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Key Aspects of the Economic Potential Development of the Agro-Industrial Complex of the Northern Regions (Case Study of the Komi Republic)

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Abstract. The article presents a scientific approach to the actual problem of the formation of a full-fledged economic potential (industrial and consumer) of the agro-industrial complex of the northern regions. The key premise of the study is that the content of the economic potential makes it possible to identify not only the dynamics of the accumulation of production capacities, but also to determine the trends and prospects for socio-economic, environmental, infrastructural, demographic and market transformations. The principle of conducting a systematic analysis of the state, composition and structure of the agro-industrial complex of the regions of the North of potential was chosen as the main prerequisite for the study. The most reliable method that reveals the directions of the prospective development of the agro-industrial complex of the regions of the North is a retrospective analysis of the state of their technical, economic and other indicators. Given the interrelated and interdependent properties of the economic potential, it is proposed to develop the production and consumer potentials of the agro-industrial complex of the regions of the North in a single context of relevant economic relations and development strategies. Emphasis should be placed on the constant renewal of the elements of the economic potential of the agro-industrial complex of the Northern regions. An important role in increasing the economic potential of the agro-industrial complex of the Northern regions should be played by the formation of regular state financial, economic, legal and other support for the agro-industrial complex of the regions of the North. The long-term strategic line for the development of the agro-industrial complex of the regions of the North should be determined not only by the level of production and sales of marketable products, but also by the combination of state and non-state program measures into a clear and coordinated effective system of strategic measures. It is recommended to regularly transform the elemental structures of the agro-industrial complex of the Northern regions from a passive state into an active carrier of intellectual capital, fixed assets and investments.

Keywords: *agro-industrial complex, economic potential, production potential, consumer potential, material value, structural elements, intellectual capital, resource, principle, regions of the North*

Introduction

Within the framework of this study, the list of regions of the North includes the regions of the Far North and areas equated to the regions of the Far North, listed in Decree of the Government of the Russian Federation dated November 16, 2021 No. 1946 “On approval of the list of re-

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gions of the Far North and areas equated to regions of the Far North , in order to provide state guarantees and compensations for people working and living in these regions and areas, recognizing certain acts of the Government of the Russian Federation as invalid and recognizing certain acts of the Council of Ministers of the USSR as inoperative on the territory of the Russian Federation”.

The economic potential of agro-industrial complex (AIC) is a combination of capital resources and human capital, which make it possible to produce competitive products and provide services in the required volume for the development of production and consumption of agricultural products. In terms of the essential characteristic, the economic potential of agro-industrial complex can be considered as a system, the elements of which are its branches and infrastructure, forming a single integrity. On the other hand, the economic potential is the main factor in ensuring the sustainability of the agro-industrial complex as a whole. The economic potential of agro-industrial complex also includes natural and climatic conditions, the impact of environmental impact, internal incentives for the development of production, consumption, distribution and exchange of products.

The economic potential of agro-industrial complex includes market and production potentials. The latter represents the real volume and quality of manufactured products, achieved with the availability and full use of available capital, labor, land and other resources.

An important factor of the economic potential of agro-industrial complex is the dynamics of income. The assessment of the economic potential of AIC should proceed from the possibilities of obtaining future income, which are mostly the consequence of investment resources.

Based on the existing principles of management, complex natural, climatic and economic conditions of functioning, as well as the methods and mechanisms of integration behavior, it can be said that in the process of achieving sustainable development of the agro-industrial complex of the North, its branches and sub-sectors operate in special natural, climatic and economic conditions that allows them to be united in a specific economic zone, which can be assigned a certain legal status, implying constant state support. This indicates the necessity to form a new form and new methods of financing and functioning of the agro-industrial complex of the regions of the North. In essence, this is a special form of management, which will ensure reliable and comprehensive development of the agro-industrial complex of the regions of the North with the provision of regular state financial, economic, legal and other support.

The main focus of the study is on the development of production and consumer potentials of the agro-industrial complex of the regions of the North in a single context within the framework of relevant economic relations. This will make it possible to accelerate the processes of their transfer from passive states to a high-tech industrial-intellectual basis with progressive management methods. The study has determined that more reliable analysis of the economic potential gives a clear idea of the integrity of its elemental structures and the state of their operating assets.

