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Problems of Formation and Development of Agro-Food Market

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Abstract

The formation and development of agro-food market at the national and regional levels are accompanied by objective difficulties, which have different nature of origin. A solution of the key task to meet the population's needs for affordable and high-quality food is in many respects in the area of product promotion to the end user and related problems. In this regard, the authors can conclude that the agro-food market in its present form is the most problematic aspect of activities of Russian agricultural producers. Existing restrictions on the supply of food from some countries have given a certain impetus for the development of agro-industrial complex (AIC) and an increase in the competitiveness of agricultural products. In general, for the period of 2013-2017, the self-sufficiency of the Russian Federation with food has increased, the targets of Food Security Doctrine for providing grain, potatoes, sugar, vegetable oil, meat have been fulfilled. The production of cattle, fruit and vegetable products, eggs remains a problem. At the same time, there is a stable dependence of domestic AIC on imported supplies of seed, selection and breeding material, which does not allow talking about full-value import substitution. In this case, the state support of the scientific and innovative environment, ensuring the necessary level of communication between all market players, regulation of land relations, comes to the forefront. The important direction in the development of the agro-food market at the regional level is an interregional trade. The agro-food market of the Tambov region has features typical for most regions of Russia. It requires significant improvement of production and logistics infrastructure, the formation of the favorable investment climate, renewal of fixed assets, a solution of demographic and personnel problems. Nevertheless, in the Tambov region, there are prerequisites for increasing the investment attractiveness of the agricultural sector, meeting the demand in the regional agro-food market through domestic production.

Keywords: Agro-food market; Import substitution; State regulation; Production and logistics infrastructure; Investment climate; Scientific and innovative environment.

1. Introduction

The main task of the domestic agro-food market as a system of socio-economic relations is to ensure the existing and future needs for agricultural raw materials, products and food. Despite the obvious conjectural nature of agribusiness production program in the Russian Federation, a significant portion of it, especially medium and small-sized businesses, experiences considerable difficulties in promoting the products to the end user. This is due not only to the underdevelopment of the market institutions and its infrastructure but also to the lack of real self-organization of numerous and fragmented producers of agricultural products. Agro-industrial integration covers mainly large business structures and agro-holdings, cooperative relations in the sphere of medium and small-sized agribusiness are at a low level. The civilized wholesale markets and logistics centers are not developed enough or lacking.

Proceeding from the foregoing, it can be concluded that today agro-food market is the most problematic and “narrow” area in the activity of domestic agricultural producers. Its formation is accompanied by complex problems at the internal and external levels. Management of internal factors influencing the development of the national market is carried out, first of all, through the state impact on market processes and provision of various forms of support to commodity producers.

2. Methods

The main task of the agro-food market at the present stage is to meet domestic food needs based on its availability for various categories of consumers while ensuring the level of profitability necessary for extended reproduction, which in fact can be considered the element of the country's food security. It is necessary to ensure the filling of the agro-food market with Russian raw materials, as well as the optimal ratio of own production, exports and imports (Pavlenko *et al.*, 2015).

In turn, the key issue at the macro level is participation in shaping the world agro-food market. The authors believe that it is in this vein that one can talk about the level of competitiveness of the Russian agro-industrial complex.

Despite some qualitative improvements in the technical and technological basis of the agro-industrial complex in recent years, the competitiveness of Russian agricultural production continues to be low. As a consequence - insufficient production of agricultural products, free penetration of imported food into the Russian market and

