

## National Agriculture Modernization on the Basis of Import Substitution

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**Abstract:** The world crisis of 2014 intensified by sanctions of the USA and the western countries compels to revise the chosen economic development concepts. More and more economists and businessmen pay attention to the need for new state support mechanisms and measures under these conditions. They offer various measures which could raise significantly the state role in import substitution policy implementation, having become the main regulator of this process. At the present stage two approaches to import substitution are in the lead: the first one consists in replacing the importers for more loyal and those offering cheap production (an example: refusing the American production in favor of the Asian countries, first of all, China). Supporters of liberally economy functioning democratic system adhere to this position. In our opinion in this case it is possible to speak about import substitution only conditionally because dependence actually remains. The second approach consists in organizing domestic production and not by copying of import goods but by means of developing the innovative products having no world analogs. Research objective is developing methodical approaches modernizations of national agriculture on the basis of import substitution. On the basis of the conducted researches, the created theoretical basis of national agriculture sustainable development for the specification purpose of theory-and-methodology management approaches to transformations in the agro-industrial sphere are offered modernizations of national agriculture on the basis of import substitution. In study problems of rural territories and national agriculture modernization are considered. It is proved that it is almost impossible to create effective agriculture model proceeding from market methods and mechanisms only. The new model of development is offered; it is necessary to put emphasis on agriculture territorial development and its management on regional and subregional levels.

**Key words:** Agriculture, sanctions, embargo, modernization, import substitution, agro-food independence, safety, rural territories, sustainable development, territorial development model

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### INTRODUCTION

**The agriculture driver (basic doctrine):** From an easy hand of the prime minister of Russia D.A. Medvedev starting last year the thesis that the agriculture can become the drive of economy became a household name. If to compare the existing conditions in which the national agriculture should function, first of all, introduction of food embargo with countries of Western Europe, USA, Canada and Australia, the situation seems quite justified Misakov and (Misakov and Rakhayev, 2013; Ushachev, 2015). Yet on the other hand for the same time, judging from the sanctions imposed by the western countries, there was first, a decrease in the population real income size (salaries almost in all sectors and branches of national economy decreased there was no corresponding indexation of pensions and grants and so

forth), secondly, tax collecting and payments grew, thirdly, the credits decreased (owing to increase in interest rate and restrictions on acquisition of the cheap credits in the West), fourthly, possibilities of receiving the advanced Western equipment and technologies decreased, fifthly there is a high dependence of domestic agriculture on seed material of the Western countries, sixthly for previous years there was not a little essential modernization of agriculture material base which in many parameters lags far behind the western competitors. Many other reasons listed appear on an opposite scale and play against the set ideas of import substitution and the agriculture “driver”. Everything in total represents strategic opportunities ought to be used before they close.

On the other hand, transition to new development model is also the so-called objective reason connected

with state and development of national agriculture (Misakov and Adzhiyeva, 2008; Ushachev, 2015). First of all, it is about absolute reduction of traditional agriculture resources: lands, labor hands. In the majority of regions the agriculture reached a certain limit of introducing new lands into work. Therefore, production gain at the expense of the new areas factor is not expected in the long term. But thus, there is an active degradation of soils their elimination from agricultural turn. For previous years, since, the beginning of the 90s, means were hardly spent on restoration of soils. And if to compare for example, with such indicator as the brought volumes of mineral fertilizers it will appear that soils of Russia received less necessary volumes of nutrients (Kalov *et al.*, 2008; Misakov and Adzhiyeva, 2008). Thus, the condition of soils worsened and on the potential they cannot compete with the developed foreign countries.

All this obliges to actively introduce new model of the agricultural production organization in which these aspects would be considered. Other factor-labor hands. Even the fluent dynamics analysis of specific weight occupied in agriculture indicates continuous reducing. Some zero years showed certain stabilization and in certain regions even growth. But we should not make illusions of this factor. The gain of labor came at the expense of migrants, both from the neighboring countries and from certain regions of Russia. However, even, thus, in general, the agriculture labor in all respects grows old, it appears to below qualification. The gain of new labor hands, even as a result of decisions made by the state, did not break and apparently, in foreseeable prospect will not break the developed tendency. In other words, the number of labor hands in agriculture will be reduced.