According to the general economic activity, the most reliable method for identifying the directions for the prospective development of the agro-industrial complex of the regions of the North is a retrospective analysis of the state of their technical, economic and other indicators. This method allows not only to identify the content characteristics of the economic potential of the AIC of the regions of the North, but also to assess the ongoing changes in individual sectors, sub-sectors, and activities. In this regard, the present study is of current importance. The need for this kind of research is constantly growing.

The purpose of the study is to determine the ways, directions and methods for the formation of a full-fledged economic potential (production and consumer) of the agro-industrial complex of the northern regions, the formation of a full-fledged economic potential of the AIC of the regions of the North, and the improvement of their quantitative and qualitative parameters of the structural composition. The formation of a full-fledged economic potential of the agro-industrial complex of the northern regions will make it possible to radically change the nature of work of the AIC parts of the regions of the North, to ensure their efficiency in the long-term prospect. Real specific technical, economic and other indicators, as well as the current results of production, distribution, consumption and exchange, provide convincing arguments of the necessity to achieve long-term and sustainable development of the agro-industrial complex of the regions of the North by forming a full-fledged economic potential.

The objectives of the study are to identify real trends in the content of economic potential, sources of expansion and renewal of the economic potential of the agro-industrial complex of the regions of the North, ensuring the systemic development of its main elements and the necessary conditions for their interdependent development, designing and implementing progressive principles for regulating the proportionality of the AIC of the northern regions. The article reveals the theoretical, methodological and practical foundations for the efficient management of the agro-industrial complex of the regions of the north, the forms and methods for transferring them from the current condition to a state adequate to the intensive investment development. In terms of substantial characteristics, the economic potential of the agro-industrial complex is a set of socio-economic objects and relations, which reflects not only the stages of accumulation of production capacities, but also the level of balance between the main parameters of production and consumer potentials, probable changes in the infrastructural and demographic components of the AIC, the load on the environment.

Literature review

Studies of the economic potential of the agro-industrial complex of the northern regions occupy a prominent place in the economic literature.

The scientific literature devoted to the study of the economic potential of the AIC of the northern regions confirms that, from the classical approach perspective, the economic potential is the main initial component of the sustainable development of the agro-industrial complex. This

potential is the driving force behind the development of not only production, but also the food market. Based on the economic potential, the key tasks of the development of the agro-industrial complex of the regions of the North are being solved. The state of economic potential in different regions determines their inequality in terms of efficiency of AIC production. The level of economic potential vividly characterizes the economic power of the spheres and enterprises of the agro-industrial complex, while the dynamics — the degree of reproduction efficiency. This indicates the need for large-scale and diverse forms of development of the economic potential of the agro-industrial complex of the regions of the North, which cover both its integral movement and the proportionality of the basic technological cycles (BTC) — “finance – science – production – market”.

However, the scientific literature confirms that socio-economic and other transformations of AIC are difficult for technical and static assessments. Therefore, the study of the economic potential of the agro-industrial complex of the northern regions requires versatile methods of scientific analysis.

In the scientific literature, the key aspects of research are the identification of the content of the economic potential, the determination of the dynamics of production capacities accumulation, the forecasting of trends and the recommended choice of organizational efforts in the process of socio-economic, environmental, infrastructural, demographic, market and other transformations.

Epstein D. and Hockman G. consider the relationship of resource potential and efficiency of agricultural enterprises [1].

Gadzhiev Yu.A., Styrov A.A., Mustafaev A.A. and others analyze the investment and innovation system of the agro-industrial complex of the northern regions, the problems and prospects for its improvement [2].

Gorbunov A.A. notes that special importance in the research of AIC of the Northern regions is given not only to the study and achievement of its full economic potential, but also to the improvement of the interdependent characteristics of its main production and consumer elements [3, p. 82].

Magomedov R.M. and Khalimbekov H.Z. consider the production potential of the agro-industrial complex as a set of production resources measured in quantitative and qualitative indicators, in unity with their return under the condition of the best use in given natural and climatic conditions and given trends in the development of technologies [4]. In order to characterize the economic potential, the authors, along with the category of production capital, use the category of “consumer potential” (the prospective level of consumption of agricultural products). In their opinion, the unity of production and consumer potentials determines the category of economic potential.