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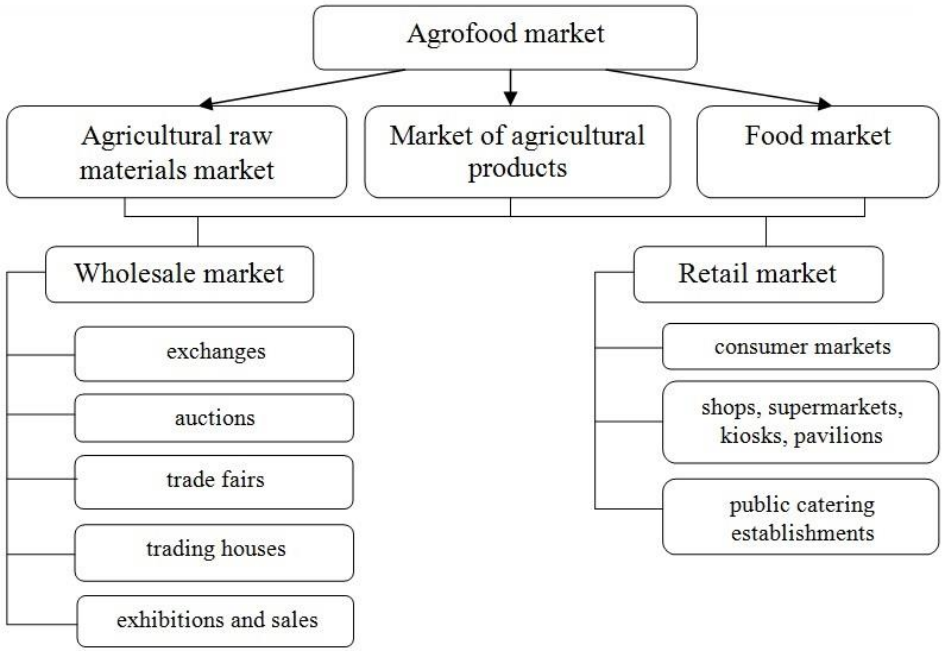
significant dependence on its individual types. In general, the low investment attractiveness of agriculture is maintained due to the low level of economic efficiency of production, development of engineering and social infrastructure, lack of specialists and skilled workforce (Paramonov *et al.*, 2016).

Nevertheless, the current restrictive measures for the supply of food from some countries have given a certain impetus to the development of Russian AIC and improvement of competitiveness of agricultural products. The food embargo has made adjustments to the existing logistics schemes of food supplies, the structure and geography of imports in recent years has undergone significant changes. Problems of infrastructural nature have worsened, in particular, shortage of capacities for storage and processing of products, primarily in the grain industry and horticulture, where these issues are of paramount importance for increasing production efficiency. The solution of these problems can be considered the integral part of the policy of import substitution.

The agro-food (commodity) market includes three segments: agricultural raw materials market, the market of agricultural products and food market (Figure 1).

Figure-1. The composition of the agro-food market



One of the key tasks of the agro-food market is to support the country's needs for basic types of food, primarily those identified in 2010 Doctrine of Food Security, which is one of the main documents in Russian agro-industrial complex. The Doctrine lists the products critical for Russia and the minimum level of their own production. These include: grain - 95%, sugar - 80%, vegetable oil - 80%, meat - 85%, milk - 90%, fish - 80%, potatoes - 95% and food salt - 85% (Doctrine of food security of the Russian Federation, 2010).

By the end of 2016, Russia fulfilled five of eight indicators of the Doctrine of Food Security, providing itself with grain, potatoes, sugar, vegetable oil, meat. In 2017, self-sufficiency in potatoes decreased to 90.7%, which in 2016 was 105.1%. It should be noted that, in general, the self-sufficiency of Russia has increased over the past five years. The production of livestock products (cattle meat and milk), fruit and vegetable products, and commercial eggs remains a problem.

On the basis of all of the above-mentioned, it should be noted that Russia is not threatened with the deficit of main products, which can not be said about the crop seeds and breeding genetic material. Russia buys in different volumes more than 50% of seeds of agricultural crops. Countries such as Switzerland, Belgium, Germany sell to Russia in large quantities seeds of sugar beet, maize and sunflower hybrids. In 2015-2016 imports of imported sunflower seeds increased by 64%, to 22 thousand tons, and seeds of sugar beets - by 18%, to 0.7 thousand tons. Thus, self-sufficiency is rather nominal in nature and takes place only under the condition of constant import of seeds, as well as planting and breeding material.

Seed-breeding, selecting, breeding work are among the most knowledge-intensive branches, for development of which, on the one hand, constant high level of state support is needed, on the other hand - relationship with the real sector and unification of all links in scientific and production process into a single chain. For the organization of direct contact between the scientific sphere, agribusiness and power structures, certain measures were taken, which resulted in the creation of development institutions and communication platforms for establishing such a dialogue - technological platforms. In particular, the only technological platform for agri-food orientation is “Food and processing industry technologies of AIC - healthy food products”. It should be noted that the potential of technological platforms is currently not being used to the proper extent, the involvement of all stakeholders in the process of development and exchange of technologies, innovation activity, remains low.