Thus, even taking into account these two factors it is required to look for new forms, tools, mechanisms and models of agriculture development activation. Under existing conditions and the existing model it is impossible to reach the set parameters, apparently.

#### **METHODS AND OBJECTS OF AGRICULTURE MODERNIZATION**

In these conditions as foreign and domestic practice shows, it is possible to reach desirable result in two ways: favorable climatic and weather conditions and the developed material base. The first direction, judging by global forecasts in the short term is not expected; on the contrary, according to all global forecasts in briefly and medium-term prospect there will be a deterioration of climatic conditions that will negatively affect traditional agriculture. There is a material base which is the most important factor of agriculture development. Practice of

the Western countries shows that good results in agriculture are possible at introduction of scientific, technical and technological progress achievements (Geffen and Rothenberg, 2000).

But it means creating the new model called industrial post-industrial, post-economic and so forth in which achievements in equipment and technology have crucial importance. Practice shows that it is a universal trend of agriculture development in which the use of so-called traditional factors decreases: lands, labor hands use of equipment, new technologies also increases. Once such model was formed in Russia as well. However, in the 90s it was gradually refused, since there was no apparent branch in the agriculture capable to create necessary impulses for national economy development. On the contrary, the agriculture was interpreted as “the black hole” by many apologists of neo-liberal reforms. In zero years the favorable environment on raw materials was created, agriculture development was put behind since the state received huge petrodollars which allowed to provide the population with the food and therefore the agriculture was pushed on the periphery of national economy as marginal branch with the corresponding consequences of such situation. It turned out so that unit of hydro-carbonic raw materials gave multiply more currency means than unit of agricultural production. Certain representatives of ruling elite indulged in belief that to extract oil, gas and other mineral raw materials and to sell it abroad and in the same place to buy food and other goods which can create national agriculture is much more effective than to contain the national agriculture. Such moods resulted in gradual degradation of domestic agriculture and all agro-industrial complex (Gauzhayev *et al.*, 2013). The country in the past being one of world leaders in agricultural production, having one of the advanced agriculture, having the high level of technical and technological development, the advanced agricultural science, highly skilled labor, became the country without national agriculture.

With such baggage the national agriculture approached the present events connected with introduction of sanctions against Russia and reciprocal introduction of limited food embargo by the Western countries. As a result of the formed pause when it was forbidden to import foreign products and agricultural raw materials into the country, it became possible and also necessary to carry out real modernization of national agriculture. All this it requires huge systematic investments into agriculture. The Western countries created the developed agriculture sectors not contrary to but thanks to intensive investments in their national economies agriculture. The modern advanced

agriculture can and has to be innovative-and-investment (Gogichayev *et al.*, 2009; Kunashev *et al.*, 2008). Thus, not chaotic but strictly consecutive formation of new agriculture development model is necessary. One of the advanced modern model formation stages is the investment model.

#### **SUSTAINABLE SOCIAL AND ECONOMIC DEVELOPMENT OF RURAL TERRITORIES**

This concept is borrowed from English-SARD transcription of an English abbreviation SARD Sustainable Agriculture and Rural Development (a sustainable development of agriculture and rural territories). It is realized in the form of the integrated social-ecology-economic approach to development of agro-industrial production and rural territories. As ultimate goal of SARD peasant life quality improvement, production volumes accumulation of environmentally friendly products, environmental protection stands (Solow, 1956)

Considering that each mountain region of the republics of the North Caucasus has the unique environment creating image of maintaining farms, culture, psychology of mountaineers has the framework of social and economic problems, development of different scientifically based decisions with obligatory adjustment on above the specified conditions is required.

Currently the republics of North Caucasus federal district are in difficult economic and social situation. Economic backwardness is aggravated with a poor development of the market relations, low solvent demand of the population and high risks of business activity which nullify investment appeal of the republic that in turn strengthens negative tendencies in economy and growth of social tension. So, for example, Kabardino Balkar republic for the last years is steadily in the list end of Russian regions on economic and social situation level. Today the republic is faced in our opinion, by a number of burning issues:

- How the republic will be able to reduce disproportions in the level of territories economic development-especially, mountain and plain (it is about the level of economic development, but not financed from the operating budgetary costs)?
- Whether the regional policy can achieve such objectives as stimulation of the accelerated growth of the most backward economically mountainous areas of the republic?
- What tools of regional policy promote achievement of the accelerated growth in economy of the depressive region most?