Serova E.V., Grazhdaninova M.P., Karlova N.A. analyze the market of purchased resources as a factor of the economic potential of the agro-industrial complex [5, p. 105].

Vitun S.E. and Rysenko A.V. emphasize that, as a rule, the basis for increasing the level of economic potential of AIC of the Northern regions are reliable internal and external sources of financing, sufficient for regular investment in its areas and enterprises [6, p. 69].

Kagan A.Kh. devotes his research to revealing the essence of economic potential. The author believes that the economic potential expresses the highest quantitative and qualitative capabilities of a system that functions at a certain level of development of science, engineering, and technology [7].

Important theoretical and methodological aspects of interrelation of economic potential and production efficiency are disclosed in articles of Svobodin V.A. [8].

Herath J. shows that the income of the population positively correlates with the development of agriculture, which leads to the strengthening of its economic potential in the process of economic growth acceleration [9].

Kiseleva N.N. and Papushoya M.S. clarify the categorical content of the resource potential of agriculture and its structure, taking into account the innovative component [10].

Naydenov N.D., Mustafaev A.A., Naydenova T.A. analyze the economic potential for the development of agriculture in the penitentiary institutions of the Arctic [11].

Anishchenko A.N. assesses the production potential of the subjects of the European North in the field of agriculture and argues that they have a significant potential for agricultural development [12].

Thus, the issues of increasing the economic potential of agriculture and the agro-industrial complex are being widely discussed in Russia and abroad. The authors are unanimous that the economic potential of AIC of the regions of the North is promising for investment. However, in practice, its economic potential is underestimated, and its specifics have not been sufficiently studied. It is important to deepen the understanding of the specifics of the economic potential of the agro-industrial complex of the Northern regions and to find forms and methods for strengthening its positive impact on their economic growth.

Research materials

Let us consider the dynamics of investments to the fixed capital and fixed production assets of agriculture in the regions of the Far North (Table 1).

Table 1

Dynamics of investments to the fixed capital and fixed production assets of agriculture in the regions of the Far North of Russia, thousand rubles¹

Regions of the Far North	Investments in the fixed capital of agriculture (average), thous. rubles			Change in investments as a percentage of the previous period		
	2010–2013	2014–2017	2018–2020	2010–2013	2014–2017	2018–2020
Arkhangelsk Oblast	1876069.0	543817.3	1169780.0	100	28.5	215.1
Komi Republic	647174.3	764191.0	1004223.0	100	15.4	131.4

¹ Source: materials provided upon official request by the Federal State Statistics Service of Russia, authors' calculations.

Republic of Karelia	283521.3	296831.0	346725.2	100	104.6	122.2
Murmansk Oblast	219407.6	259007.6	229456.5	100	118.0	88.5
Khanty-Mansi Autonomous Okrug	81165.3	73546.6	63297.0	100	90.6	77.9
Yamalo-Nenets AO	238623.6	329045.6	200632.0	100	137.8	84.0
Nenets AO	111165.3	99426.3	197258.7	100	89.4	198.0
Republic of Sakha (Yakutia)	447526.0	257005.6	313521.5	100	57.4	121.9
Magadan Oblast	28016.0	41857.3	18765.0	100	149.4	44.8
Kamchatka Krai	194777.6	289621.0	241933.0	100	148.6	124.4
Chukotka AO	228110.0	120175.0	59209.0	100	53.1	49.2
Sakhalin Oblast	379542.6	1154068.6	4854736.5	100	304.0	420.6
Average				100	108.5	139.8
Median					97.6	122.5
Dispersion					9637.8	5324.6

Analysis of the data shown in Table 1 indicates that the process of investing in agriculture in the regions of the Far North is unstable and uneven. This is especially true for the Arkhangelsk, Murmansk and Magadan oblasts, the Khanty-Mansi, Yamalo-Nenets, Chukotka and Nenets autonomous okrugs. Instability in the investment sphere of the agro-industrial complex creates favorable conditions for a de-investment trend in agricultural production in the regions of the North. In addition, instability of investment processes is an expression of disproportionality. Instability in the investment sphere leads to an increase in disproportionality in the technological structure of capital and the specific structure of fixed production assets. Ultimately, instability in the investment sphere leads to a decrease in the production and consumer potentials in the agro-industrial complex of the Arctic regions as a whole (see Table 2).

