

Opportunities and barriers to the agrarian sector modernization in the Northern and subarctic territories in the conditions of Russia's WTO membership*

The paper dwells on specific characteristics, factors, and conditions stimulating or hindering technical and socio-economic development of the agrarian sector in the Northern region in the case of the Komi Republic. It reveals conditions and threats to the Northern agricultural modernization upon Russia's entry into the WTO; analyzes risks caused by the reduction in the volume of direct state support that pose a serious threat to the sector modernization; suggests measures on improving budget support for the agrarian sector in accordance with the WTO requirements.

Modernization, agriculture, the Komi Republic, 'green, yellow and blue baskets', duties, tariff quotas, export subsidies.



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After 18 years of negotiations Russia has joined the World Trade Organization (WTO). Upon the country's entry into the WTO, the agriculture of the Northern territories, not having been able to overcome the 1990 – 2000 crisis, will face new problems concerning technological and socio-economic development of the sector. The risks and threats are the following: reduction in investment attractiveness and profitability of enterprises and households that makes modernization of the agrarian sector branches problematic; non-fulfillment of the Russian Food Security Doctrine's indicators;

agro-industrial enterprises bankruptcy due to low competitiveness; job cuts and tax revenue decline in the agro-food sector; decrease in income and living standards of rural people. As a result, the adoption of measures to prevent worsening of the socio-economic situation in the agrarian sector becomes of special importance.

The aim of the research is to analyze probable consequences of Russia's entry to the WTO for the modernization of the Northern agrarian production. In terms of the research, the following tasks were being solved:

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1. To consider the specifics of modernization processes in the agrarian sector in the case of the Komi Republic.

2. To reveal risks and threats to the agricultural modernization owing to the reduction in the volume of direct state support.

3. To offer measures on adaptation of the agrarian sphere to the WTO conditions.

Specific characteristics, factors, and conditions of the agrarian sector modernization.

The relevance and importance of agricultural modernization of the Northern and subarctic territories is determined by the expanding of local environmentally-preferable food products, efficient use of productive potential, solving of the issue concerning the native population employment, increase in the living standard of the rural community. During the period of economic and agrarian transformations the degradation of land, logistics, and human resource potentials was observed in the area, with the reduction in the areas planted, the cattle population, the number of agricultural workers, all types of agricultural production. About two-thirds of agrarian enterprises in the remote rural areas of the Komi Republic are financially unsustainable. Agrarian economic entities have no access to financial markets. At present, the majority of remote agrarian enterprises and (peasant) farms have lost their economic and social sustainability. Actual tendencies taking place in the agrarian sector may lead to its liquidation and decrease in rural territories inhabitable for centuries. Agricultural modernization with the application of the latest technologies is the key direction to exit the crisis. At the moment, primitive methods and technologies are domineering in agricultural organizations, (peasant) farms and rural households; obsolete plant species and cattle strains, imperfect organization and management forms are used, as well.

In the narrow sense, modernization is understood as enhancement, improvement, renewal of an object, its adjustment to conform

to the new requirements and norms, technical specifications, quality factors. Machinery, equipment, technological processes are primarily exposed to modernization [7, p. 198; 11, p. 439].

In the broader sense, modernization defines a political and economic strategy, aimed at a rapid change of technological, economic and socio-political conditions for the functioning of an economy in order to boost its technological and social dynamism and economic competitiveness [1, p. 3].

According to the classic modernization theory, modernization is the transition from a traditional society to the modern, fundamentally different innovation-oriented society [10, p. 192].

Innovation modernization of the agrarian sphere contemplates the use of technological, selective-genetic, business, social and environmental innovations. The purpose of modernization is to create long-term preconditions for sustainable rural development and to raise the living standards and quality of life of the rurals.

Let us consider specific characteristics and main factors contributing or hampering modernization processes in agriculture. The northern agrarian production incurs great expenses and entails a high degree of risk that makes private investors not interested in investing capital in its development. At this point, the invisible hand of the market, market mechanisms are not able to ensure the effective functioning and modernization of the agro-producing economy. Agriculture and traditional industries in the North, so as the social sphere, cannot develop without state support.

The argument against local product development policy, due to the high cost of agriculture in terms of government policy, can not be acknowledged sufficient enough. The Komi Republic has such possibilities favorable for agriculture as agro-environmental

(natural moistening, long daylight hours during vegetation period, large areas of natural forage lands) and economic potentials that allow efficient production of potato, range of locally grown vegetables, whole milk and sour-milk products, eggs. Rural areas have capacities for organic food production and the corresponding market segment formation. A sort of rental income can be received from the realization of environmentally friendly products. The products of traditional industries (reindeer herding, fishing, hunting, gathering of wild mushrooms and berries) are competitive not only in the regional, but also in the national and international markets.