The solution of social, economic, technical, ecological, etc. “challenges” needs development of national economy as major tool and tool of “answers” to sanctions of the USA and Western countries of Europe. It is obvious that complication of problems stimulates search of new “answers”, obliges “answers” to be adequate, anticipating “challenges” and effective. It is obvious that adequacy of “answers” is defined not only by timeliness of the first but perhaps first of all, by their systematic implementation, complexity. One of such “answer” directions for global and local “challenges” of the 21st century is modernization of national agriculture. Modernization of national agriculture needs to be considered as the general context in development of branches and territories of Russia for an objective assessment of place and role of agriculture in model of national economy modernization (Misakov *et al.*, 2009).

#### **THE NEW MODEL OF ENSURING FOOD SECURITY OF RUSSIA IS NECESSARY**

The special place of agriculture in national economy of Russia is connected with the volume of the resource potential concentrated in branch. Proceeding only from external parameters: shares in GDP (about 6.0%), the number of population (10.4%) occupied in economy, the number of population living in rural areas and to some extent dealing with agriculture (38.8 million people or 27% of the total number of the country population), shares of agriculture production in the internal consumption (67%), specific weight of agricultural production and foodstuff import (15.2%, it took the third place after import of cars, equipment and vehicles and also import of mineral products), the specific weight of agricultural production in export (1.8%, took the third place from the end, conceding only to raw leather, furs and products from them to textiles, textile products and footwear), a share of the fixed business assets concentrated in agriculture (1.182 trillion. rub. or 3.7%), the average annual volume of investment, coming to agriculture (for the last 5 years this indicator made over 50 billion rubles or over 3% of the total amount of annual investments), etc., not to mention so-called international comparisons the areas of agricultural grounds 193.8 million hectares (of which the cultivated area makes 79.6 million hectares), the volume of the fresh water used on irrigation 8.45 billion m<sup>3</sup> or 13.2% of the total amount of water use, the power of 191.2 million h.p., volume of collecting grain crops over 70 million tons or about 6.5% of world collecting, etc., it is possible to draw a conclusion on the special status of agriculture for national economy of Russia.

Relevance of the considered problem is obvious to Russia, after all it is not only about especially economic

or economic parameters the huge territory, a high share of agriculture in GDP (not to mention VPR of certain territories), a high share of the country people and the population occupied in agriculture, etc. but also the social and cultural features of the country. In Russia the agriculture is bases for our spirituality and therefore, originality of Russia in many respects, it is formed by this feature. That is, it concerns the national system of values and needs to be included in the context of national economy development model of Russia.

However, the agriculture, unlike a set of other economy branches and despite progress is very conservative. Its activity remains still very strongly dependant on climate, conditions of weather, soil, etc. and therefore deterioration of the main climatic conditions which are considerably caused by development of the industry has negative impact on dynamics of agriculture as well. Standing alone the agriculture cannot resist to those “challenges” created by natural, weather, climatic, social, geopolitical and other factors interfaced in present realities. It has neither resources, nor mechanisms for this purpose. Cooperation with other branches is possible, actually it occurred repeatedly in the history of agriculture but thus this cooperation is interfaced with certain risks. Creating chains which would promote general cooperation is possible and theoretically they can be formed into a complex which however, owing to incompleteness, might turn into many complexes. But for this purpose, at least, two conditions are necessary.

First, it is necessary that the subjects entering a complex gets profit on new cooperation, i.e., any new activity makes profit and the profit is no lower than that which took place in the previous complex.

Secondly, limitation of the subjects forming economic chains is required. With openness (and that is reality) creating effective model systems for agriculture, proceeding only from market methods and mechanisms is almost impossible.

However, the history and the present show that the agriculture can act as effective branch of national economy. The state support and state regulation of agriculture is necessary for this purpose. The state acts as a specific creditor for agriculture. By means of the state the agriculture, first, eliminates negative influence of climatic, weather conditions, social and other factors. And secondly, expands economical opportunities.