Table 2

Dynamics of the fixed production assets of agriculture in the regions of the Far North of Russia, thousand rubles²

Regions of the Far North	The fixed production assets of agriculture (average), thousand rubles			Change in the fixed production assets of agriculture as a percentage of the previous period		
	2010–2013	2010–2013	2014–2017	2010–2013	2014–2017	2018–2020
Arkhangelsk Oblast	8680042.0	4010761.6	5338016.7	100	46.2	13.3
Komi Republic	4423036.3	5889853.3	8969080.7	100	133.0	152.2
Republic of Karelia	2644679.6	3223455.3	2913692.7	100	121	180.7
Murmansk Oblast	1729071.3	1933268.6	1899883.0	100	111.8	98.2
Khanty-Mansi Autonomous Okrug	1365131.0	1503373.0	727837.5	100	110.1	48.4
Yamalo-Nenets AO	1427401.0	1964953.0	1900025.7	100	137.6	96.6
Nenets AO	648679.6	694404.0	1233297.5	100	107	177.6
Republic of Sakha (Yakutia)	4244420.3	4738432.6	8066495.2	100	111.6	170.2
Magadan Oblast	181942.3	526357.0	379017.7	100	289.2	72.0
Kamchatka Krai	1342830.3	1656873.0	1682135.2	100	123	101.5
Chukotka AO	1049496.3	709467.6	954222.0	100	67.6	134.4

² Source: materials provided upon official request by the Federal State Statistics Service of Russia, authors' calculations.

Sakhalin Oblast	2310404.0	4455993.0	11364818.2	100	192.8	255.0
Average				100	129.2	119.9
Median					116.4	101.5
Dispersion					3499.1	4135.2

As Table 2 shows, the absolute decrease in the volume of capital investments in the agro-industrial complex of the regions of the North slowed down the processes of modernization and reconstruction of fixed production assets.

The decrease in innovation activity has increased the volume of old equipment and has led to a discrepancy between production needs. The direct correlation between the growth dynamics of investment resources and the growth rate of production has collapsed. There were problems not only with the destructive location of production capacities, but also with disproportions in the agro-industrial spheres. Ultimately, imbalances in the agro-industrial sectors lead to inefficient use of capital values, deterioration of cultivated land and destructive distribution of workers.

According to our observations and estimations, there is an increase in costs and prices for new equipment in the main regions of the North, which causes an increase in the volume of repair work. Hence the phenomenon of fictitious property arises. It is expressed in the increase of current expenses (first of all, repair works) and expenses for maintenance of the available obsolete equipment (machines and mechanisms) while maintaining or even reducing production capacity.

The above data allow us to conclude that it is necessary to form a full-fledged investment cycle, which includes extensive use of innovations, for a more complete use of the economic potential of the agro-industrial complex of the Northern regions. The investment cycle is a closed chain of successively interconnected links of the AIC activity.

It should be noted that the growth in the cost of fixed production assets is determined by two sources: 1) increasing the amount of investment in agriculture to a volume that can improve the quantitative and qualitative characteristics of the fixed production assets; 2) conducting a periodic revaluation of fixed production assets that can “artificially” increase their value and strengthen the authorized capital of agricultural enterprises. Despite all the circumstances, forecasting the growth of investments and the formation of fixed production assets of specific enterprises is of particular importance. Although “...unlike historical and alternative estimates, the forecast calculation does not contain prudent values of exogenous variables” [13, p. 135].

In contrast to the growth of new investments and funds, the revaluation of the old value of funds (equating their old value to the current market value) is not a natural source of changes in the physical characteristics of fixed assets, which consist of quantitative and qualitative parameters of operating assets. Thus, the revaluation of the value of funds worsens the prospects for increasing the level of use of the AIC economic potential. “The lower the level of competition in the market, the more problems with the efficiency of enterprises” [14, p. 350].

It is known that the formation of the AIC production potential proceeds from the efficiency of investments. However, at the low level of efficiency of economic activities of agricultural entities in the North, carried out in harsh natural and climatic conditions, the postulate of investment

efficiency, not lower than the average for Russia, is not fully applicable. It is necessary to take into account the specific financial and economic circumstances and to bring the correspondence between the effectiveness of investments and the parameters of expected return.