Socio-economic factors and conditions, negatively affecting the modernization of agricultural production include:

1. Population decrease due to an outflow and natural loss. Over the last 20 years the rural population has decreased by more than a third; the mortality rate in rural areas exceeds the birth rate by 1.2 times.

2. Low incomes of the rural population, a significant wage gap between workers in agriculture, forest and other industries (employed rural population lives below the poverty line). In 2011, the average monthly wage in agriculture amounted to 56% of the Republic-averaged salary. Average annual income is particularly low in peripheral rural areas: agro-production salaries are below subsistence level of the working age population in Izhemsky, Koygorodsky, Troitsko-Pechorsky, Udorsky, Ust-Kulomsky, Ust-Udinsky districts.

3. High level of unemployment in rural areas (15%) and poor social protection of the rurals.

4. Shortage of skilled personnel, low level of management, particularly in peripheral regions. While in the 1980s, there was an average of 8 specialists with higher education and 40 specialists with secondary professional education per one sovkhos (state farm), at present there is only one specialist with higher and 5

specialists with secondary professional education per one farm. 27% out of employees holding positions of managers and specialists were without higher or secondary professional education; 57% out of middle managers. At the beginning of 2012, the share of managers with higher education amounted to 32%. (Note that in Russia 68% of farm managers have higher education, and in the Republic of Belarus their number is 92% [3, p. 21]). In 2011, only five specialists graduated in the reporting year were hired by farms in peripheral areas; the share of farm managers and specialists under 30 years of age is only 2%. A similar situation is observed throughout the Republic (12%). In addition, the qualification and workers training level is low. Thus, according to the questionnaire survey conducted in 2012, out of 64 livestock farmers in Udorsky and Ust-Kulomsky districts only one was given the title 'First-rank Master in livestock', and only five were marked as Second-rank Masters. During the years of reforms, the number of employees in agrarian production decreased 8 times, with more than 10 thousand exiting farms.

5. A significant lag of social infrastructure development and provided service quality between rural areas and the city. The absence of sanitation facilities is characteristic of individual housing in the countryside. The share of failing and old housing stock makes 22% as compared to 9% in the city. The number of water-supplied rural houses is three times less than in the city, the quantity of houses supplied with central heating is three times, with gas – two times, hot water – nine times, bathrooms – eight times less in comparison to the city. The share of failing and old housing stock is particularly high in such remote areas as Troitsko-Pechorsky (41%), Koygorodsky (35%), Ust-Kulomsky districts (34%) [9, p. 145].

6. Low transport accessibility and low possibilities for receiving basic social benefits (health, education, culture, welfare services) of the rural population. Roads are extremely

poorly maintained in remote rural areas: out of six peripheral districts, only two (Koygorodsky and Ust-Kulomsky) are linked to the city of Syktyvkar by hard surface roads. Over the 20-year period, the number of pre-school institutions has decreased by 45%, of educational institutions – by 33%, of hospitals – by 50%, culture and leisure establishments – by 24%. Rural supply of doctors is three times less and of medical staff two times less than the urban one.

7. A significant decrease in the output of major agricultural products, particularly on collective farms. During the period of market reforms milk production on farms has dropped 5.3 times, beef – 13.5 times, pork – 4.5 times, potato – 14.5 times, vegetables – 4 times.

8. The territory of farmlands during the period has declined 1.8 times, of the areas planted – 2.5 times, the cattle population decreased 4.5 times, and the number of swine dropped 5.5 times. The tractor fleet decreased 5.6 times, the volume of generating capacities – 5.1 times. Livestock capital goods are 80% outworn. Due to unprofitability of potato, vegetables, and beef production, as well as low profitability of other product types there is the lack of own financial resources for the modernization of plant growing and cattle breeding sectors.

9. Existing volume of state support provided to the agrarian sphere in rural peripheral areas makes impossible not only its development on an innovation basis, but also restraining of production decline. In 2011, only 9.9 percent (123.5 million rubles) out of the total subsidies (1253.5 million rubles) were allocated to the agrarian sector of the Komi Republic, and agriculture in peripheral areas, whereas their share in the volume of gross agricultural production made 18.5%.

Upon Russia's entry into the WTO new problems regarding modernization of agriculture in the northern and subarctic territories will arise.