In addition, a prerequisite for the formation of the agro-food market is the development of competitive environment, especially in the sphere of supplying the village with the means of production, storage, processing of agricultural products, and production and technical servicing of agricultural producers. The active position of

antimonopoly regulation in this sphere is to ensure the priority of the economic interests of agricultural producers, including peasants, who, being participants in the market of perfect competition, are dispersed over a vast territory, are scattered and, ultimately, can be removed from consumers of manufactured products.

Often in theory and practice, state support and regulation of agro-food market are treated as government intervention in economic processes with the aim of influencing the development of production and solving the food problem.

At the same time, according to some researchers, state support can become an effective incentive for the production of agricultural products, if it is provided to economically strong producers who can work. Others emphasize that the existing mechanisms for granting subsidies lead to their unjustified concentration in economically sound economies, which does not allow the bulk of enterprises to be taken out of the crisis. Still, others draw attention to the unreasonably high level of state support for individual industries (Neuimin D. S. *et al.*, 2016).

The authors believe that all opinions deserve attention, but they hold the opinion on the role of the state in the formation of the agro-food market on the principles of perfect competition and functioning of an effective mechanism of state support. It has special significance in the organization of the land market, which is the central link of market relations in the agricultural sector. The main distinguishing feature of this market is that the commodity is land, which in the economic sense is the main means of production.

The land market is one of the factors affecting rational land use since it ensures the turnover of land and its transition to more efficient owners. The land market is quite complex in its structure, as is the system of land relations. In the market, not only sellers and buyers interact but also purchase and sale of land take place, other forms of its market turnover (rent, pledge, etc.).

On the other hand, agricultural products are mostly perishable and low-transportable, its supply depends on local procuring and processing enterprises, their relationships with commodity producers are often tense. Private plants actually dictate the terms of delivery, because there is no other choice for the peasants. Refining, refrigeration and storage facilities in rural areas are poorly developed, this also affects the higher susceptibility of households to fluctuations in market conjuncture.

At the same time, according to the Accounts Chamber of the Russian Federation, total deficit of potato storage, vegetable storage and fruit storage is 3.3 million tons, replenishment of which along with other capital-intensive elements of the logistics infrastructure (bases, warehouses, refrigerators, elevators, access roads, transport etc.) without government support is not possible.

In this regard, implementation of subprogram “Development of wholesale distribution centers and infrastructure of social food system” of the State Program for Agricultural Development, which began in 2016, is of great importance. It aims to create conditions for the formation of an integrated system for procurement, storage, pre-sale preparation and marketing of products, elimination of superfluous intermediary links, gradual transition to more civilized, “mature” food market and competitiveness of agricultural enterprises.

In modern conditions, when the process of market formation is ongoing, there is the characteristic presence of a huge number of resellers and intermediaries, which leads to an increase in retail food prices and a decrease in effective demand for it, giving the general spontaneous nature of market relations. The steady trend in the development of all agro-food markets in Russia today is “enlargement” of counterparties, the concentration of supply and demand, the formation of wholesale food markets as managed, regulated mechanisms of commodity circulation with the corresponding infrastructure.

This requires considering the experience of individual regions, in particular, the Volgograd region, where in 1995, one of the first wholesale food markets appeared on the basis of the central fruit and vegetable base in Volgograd, using the experience of the Spanish company “Merkas”. This market in a year provided up to 70% of the food flows of the region.

The important direction in the development of the agro-food market at the regional level is interregional trade, which, on the one hand, promotes expansion of production in each region, without restricting it to the regional market, on the other, creates conditions for better ensuring the production and personal needs of the population of each region, regardless of its specific production conditions and resulting specialization.

The degree of maturity of the agro-food market largely depends on the development of intra-regional or inter-territorial economic relations. The basis of intra-district commodity exchange is agricultural raw materials and products ready for sale and consumption, as well as food and other goods moved from major markets of cities. Formation of agricultural cooperative markets in accordance with natural and economic conditions of the region should become part of the model for the development of intra-regional agro-food markets (Stasyulys, 2015).