The main task in using the economic potential of the agro-industrial complex of the Northern regions is the effective implementation of the production function of resources and technologies. Taking into account the best functional characteristics of the AIC of the Komi Republic, let us consider some basic indicators of the development of its production potential (Table 3).

Table 3

*Dynamics of the main indicators characterizing the level of production potential of agriculture in the agro-industrial complex of the Komi Republic for 2010–2020*³

Indicators	Average		
	2010–2013	2014–2017	2018–2020
Volume of manufactured products, million rubles. Agriculture, total:	7243.1	10041.6	10749.1
of which: crop production	2134.8	2826.8	2737.2
animal breeding	5108.3	7214.8	8811.8
Index of agricultural production (in comparable prices), in % to the previous year	97.8	100.3	101.8
Index of investments in fixed capital of agriculture, in % to the previous year	102.3	118.0	131.4
Index of availability of fixed assets in agriculture, in % of the previous year	114.8	133.1	152.2
Structure of agricultural production by categories of farms:			
agricultural organizations, units	67	70	71
households, units	28	26	24
peasant (farm) households, units	5	4	5
Share of profitable organizations, units	54	56	65
Balanced financial result (profit minus loss), million rubles	394.9	514.7	402.0
Level of profitability of sold goods (works, services), %	2.7	2.3	-3.7

As Table 3 shows, the economic potential of the agro-industrial complex of the Komi Republic showed a negative trend in its development in terms of profitability in 2010–2020. The reason for this trend is the low competitiveness of agricultural products of the Komi Republic in the regional market. The processes of formation of the AIC production potential of the Komi Republic are constrained by import of products from more southern regions. However, this does not exclude the search for effective segments of commodity agricultural markets of competitive local producers and solvent buyers.

Due to low labor productivity, the production volumes of the majority of AIC enterprises of the regions of the North are small. Therefore, the agribusiness entities of the Northern regions are not able to purchase high-performance machinery and equipment intended for use in large-scale production. Many agro-industrial enterprises in the Northern regions are not able to apply effec-

³ Source: materials provided upon official request by the Federal State Statistics Service of Russia, authors' calculations.

tive methods of financing and functioning — to rationalize the resources turnover and to apply effective mechanisms for economic activity. The efficiency of using the AIC economic potential of the Northern regions depends on equipment and technology adapted to the conditions of small-scale production [15, p. 64].

According to our observations and estimates, the service life (primarily the average age and average service life) of machinery and equipment in agricultural organizations of the North exceeds the standard service life, which results in the active degradation of agricultural machinery and tractor fleets.

Therefore, some of the production capacities, which are not actually used as part of the economic potential due to increased repair costs, hinder the effective use of production potential. Unused production capacities cannot be reserved, and they are not the result of temporary market changes in demand.

The production potential of the agricultural sector in the North regions includes assets that are obsolete or outdated, and do not correspond to natural and climatic conditions. This property interferes with the expected rate of return and should be disposed of.

In the Northern regions, land suitable for agricultural use is often abandoned. However, the development of local markets in mining and transportation areas has made it possible to expand the amount of land in use.

In the regions of the North, the area of agricultural land is insignificant relative to the total area. On this basis, it should be emphasized that the economic effect of agricultural land use in the regions of the North consists largely not so much in the growth of income and optimization of operating costs, but in indicators characterizing the improvement of land use and related real estate objects [16, p. 80].

Urgent tasks in the process of using the land potential in the agro-industrial complex of the Northern regions are land monitoring with the organization of modern geoinformation technologies, compiling a land cadastre and legal registration of lands. Work in these areas is just beginning.

A special place in the economic potential of the agro-industrial complex of the Northern regions is occupied by the formation of labor potential. The analysis shows that over the past 10 years, the absolute number of the rural population in the regions of the North has decreased. There is an outflow of the rural population to nearby cities, towns and other settlements.

The main reasons are: 1) strong decline in agricultural production; 2) low wages in the agricultural sector. According to our calculations, the average wage in agriculture, hunting and forestry in the regions of the North is slightly more than 60% of the average wage in the Russian economy. Low wages are pushing the active able-bodied population and young people, who are trying to get specialties not related to agriculture, out of the village [17, p. 151].

The main task in terms of improving the use of labor potential is to transfer labor resources from negative attitude to work in the AIC into active carriers of the intellectual capital of the agro-industrial complex of the Northern regions.