Conditions, risks and threats of Russia's accession to the WTO for the agrarian sector modernization.

Having joined the WTO, Russia undertook a number of commitments on state support provided to agricultural sector, as well as export and import duties, tariff quotas, export subsidies.

Threats related to the customs tariff regulation, above all, concern tariffs reduction on agricultural products and food from the current 15.6% to 11.3% by the end of the transition period (the year 2018). According to academic agricultural economists [3, 4, 6, 11], serious negative effects from tariff reductions are expected in the pork and beef market. Our country undertook to reduce customs tariffs on live swine from 40% to 5%. As for the pork imports within the quota, duty will fall from the current 15% to 0%. Further reduction in the quota amount is banned.

Growing prices for energy and other material support, reducing agricultural producers' income, pose a serious threat to agriculture, thus, limiting their possibility to carry out modernization and innovative development. Prior to joining the WTO, the state each year partially compensated through direct subsidies losses stemming from a price disparity between agricultural and industrial production.

State support is important in the development of the agrarian sector. Therefore, the support proportions are the main tradeable subject of agriculture agreements. Having become a WTO member, Russia with its regions should adhere to the restrictions concerning budget support of the branch and to changes in subsidized direction. The level of support, approved under the WTO, is divided into three types, defined as 'green, yellow (amber) and blue baskets', depending on the trade distorted impact degree.

The 'green basket' comprises the support measures, having no negative impact on trade: promoting the restructuring of agricultural

production and the development of the agroindustrial complex infrastructure; plants and animals disease prevention, pests control, veterinary measures; research activities and personnel training; information and consulting services for agricultural producers; marketing, direct payments to producers, income support, separated from production; income insurance and crop insurance programme; disaster recovery; regional aid programme; ecological and regional agricultural sector support programmes; income support, not related to production, etc. 'Green basket' measures can be used without restrictions.

The 'yellow basket' comprises measures distorting the market. Their initial and finite scale and reduction rates up to the level agreed during negotiations. Commitments under the 'yellow basket' measures are fixed on the list for each WTO member in the form of aggregate measures of support (AMS). 'Yellow basket' subsidies include product and non-product support measures. Product support measures include support for market prices of specific products; subsidies per production unit, per livestock unit, per unit area, etc.; partial compensation of expenses for material and technical resources purchase (combination fodder, mineral fertilizers, fuels and lubricants, etc). Non-product measures include subsidizing the repayment of bank credit interest rates, partial compensation of costs on material and technical resources, etc.

However there is an exception to these regulation rules. The country, which is a WTO member has the right not to undertake obligations to restrict the volume of support provided within the 'yellow basket', if the amount of such support does not exceed 5% of the value of agricultural production. This is the so-called *de minimis* rule [4, p. 7].

The 'blue basket' comprises budgetary payments to limit agricultural production. These payments are not subject to compulsory reduction, if based on fixed areas and yields, a fixed livestock number.

At the initial stage of the negotiations on the country's accession to the WTO, Russia determined the level of state support for agriculture as 89 billion dollars (corresponding to 1989 – 1991 annual average subsidies rate). Subsequently, Russian delegation has been gradually receding from original positions – first, up to 36 billion dollars, then to 16 billion dollars [14]. In compliance with the agreement, the level of direct state support in Russia is to be 9 billion dollars by 2013 with consequent equal parts reduction to 4.4 billion dollars by 2018. Such amount of subsidies for Russian agriculture is extremely low, as compared with developed countries, due to low bioclimatic potential, lack of proper technical equipment and obsolete technologies. The permitted level of support to agriculture in the EU is 98.8 billion dollars, in Japan – 39.6 billion dollars, in Switzerland – 3.9 billion dollars, in Norway – 2.0 billion dollars. Support provided per hectare of ploughland in Russia is 7.6 times lower than in the United States, 10.3 times lower than in China, 13 times lower than in the EU, 41.1 times lower than in Norway, 55.7 times lower than in Japan [3, p. 4, 6]. Per capita budget support level in the EU is 6.9 times, in the United States – 7.7 times, in Japan – 8.3 times, in the Republic of Korea – 9.4 times, in Norway – 13.6 times, in Iceland – 14.9 times, in Switzerland – 15.5 times higher than in Russia. While in economically developed countries, the level of budget support of farmers relative to production costs makes 32%, in EU – 35%, in Russia it accounts for only 6.9% [12, p. 29]. Such low budget support restrains the modernization and innovation development of domestic agriculture, and makes it impossible to eliminate a significant gap in labour productivity level between Russia and highly developed countries.