The functioning of the agro-food market of this or that region takes place in accordance with the general laws and principles of a market economy within the framework of the single economic space of the country. But there are also features related primarily to the structure, market capacity, the level of development of agriculture and processing industry, market infrastructure and mechanism of state regulation of AIC and the market developed in the region. In addition, the differences in the level of economic development of constituent entities of the Russian Federation are due to sector specificity, economic and geographical situation, demographic situation, natural and climatic resources.

The regional market is formed on the basis of local production and directly depends on the level of development of individual industries. One of the regions successfully implementing the policy of import substitution in the sphere of food with state support is the Tambov region, which economy has a traditional agrarian orientation. The region is located in the Central Federal District and is characterized by favorable agroclimatic resources for the production of most of the main types of agricultural products.

3. Results

The Tambov region experienced serious economic difficulties during the transition to market relations in the early 1990s. Some trends have been observed so far, in particular, slow growth of such important indicators as a gross regional product (GRP) per capita, living standards, inadequate industrial development, and high depreciation of funds (Neuimin S. K. and Neuimin, 2017).

The degree of depreciation of fixed assets in the Tambov region - 56.7% (one of the first places in the Russian Federation) is significantly higher than the average Russian indicator (47.9%). And over the past 10 years, the degree of wear has increased, in contrast, for example, to the Voronezh, Kaluga or Tula regions. In this regard, the creation of more attractive conditions for investors with new technologies and equipment with the innovative component is of particular importance. At the same time, the output growth rates of industrial products based on exhausted, but often obsolete technologies, are secondary in comparison with the quality indicators of fixed assets, since the demand for such products raises doubts, and its noncompetitiveness is the aggravating factor for the development of regional economy. At the same time, in the authoritative Environmental rating "Green patrol" Tambov region has steadily ranked first among the subjects of the Russian Federation for the last several years.

Nevertheless, since the 2000s, the region has experienced quite a high growth rate of investment and development of agricultural production, which is associated with the growth of the entire production sector and economic success of the region.

For the period from 2000 to 2017, the volume of gross agricultural output of the Tambov region increased more than threefold. According to this indicator, the region ranks second in the Central Chernozem Region (CCR) after the Belgorod region (Table 1).

Table-1. Dynamics of agricultural production indices in the subjects of the CCR, %

Subjects	Years								
	2000	2010	2011	2012	2013	2014	2015	2016	2017
Belgorod region	100.0	259.2	342.4	371.2	401.6	421.6	440.1	468.7	469.6
Voronezh region	100.0	120.3	200.8	210.2	229.5	232.0	234.1	242.8	246.0
Kursk region	100.0	128.3	191.4	210.0	241.7	272.4	288.5	323.1	345.7
Lipetsk region	100.0	178.0	262.4	269.7	303.7	305.5	317.0	338.9	357.5
Tambov region	100.0	134.5	220.4	237.8	299.2	309.1	339.1	318.8	363.8

In terms of gross agricultural output (in comparable prices, 2000=100%), the region has risen from the 28th to 11th position in 10 years in the Russian Federation. Such growth in production is due to the development of both crop production and animal husbandry. The production and processing of agricultural products are a priority for the economy of the Tambov region.

The production of sunflower grew 1.9 times, primarily in agricultural organizations (almost 2 times) and peasant-farmers holds (more than 2 times). The significant increase in production is observed for sugar beet - 2.3 times for the period 2010-2016. Gross harvest of potatoes increased 2.2 times, however, it is necessary to note a decrease in potato production in comparison with the period 2011-2015, which is explained by unfavorable market conditions, primarily, the price character in 2015. In general, the gross output of crop production in the Tambov region tends to increase (Table 2).