Even at first glance, it is obvious that, due to objective and subjective reasons, the pace of development of the economic potential of the agro-industrial complex of the Northern regions, both between individual regions and between different areas and enterprises within AIC, is far from being equal; they differ especially strongly in agricultural output. However, certain regularities are also observed. In all Northern regions, a high growth of agricultural production is observed in animal husbandry, which is closely connected with more favorable conditions for this sector of agriculture, with growth of investments and increase of the volume of subsidies in this segment. A significant decrease in crop production is associated not only with unfavorable natural and climatic conditions, but also with a reduction in cultivated land, as well as a decrease in investments. The institutional structure of agricultural production in terms of crop production is such that its significant share belongs to peasant (farm) households. For example, according to our calculations, in 2016, peasant farms produced 5% of the total volume of potatoes, economic organizations — 7%, and households — 88%. A similar situation is observed in the production of vegetables. In 2015, peasant farms produced 3% of the total volume of potatoes, economic organizations — 21%, and households — 88%.

Therefore, there are imbalances in the economic potential of the agro-industrial complex of the Northern regions, in particular between livestock and crop production in general. The weak development of crop production slows down the formation of a forage base in animal husbandry and hinders all possible options for developing the economic potential. It is important to observe more clearly the balanced chains of interdependence of crop production and animal husbandry within the framework of the economic potential of the agro-industrial complex of the Northern regions.

An important factor in the production of the physical volume of marketable products is the consumer potential of the regions of the North. Proceeding from the interrelation and interdependence of production and consumer potentials, we note that the main task of ensuring their effectiveness consists in the effective regulation of the ratio between capital, output and consumption in each specific sub-regional food market.

Particular attention in more complete use of the economic potential of the agro-industrial complex of the Northern regions requires the proportional development of production, social and market infrastructures, including information technology and infrastructure of sociological and marketing research. In the absence of modern information technologies as part of the economic potential of the regions of the North, it is impossible to meet the needs and expectations of consumers, improve the quality of services provided to the population in the field of agro-industrial complex [18, p. 148].

Consumer potential covers not only economic and social relations between consumers and existing consumer organizations, but also many stakeholder ties, expressed in close relations between manufacturers, suppliers, consumers, partners, customers, state, and public organizations. The relationship of interested individuals and legal entities in the sphere of food consumption forms a kind of interdependent system of stakeholders in both production and consumption. The problems of product sales impose increased requirements on sales and logistics departments, as well as on production divisions [19, p. 534].

Increasing the share of regional producers in the corresponding consumer potential, in our opinion, requires state support. It is reasonable for the state to develop and implement a policy of agrarian protectionism in order to protect regional producers from unfair competition from other regions (deliveries of goods at dumping prices or low quality).

An important direction for better use of the AIC potential of the Northern regions is the acceleration of food trade in the regional markets through local production. Organization of program-targeted purchase of necessary food products, works and services of local significance for state and municipal needs can play an important role. This would allow meeting the needs of institutions and organizations in local agro-food products in a timely manner [20, p. 70].

In 2010–2020, trade turnover increased significantly in almost all regions of the North, to a greater extent — due to imported goods. Our calculations show that during this period, the average retail trade turnover in the regions of the North (in actual prices) increased almost seven times, and per capita — only 5.3 times. During this period, the average index of physical volume of retail trade turnover (in % of the previous year) was 112.1%. According to our calculations based on the data of the State Statistics Committee, the ratio of the highest and lowest provision of food per capita (in kg per year) in the regions of the Far North and equivalent areas was the following: meat and meat products — 87:43, milk and dairy products — 374:153, potatoes — 230:83, fish and fish products — 29:10. Consequently, the fluctuation in the consumption of these products was 2.0, 2.4, 2.8 and 2.9 times, respectively.

Our calculations show that during the analyzed period, food consumption by the population in the regions of the North did not meet scientifically based nutritional standards. The scientifically based norm of consumption of meat and meat products per capita for the North is 90 kg; on average, during these years, it was 59.7 kg, which is almost 34% less. Similar indicators for milk and dairy products amounted to 425 and 230 kg, respectively, for eggs — 320 and 256 pieces, for potatoes — 120 and 89 kg, for vegetables and cucurbits — 105 and 79 kg, for fish and fish products — 40 and 15 kg.