In these conditions today feature research of the state and agriculture interaction also causes both scientific and applied interest. The matter is that former models that took place in our national history as well as abroad are no longer fully able to satisfy neither theoretical inquiries, nor inquiries of practice in present

conditions. All this demands development of the corresponding theoretical model and its approbation in practice.

Research of development problems for rural territories and ensuring food security of Russia allows to draw a number of conclusions and offers.

## **SUMMARY**

Agriculture is the most ancient and key branch of economy; being expressed figuratively, the agriculture is mother of all other economy branches. For millennia of the branch development in it occurred considerable and in the last two-three centuries-revolutionary changes. Not everything in this process can be estimated unambiguously. There were eras of unlimited monopoly in it when the main share on number occupied fell on agriculture and when it acted as key industry of national economies, created architecture of the last, social system, political systems, systems of national values, institutes, many of which still exist now. There were also periods of agriculture degradation, its marginalization. And thus, even in post-industrial societies the agriculture continues to play the leading role as dynamics factor and defines a vector of sustainable development. We are convinced that the agriculture remained in the cruel competition to other branches not because someone created it special conditions of development but only because in it the structures and elements capable of self-development remained. The main criterion of self-development was ability of the branch to maintain the following economic paradigms. Any other branch has no such flexible mechanism in the arsenal as does agriculture.

The last decades the branch held peripheral situation in structure of national economy therefore from agriculture there was an essential outflow of various resources (personnel, finances, capital), activation of its marginalization as a branch of national economy proceeds. At the same time, the agriculture remains basic branch of integrity and safety of the state, national economy, at least because a basic problem of any state a problem of food security is impossible to solve outside the agriculture context. Moreover, the agriculture for Russia has not only a branch value but a political value as well.

At a present stage of development, especially in the sanctions conditions of the USA and the Western countries, the agriculture development model has the defining value. The worsening ecological conditions and also increase in load of agricultural grounds and the occurring geopolitical events, demand new managing model. Besides, it is also necessary to consider that

resource agrarian sphere is not capable to develop model of competitive development owing to constant shortage of resources as well as owing to the historical traditions making its structure. Other feature of agriculture for the entire time period of the historical long development, always developed conservatively, without being exposed to revolutionary changes, unlike other branches and kinds of activity where innovations extended offensively on time and covered big territories and the vast majority of subjects. Also the branch is always doomed to be strongly dependent on climatic conditions.

In the current conditions when especially there is a problem of import substitution of agricultural production and in essence-need of an autarchy, acts as the key tool and model of development state regulation in different forms and types: from state regulation to state support. Import substitution is the complex problem consisting of two blocks:

- Grocery block (specific types of agricultural production)
- Problems of agrarian and industrial complex development regarding ensuring import substitution

Within the set problem it is necessary to create effective incentives for modernization of the agricultural enterprises of the Russian Federation to create tools and methods of administrative coercion of business to technical progress.

Instruments of agriculture modernization and import substitution at the micro-level are practically absent. We consider necessary to develop short-term strategy of import substitution in agrarian economy of the republics of North Caucasus federal district, being potentially large suppliers of food production on the domestic market.

In these conditions in our opinion it is necessary to put emphasis on territorial development of agriculture and its management at the regional and sub-regional levels. We recognize that agriculture, unlike the majority of national economy branches is interfaced to space it functions in thus the last is the major factor and parameter of agrarian branch development. From here, the national agriculture turns out distributed (placed) between regional economic systems. Thus, it appears that sometimes the unity of climatic and geographical conditions does not influence agriculture distinctions of adjacent areas or the republics.

The particular interest is caused by the situation which developed in the South of Russia in this respect. Feature is that the agrarian sector subjects of the Russian South Russia have versatile territorial potential. Thus, it should be noted that the available potential is

