

– elimination of territorial (interregional) imbalances in the development of the agro-industrial complex;
– ensuring access to foreign financial resources and modern technologies [29];
– breeding of purebred breeding cattle;
– development of foodstuff industry;
– providing crop production with its own planting material;
– renewal of the fleet of agricultural machinery of domestic production;
– improving the standard of living of the rural population;
– creation of breeding centers in both animal husbandry and crop production, creation of infrastructure in rural areas;
– construction of processing plants.

Current economic situation dictates the need for import substitution in the market of agricultural machinery, since technical dependence can develop into technological dependence.

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