Table-2. Gross collections of main crops, thousand tons

Types of crops	Years						
	2010	2011	2012	2013	2014	2015	2016
The economy of all categories							
Grain (in weight after completion)	925.6	1919.8	1866.0	2993.4	3120.2	3445.6	3250.4
Sunflower seeds	299.5	638.5	548.4	723.8	624.7	735.4	571.2
Sugar beet (factory)	1905.9	5093.5	4304.4	4382.6	3122.8	4187.5	4506.2
Potatoes	221.5	527.2	572.6	652.0	522.3	766.7	484.2
Vegetables - total	130.9	149.0	145.4	140.2	121.1	127.6	119.1
Agricultural organizations							
Grain (in weight after completion)	719.5	1502.0	1435.5	2366.2	2431.0	2706.9	2562.9
Sunflower seeds	216.3	476.0	388.2	517.5	438.9	523.0	400.8
Sugar beet (factory)	1619.1	4402.6	3846.7	4069.0	2853.9	3840.9	4067.8
Potatoes	9.2	36.1	58.1	113.4	114.3	151.9	105.0
Vegetables - total	8.3	15.6	17.7	25.4	14.0	16.2	14.8
Households of population							
Grain (in weight after completion)	3.6	5.9	5.7	6.5	5.7	6.0	4.0
Sunflower seeds	0.8	1.4	1.1	1.4	2.3	2.2	1.6
Sugar beetm(factory)	0.3	0.3	0.2	0.2	0.1	0.1	-
Potatoes	205.3	477.2	499.3	526.6	395.6	590.5	364.9
Vegetables - total	117.1	128.5	126.3	114.7	106.9	111.3	103.7
Peasant farms and individual entrepreneurs							
Grain (in weight after completion)	202.5	411.9	424.8	620.7	683.5	732.7	683.5
Sunflower seeds	82.4	161.1	159.1	204.9	183.5	210.2	168.8
Sugar beet (factory)	286.5	690.6	457.5	313.4	268.8	346.5	438.4
Potatoes	7.0	13.9	15.2	12.0	12.4	24.3	14.3
Vegetables - total	6.2	5.5	4.9	1.4	0.1	0.1	0.6

The excess supply of potatoes on the market led to the sharp drop in wholesale prices. After the estimation of the preliminary harvest in the summer of 2015 the average price level of 33 rubles per 1 kg was observed in May; by December, prices fell to 7.9 rubles, which negatively affected the production of potatoes in the following period.

The production of grain, sunflower, sugar beet in the Tambov region is concentrated mainly in agricultural organizations, potatoes and vegetables - on the farms of the population. Farms play a generally significant role in the production of all major crops.

Meat production in the Tambov region has a steady tendency to increase in volumes (Table 3).

Table-3. Dynamics of meat production by types in Tambov region in farms of all categories, thousand tons

Types of products	2010	2011	2012	2013	2014	2015	2016
Meat – total							
in live weight	100.4	107.7	204.2	263.5	341.6	347.4	362.3
in slaughter weight	68.1	74.2	148.2	193.8	254.5	259.2	271.4
Meat from pigs							
in live weight	58.8	59.3	64.8	113.1	185.7	189.1	203.5
in slaughter weight	44.4	45.0	50.5	88.2	144.4	147.0	158.2
Meat from cattle							
in live weight	34.9	32.0	28.7	28.9	27.4	25.9	23.5
in slaughter weight	19.7	18.0	16.2	16.2	15.5	14.7	13.2
Poultry meat							
in live weight	3.0	12.7	106.8	117.2	124.0	127.7	132.3
in slaughter weight	2.2	9.4	79.6	87.3	92.5	95.2	98.6

For the period from 2010 to 2016, gross meat production in the region increased in live weight from 100.4 thousand tons to 362.3 thousand tons or 3.6 times; in slaughter weight from 68.1 thousand tons to 271.4 thousand tons or almost 4 times. Such a significant increase was possible due to the implementation of investment projects in the livestock sector in the region, primarily in poultry and pig breeding. Production of beef, on the contrary, decreased by one third. At the moment, the development of cattle breeding industry (both meat and dairy) is accompanied by difficulties, primarily of investment nature. Projects in the field of cattle breeding are characterized by a longer payback period and a lower level of profitability.

If one considers the categories of farms, then the production of meat by 80-85% is concentrated in agricultural organizations. To a lesser extent (1.0-1.5%) - in peasant farms. With the introduction of increased requirements for the slaughter of farm animals, the production of meat in the households of the population declined (by 8% in 2016 as compared to 2015).

Meat production is the main direction of livestock development in the region. In the structure of livestock products, production of livestock and poultry for meat is almost 80%. Over the period from 2000 to 2016, the Tambov Region increased meat production fourfold, having grown from the 32nd to the 10th position in the Russian Federation. More than half of meat production is pork and more than one-third is poultry. According to the annual grain production, the region rose from the18th position to the7th, for sunflower seeds production - from the 8th to the 5th position, for sugar beet production - from the 6th place to the 3rd one (Table 4).