Russia's entry into the WTO will oblige the country to follow the rules of agricultural subsidies, stipulated by the WTO agreements. Thereby, it is interesting to consider the volume

of budget allocations in Russia for implementation of the State Programme for Development of Agriculture and Regulation of Agricultural Commodities Markets in 2013 – 2020.

The forecast estimate of the federal budget expenditures, consolidated expenditures of the RF constituent entities for the State Programme implementation are given in *tables 1, 2*.

Table 1. The volume and structure of budget support for implementation of the State Programme on Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020, billion rubles

Years	Federal Budget	Consolidated budgets of the RF constituent entities	Total
Billion rubles			
2013	159.0	80.0	239.0
2014	161.9	74.9	236.8
2015	175.4	87.8	263.2
2016	186.1	94.1	280.2
2017	194.7	99.5	294.2
2018	203.6	106.9	310.5
2019	211.2	112.9	324.1
2020	217.9	120.7	338.6
%			
2013	66.5	33.5	100
2014	68.4	31.6	100
2015	66.6	33.4	100
2016	66.4	33.6	100
2017	66.2	33.8	100
2018	65.6	34.4	100
2019	65.2	34.8	100
2020	64.4	35.6	100

Table 2. Budget ensuring for implementation of the State Programme on Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020, billion rubles

Sub-programme, programme	2012	2013	2014	2015	2016	2017	2018	2019	2020
Total budget expenditures	228.7	239.0	236.8	263.2	280.2	294.2	310.5	324.1	338.6
Including, development of crops production, processing and marketing of plant products subindustry, total	57.7	65.1	61.8	70.3	79.2	88.2	98.2	104.9	110.8
Federal budget	40.2	45.9	43.4	47.3	53.7	60.2	67.3	72.7	76.1
Consolidated budgets of the RF subjects	17.5	19.2	18.4	23.0	25.5	28.0	30.9	32.2	34.7
Development of livestock-breeding, processing and marketing of livestock products	76.4	87.4	92.3	102.6	102.1	100.8	98.2	96.0	94.9
Federal budget	50.4	57.8	61.9	67.3	66.6	65.2	62.4	59.9	58.3
Consolidated budgets of the RF subjects	26.0	29.6	30.4	35.3	35.5	35.6	35.8	36.1	36.6
Development of beef cattle industry, total	-	10.9	11.3	12.6	13.2	13.8	14.4	15.0	15.7
Federal budget	-	6.8	7.1	7.7	8.0	8.4	8.7	9.1	9.5
Consolidated budgets of the RF subjects	-	4.1	4.2	4.9	5.2	5.4	5.7	5.9	6.2
Support of small forms of business, total	15.1	10.2	10.2	11.6	12.1	12.5	13.1	13.7	14.2
Federal budget	11.2	8.6	8.6	9.9	10.4	10.8	11.3	11.8	12.3
Consolidated budgets of the RF subjects	3.9	1.6	1.6	1.7	1.7	1.7	1.8	1.9	1.9
Technical and technological modernization and innovation development, total	16.0	2.0	2.0	4.3	5.3	5.4	5.6	5.7	5.9
Federal budget	12.0	2.0	2.0	3.3	3.2	3.2	3.3	3.3	3.4

End of table 2

Consolidated budgets of the RF subjects	4.0	-	-	1.0	2.1	2.2	2.3	2.4	2.5
Ensuring the State Programme implementation (federal budget)	21.2	21.7	22.7	22.1	25.2	26.2	27.1	28.3	29.1
Budget expenditures on sub-programmes, total	186.4	197.3	200.3	223.5	237.1	246.9	256.7	263.6	270.6
Federal budget	135.0	142.8	145.7	157.6	167.1	174.0	180.2	185.1	188.7
Consolidated budgets of the RF subjects	51.4	54.5	54.6	65.9	70.0	72.9	76.5	78.5	81.9
Programme 'Social Development of villages', total	20.6	22.0	-	-	-	-	-	-	-
Federal budget	8.7	9.0	-	-	-	-	-	-	-
Consolidated budgets of the RF subjects	11.9	13.0	-	-	-	-	-	-	-
Programme 'Sustainable Development of Rural Territories in 2014 – 2017 and up to 2020' (draft), total	-	-	22.1	22.1	26.3	29.7	35.4	41.3	48.0
Federal budget	-	-	9.0	9.0	10.6	11.9	14.2	16.5	19.2
Consolidated budgets of the RF subjects	-	-	13.1	13.1	15.7	17.8	21.2	24.8	28.8
Programme 'Preservation and Restoration of Soil Fertility of Agricultural Lands and Agro-landscapes as Russia's National Patrimony for 2006 – 2010 and up to 2013', total	21.7	19.7	-	-	-	-	-	-	-
Federal budget	10.9	7.2	-	-	-	-	-	-	-
Consolidated budgets of the RF subjects	10.8	12.5	-	-	-	-	-	-	-
Programme 'Development of Agricultural Lands Reclamation in 2014-2020' (draft), total	-	-	14.4	17.6	16.8	17.6	18.4	19.2	20.0
Federal budget	-	-	7.2	8.8	8.4	8.8	9.2	9.6	10.0
Consolidated budgets of the RF subjects	-	-	7.2	8.8	8.4	8.8	9.2	9.6	10.0