distinguished not by climatic or weather condition but by complex of the organization of agricultural production including a level of productive forces development, technologies, institutes, scientific and methodical base, implementation system, access to credits, finance, etc. Therefore, the agriculture of these regions differs in the extremely different level of development. So, in Krasnodar Krai the highest level of agriculture development multiply exceeding the level in the North Caucasian republics is observed. It is the main reason for this situation that residents of Krasnodar have more favorable climatic conditions, soil, etc. but also that the level of their technical equipment, etc. makes 10 times more than the neighboring regions. From here it is obvious that if everything remains at the same level (i.e, system of agricultural production formation will be based on the former principles), even in the most favorable years the agriculture of the republics of the North Caucasus is doomed to continuous lag from the agrarian sphere of Kuban. To involve any new (stimulating) development model, for example, constructed on accumulation of financial investments volumes into agrarian sector is illusory owing to lack of those means for realization of similar model. In case of an impartial assessment of regional farms opportunities concerning agriculture it should be noted that those slender means allocated for needs of agriculture are already at a limit. Thus, a question arises-what to do in order not to loose the agriculture in these framing-oriented regions. What measures to take in this situation? Obviously, the decision exists. It consists in changing the actual model of regional agro-industrial complex development.

First of all, we consider necessary to refuse the territorial principle of the agriculture organization, i.e, when any region develops its own agrarian sector only. Undoubtedly, the depressive republics have no necessary means for creating highly competitive agriculture and withdrawing from allied industries for branch maintenance, it seems not only irrational but impossible. From here it is necessary to differentiate agriculture of the republics to establish the key industries and types of production forming specialization of the agrarian sphere in which the republics have essential internal reserves growth points for the purpose of investment of necessary means into them for a sustainable development of highly effective branches and achievement of significant results. It is expedient to transfer the types of production which did not enter into this group (naturally not territorially and institutionally and organizationally) to management of other subjects.

Creation of the consolidated policy of the republics concerning those types of the productions capable of

having interest for other regions can be the third direction. Of course for this purpose it is necessary to carry out the lot of work interfaced with opportunities of regions and requirements of the market, etc and in general it will be necessary to formulate and realize a specific policy of “common market”

### **CONCLUSION**

We do not share views of those who find it possible to carry out import substitution of foodstuff in the next 2-3 years because for this purpose absolutely new productions will be required, new technologies and even new production culture that is interfaced with big expenses which for today Russia does not have. Certainly, the solution of the specified problems will demand a long time. Moreover, it is necessary to recognize that even when forming special economic conditions, favorable for agricultural production, the draw-back factor would be the poor employee professional skills, because as it is impossible to restore a livestock quickly in animal husbandry, it is as well impossible to increase fertility of soils to solve quickly the problem of qualified personnel cultivation with market mind and modern culture.

### **REFERENCES**

- Gauzhayev, A.Z., A.Y. Mairov and V.S. Misakov, 2013. Institutional and organizational context of modernization strategy for regional industrial complexes development. *Terra Econ.*, 11: 62-66.
- Geffen, C. and S. Rothenberg, 2000. Sustainable development across firm boundaries: The critical role of suppliers in environmental innovation. *Int. J. Operat. Produc. Manage.*, 20: 166-186.
- Gogichayev, A.B., M.M. Malsurgenov and A.V. Misakov, 2009. Efficiency of regional agrarian and industrial complex production resources use. *Terra Econ.*, 7: 185-189.
- Kalov, Z.A., A.V. Misakov and E.B. Teuvazhukov, 2008. Transition from strategy of survival to strategy of sustainable development. *Fundamental Res.*, 9: 41-46.
- Kunashev, E.R., A.V. Misakov and S.A. Apsheva, 2008. Formation of indicators system for an assessment of effective innovative development management of the agrarian and industrial complexes enterprises. *Bull. Orenburg State Agric. Univ.*, 3: 137-140.
- Misakov, A. and B. Rakhayev, 2013. Spatial characteristic of agriculture in Russia and way of its efficiency increasing. *Soc. Econ.*, 6: 105-117.
- Misakov, V.F., I.Z. Baiduyev and S.Z. Gendugov, 2009. Functionally value analysis as a method of system research. *Bull. Orenburg State Agric. Univ.*, 1: 167-172.
- Misakov, V.S. and A.Y. Adzhiyeva, 2008. Features of transformational processes in agrarian sector. *Terra Econ.*, 6: 233-236.
- Solow, R.M., 1956. A contribution to the theory of economic growth. *Q. J. Econ.*, 70: 65-94.
- Ushachev, I., 2015. Agrarian sector of Russia in the conditions of the international sanctions and embargo: Challenges and prospects. *Agrarian Ind. Complex Econ. Manage.*, 5: 9-23.