Table-4. Dynamics of agricultural production in the Tambov region and rating in the Russian Federation

Years	Grain, thous. tons	Position in the RF	Sugar beet, thous. tons	Position in the RF	Sunflower, thous. tons	Position in the RF	Cattle and poultry (in slaughter weight, thous. tons)	Position in the RF
2005	1581	18	1630	6	247	9	56,7	34
2006	1701	16	2750	4	179	11	57,5	34
2007	1585	18	2636	5	240	8	57,2	35
2008	2870	14	2758	3	297	9	57,5	37
2009	2633	14	2354	5	391	6	60,1	36
2010	926	16	1906	3	300	7	67,2	37
2011	1920	19	5094	3	639	6	72,3	35
2012	1866	13	4304	4	548	5	141,9	20
2013	2993	11	4383	3	724	8	192,1	14
2014	3120	13	3123	4	625	6	240,8	10
2015	3446	7	4188	3	735	5	245,3	10
2016	3250	13	4506	5	571	8	257,1	11

4. Discussion

In general, the agro-food market of the Tambov region has features typical for most regions of Russia. In particular, it requires a significant improvement in production and logistics infrastructure, the formation of the more favorable investment climate, renewal of fixed assets, a solution of demographic and personnel problems, utilization of livestock wastes, which significantly increased after the implementation of major investment projects, primarily in poultry and pig production.

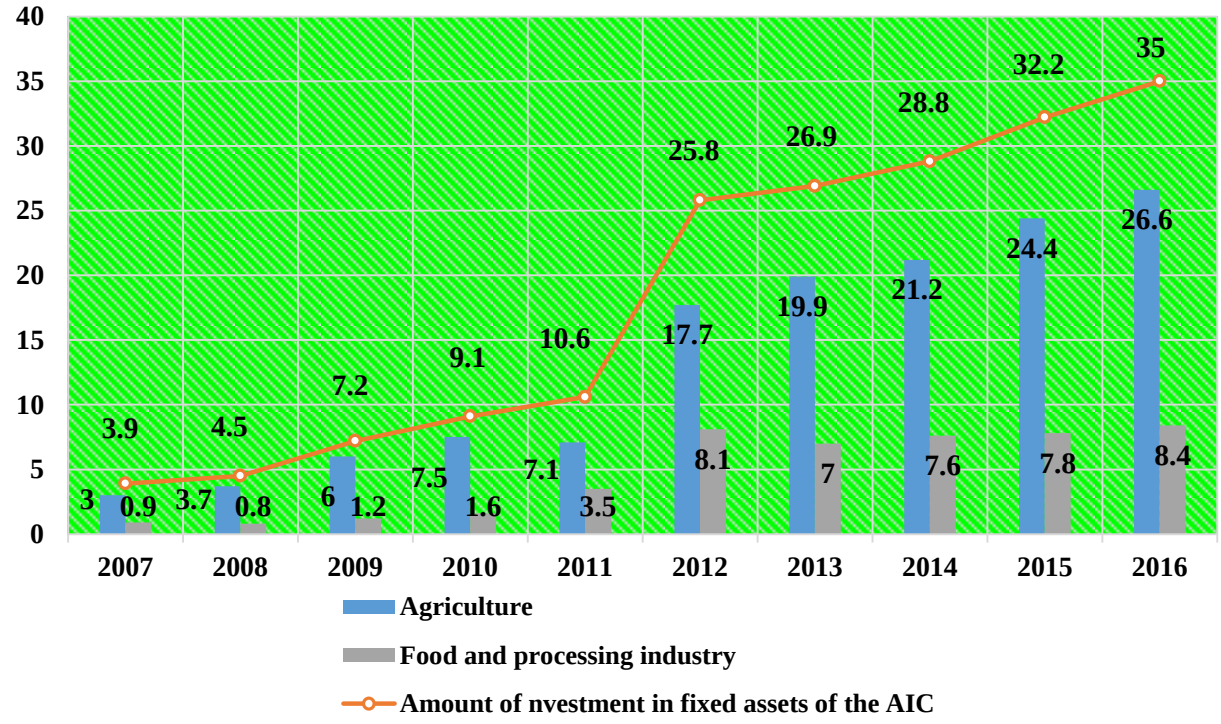
For some types of agricultural products, the Tambov region has confidently reached self-sufficiency, this concerns the production of poultry meat, pig meat, grain, potatoes. At the same time, industries of dairy cattle breeding, fruit growing and vegetable growing, production of marketable eggs remain problematic for the region. To

solve these problems, in particular, the administration of the Tambov region initiates the creation of biotechnological and dairy clusters as points of sectoral growth through JSC "Tambov Region Development Corporation" (Kalyuzhny *et al*., 2015).