According to our data, for 2011–2020, the percentage ratio between produced and imported products in the total volume of potatoes, including imports, was 58.3:6.1; vegetables and cucurbits — 23.1:67.3; meat and meat products — 24.2:68.7; milk and dairy products — 26.4:64.8; eggs and egg products — 71.3:38.1. A similar ratio between production and personal consumption in the total resources used was 18.1:39.4; 2.4:89.1; 0.2:95.7; 2.9:91.0 and 5.2:98.7.

As an example of significant differences in food consumption by subregions of the North, let us consider the structure of food resources by territories of the Komi Republic (Table 4).

Table 4

*The structure of food resources by territories of import in the Komi Republic, as a percentage of the total*⁴

Indicators	2005–2008	2009–2012	2013–2016	2017–2020
Potatoes: Stocks at the beginning of the year	39	34	42	31
Production	47	44	41	42
Import	14	22	17	27
Total resources	100	100	100	100
Vegetables and cucurbits: Stocks at the beginning of the year	14	16	11	17
Production	24	28	31	22
Import	62	56	58	61
Total resources	100	100	100	100
Meat and meat products: Stocks at the beginning of the year	7	5	4	6
Production	21	19	20	26
Import	72	76	76	68
Total resources	100	100	100	100
Milk and dairy products: Stocks at the beginning of the year	4	6	5	7
Production	32	27	28	29
Import	64	67	67	64
Total resources	100	100	100	100

As Table 4 shows, for 2005–2020, the share of own production in food resources is generally decreasing in the Komi Republic.

According to our calculations based on data from the State Statistics Committee of the Republic of Komi, dynamics of potato and vegetable production per capita in the Komi Republic for the period 2005–2020 remained at a low level. There was an increase in import from other regions not only of potatoes and vegetables, but also of sausages, whole milk products, and canned dairy products.

Over the past twenty years, there has been a convergence of actual and standard indicators in the Komi Republic, but differences in the consumption of basic foodstuffs per capita between the subregions remain significant. For example, the ratio of the average monthly accrued wages of employees of organizations and the subsistence minimum as a percentage in the Republic of Komi was 399% in 2019, in Vuktyl — 492%, in the Ust-Kulomskiy district — 256% (data from the State Statistics Committee of the Komi Republic). These differences are explained not only by the differentiation of incomes, but also by an underdeveloped network of market infrastructures, organization and management of retail networks.

⁴ Source: materials provided upon official request by the Federal State Statistics Service of Russia, authors' calculations.

Conclusions

Summarizing, it should be noted that the degree of functional utility of the economic potential of the agro-industrial complex is determined by the quantitative and qualitative parameters of the accumulated production capacities and consumer capabilities, the ability of regional producers of competitive goods, works, and services to meet consumer demand.

1. In the regions of the North, supplies of all types of agricultural equipment are declining, the degree of depreciation of fixed production assets is growing, and capital investments in agriculture are not stable.

2. The degree of use of the economic potential of the Northern regions is reduced due to the instability of proportions and investments in the agro-industrial complex there.

3. The authors of the article believe that for a more complete use of the economic potential of the agro-industrial complex of the regions of the North, the main emphasis should be placed on the formation of the infrastructure of the regional food market.

4. Primarily, it is necessary to improve the proportionality between the production of agricultural products, the processing of raw materials and elements of the trade infrastructure.

5. It is important to form trusting psychological attitudes in relations between regional agricultural producers, processors of raw materials, trade and consumers, which will not only contribute to the satisfaction of mutual interests, but also ensure the elimination of imbalances in the sources of food supplies to regional markets.

6. The degree of functional usefulness of the economic potential of the agro-industrial complex is determined by the quantitative and qualitative parameters of the accumulated production capacities and consumer capabilities, but an important role is played by the preservation and accumulation of the abilities and skills of regional producers of competitive goods (works, services) to meet consumer demand.

7. The lack of marketing services at the enterprises of the agro-industrial complex of the regions of the North hinders the increase in the level of use of their economic potential. This shortcoming in the work of their economic services must be eliminated.

8. It is advisable to unite the regions of the North into a special economic zone, where agribusiness enterprises will be provided with comprehensive state financial, economic, legal and other support, the methods of which should be brought into a clear and coordinated system.

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