The important indicator of growth and development of the economy is an annual rate of accumulation in fixed assets - the ratio of investment in fixed assets to GRP. According to this indicator, the region has been the leader in the Central Federal District for several recent years.

According to the opinion of the Expert-RA Rating Agency, investment climate rating of the Tambov region is steadily increasing. In 1996-2011 the rating value was 3B2, then 3B1 (low potential - moderate risk, reduced potential - moderate risk). Since 2012, this rating has been upgraded to 3A1 (reduced potential - minimum risk), which, of course, is the indicator of the positive development of the region. In addition, the region significantly improved its positions in the investment risk rating (from the 40th place in 1999 to the 2nd place in 2016). There is a steady trend towards increased investment in the AIC of the Tambov region (Figure 2).

Figure 2: Dynamics of investments in AIC of the Tambov region in 2007-2016, billion rubles



The positive dynamics of the Tambov region in the rating of socio-economic status of subjects of the Russian Federation, which is annually presented by the RIA Rating Agency, should be noted. According to this rating, the region rose from the 54th place in 2010 to the 42nd place in 2015.

The Ministry of Economic Development of the Russian Federation conducts the ranking of regions of Russia in terms of the level of development of public-private partnership (PPP). In this rating for 2014-2015, the Tambov region ranks high in the 18th place, having risen by 11 positions over the year. Thus, according to the Ministry of Economic Development classification, the region has a high level of PPP development, i.e. developed institutional environment that allows for the systematic use of PPP mechanisms, high investment attractiveness, and the existence of the extensive practice of implementing PPP projects.

Among the subjects of CCR, the higher position in this rating is taken only by the Voronezh Region (the 10th place). In the rating of 2015-2016 years, the Tambov region ranks 12th in the country and leads among the chernozem regions. Compared to the previous year, the region climbed six points. The results of the rating are taken into account by the Government of the Russian Federation when assessing the effectiveness of the investment activity of the governors. Also, since January 2016, the rating of regions as to the level of development of public-private partnership is an integral part of the National rating of the investment climate in constituent entities of the Russian Federation, formed by the Agency for Strategic Initiatives.

The international rating agency Fitch Ratings has been monitoring the Tambov region since March 2008. The Agency notes the continuous improvement of the region's indicators. In 2013, Fitch Ratings raised the region's ratings - the long-term issuer default rating (IDR) to “BB +” (from “BB”) and the national long-term rating to “AA (rus)” from “AA- (rus)”.

Fitch Ratings confirms the stable implementation of the budget of the Tambov region in 2016-2017. Tax revenues are likely to grow by 5-7% per year due to development of the agricultural sector and confident development of manufacturing industry. The Tambov region, according to Fitch Ratings, shows higher growth rates than Russia as a whole, which is facilitated by investments in the regional economy. In 2016, the agency confirmed the ratings of the region with the “stable” forecast. Thus, for today in the region, there are all prerequisites for increasing investment attractiveness, first of all, in the agrarian sector.

Despite the obvious positive changes, the formation of the agro-food market in the Tambov region is accompanied by a number of problems, which, among other things, include:

1. The decrease in agricultural activity in personal subsidiary farms.

In general, in all categories of farms, milk production decreased from 232.9 thousand tons in 2010 to 200.2 thousand tons in 2016 due to a decrease in production of milk in personal subsidiary farms from 177.7 thousand tons in 2010 to 107.6 thousand tons in 2016 or by 39.4%. One of the reasons is the decrease in the number of rural population. For the period from 2010 to 2016 the rural population of the region, according to statistics, decreased by 39164 people.

Another motive for reduction of livestock in personal subsidiary farms is the creation of jobs in the framework of ongoing investment projects in dairy cattle. In general, the decline in agricultural production in the households is a trend that is difficult to level.

2. Lack of production capacities that ensure processing of grain surplus, the creation of added value and reduction of export of products in the form of raw materials.

The Tambov region is one of the traditional regions for the production of grain and it has stable prerequisites for increasing production volumes for the future. According to food balance, the Tambov region is experiencing the grain surplus. Annually the harvest allows not only providing for own needs but also supplying to other regions of the country. It is necessary to implement projects aimed at deep processing of grain, allowing processing the larger volume of grain, producing new products and stimulating the supply of the final product, including for export.

According to the annual grain production, the region rose from the 18th place in 2005 (1581 thousand tons) to the 7th place in 2015 (3445.6 thousand tons). Grain production in the Tambov region during the period under review (2010-2017) increased 4.4 times and amounted to 4100.0 thousand tons (Table 5).

Table-5. Indicators of grain production in the Tambov region

Indicators	Years							
	2010	2011	2012	2013	2014	2015	2016	2017
Productivity, centn/ha	13.8	22.5	21.6	30.9	31.7	32.0	32.6	37.8
Sown areas, thousand hectares	781.2	826.2	831.3	928.4	931.5	1093.3	1034.3	1077.0
Gross yield, thousand centners	925.6	1919.8	866.0	2993.4	3120.2	3445.6	3250.4	4100.0

High yields of cereals and active development of livestock make it necessary to develop feed mill production. Thus, it is necessary to synchronize the production of grain, its processing and storage, with the development of livestock and the feed mill industry. The increase in grain resources will be facilitated by a reduction in consumption of grain for production of a unit of livestock production due to its use mainly in the form of full-value mixed fodders, reducing grain losses in creating better conditions for its storage and transportation, and logistical support.

The analysis of the revealed problems and peculiarities of the national and territorial system of commodity distribution of agro-food products made it possible to identify a number of reasons that predetermine the need for its improvement, namely: considerable distances, insufficient development of transport network and modern logistics infrastructure; heterogeneous development of logistics, its excessive centralization both in the country and in the regions; relatively low demand for services; imbalance of import and export freight flows; general infrastructure lagging behind the regions.

Between the regions, differences in the degree of inclusion in integration processes (the Customs Union, the Eurasian Economic Union, the WTO) persist and intensify, which is manifested in the significant differentiation of use of internal and external factors for the purposes of reproduction of food resources of the regional AIC.

In the authors' opinion, the key directions of state regulation are the creation of a system of wholesale agro-food markets at the federal and regional levels and assistance in improving the relevant infrastructure. This initiative will improve the transparency and controllability of the market by combining and coordinating the efforts of agricultural producers and commercial entities to sell products, creating prerequisites for subsequent cooperation, uniting participants in various trade unions and associations, and facilitating the partial ousting of intermediary links.

Among the measures that have proved themselves in world practice, it is possible to single out the development of agro-industrial integration, in the process of which today for many reasons many business entities of AIC, primarily small and medium-sized businesses, and also the organization of exchange trade and other types of wholesale markets are not involved (Minakov, 2016).

The authors believe that the determining role in the development of the agro-food market is solvent demand, which, with regard to food, is poorly elastic, depending on prices. The population relatively steadily consumes a certain set of food products depending on its preferences, refusing or substantially reducing the cost of manufactured goods with the rise in food prices. In extreme cases, with further price increases and lower incomes, people are forced to reduce food consumption, which is one of the signs of poverty.

As to types of food, there are also differences in the level of price elasticity of demand. The greatest changes are observed in meat and meat products, and the smallest - for goods of daily demand: bread, potatoes, milk. But even with these differences in mind, the rise in food prices is accompanied by a smaller decline in effective demand. Only the cheapest food products observe the so-called effect of Giffen's goods when the consumption of these goods increases with rising prices. On the other hand, with rising incomes or falling prices, the demand for food does not increase as much because food consumption is determined by two simultaneously acting factors - physiological and economic, actions of which do not coincide.

5. Conclusion

The promotion of Russian food to the world market is the natural consequence of the policy of import substitution. The demand for food in the world is steadily growing, which directly affects the growth of prices. Considering the fact that many countries with significant population have limited land and water resources with the excessive availability of these resources in Russia, at present, there are objective prerequisites for the development of the national agro-food market as the largest supplier of environmentally safe and quality products.

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