Source: the State Programme for Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020.

As can be seen, during the first year of the Programme implementation (2013) the volume of budget allocations will make 239 billion rubles, i.e. 8 billion dollars; during the second year the volume will amount to 236.8 billion rubles and 7.2 billion dollars respectively. In 2018, 310.5 billion rubles are planned to be allocated for the State Programme implementation in 2018, and 338.6 billion rubles in 2020. The Programme envisages the total state budget allocations in 2013 – 2020 at 2286.6 billion rubles, including 1509.8 billion rubles (66% of all expenditures) out of the federal budget funds; 776.8 billion rubles (34%) out of the funds from the consolidated budgets of the RF constituent entities. The share of the consolidated budgets of the RF subjects will grow from 33.5% in 2013 up to 35.6% in 2020.

According to the calculations made on the basis of the volume of budget expenditures for the State Programme implementation, state

support within 'the yellow basket' is set at 4.8 up to 5.3 billion dollars for the 2013 – 2016 period (*tab. 3*), i.e. 1.2 – 1.9 times lower as compared to the obligations, provided under the conditions of the accession to the WTO. In 2017 'the yellow basket' financing will exceed the permitted level by 4%, in 2018 – by 30%, and in 2020 – by 34%.

This situation requires development of a new system of support for agriculture. To accelerate the rate of technical and technological upgrade, to boost investment opportunities of the industry in the 2013 – 2016 period of the programme implementation, it is expedient to enhance the growth of state support volume up to the level permitted by the WTO conditions. Starting from 2017, when it will be impossible to increase direct state support volume (i.e. so-called 'yellow basket'), budget allocations volume might be boosted through subsidies per one hectare of crops or per a head of cattle, in compliance with the WTO conditions.

Table 3. State support for agriculture in Russia for 2012 – 2020, billion rubles

Indicator	2012	2013	2014	2015	2016	2017	2018	2019	2020
'Green basket'	3.1	3.2	3.2	3.7	4.0	4.2	4.7	5.0	5.4
'Yellow basket'	4.5	4.8	4.7	5.1	5.3	5.6	5.7	5.8	5.9
Total	7.6	8.0	7.9	8.8	9.3	9.8	10.4	10.8	11.3
Permitted level of support within 'Yellow basket'	-	9.0	8.1	7.2	6.3	5.4	4.4	4.4	4.4

Let us examine the current situation concerning state support for agriculture in the Northern zone and its impact on the profitability level in the case of the Komi Republic. The implementation of the priority national project 'Development of agro-industrial complex' contributed to a significant state support increase. State support for agriculture in the Komi Republic grew 1.8 times in 2011 as of 2006-level and made 1038.6 million rubles. The State Programme 'Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation, Fishery Complex Development in the Komi Republic for 2013-2020' envisages the allocation of 1510.2 million

rubles to agricultural complex in 2013, 1544.4 million rubles in 2014, 1590.1 million rubles in 2015. (fig. 1).

State support is mainly provided out of the regional budget. In 2011, 83.5% of subsidies were allocated from the budget of the Komi Republic, 13.8% out of the federal budget, and 2.7% out of the local budget. The programme on the development of the agro-food complex in the Republic up to 2020 envisages the ratio increase in favor of the regional budget. Thus, in 2013 – 2015 the forecast estimate of the subsidies share out of the Komi Republic budget will make 91.4%, 8.2% out of the federal budget, and 0.4% out of local budgets.

Figure 1. State support volume for implementation of the State Programme on Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020, million rubles



Subsidies helped to avoid agricultural production loss. While in 2005 the loss ratio was 5.1% and in 2006 it fell to 0%, in 2011 its value was 6.6%. Since 2009 this indicator has a tendency towards decrease (*fig. 2*).

In 2010 the profitability level of farms economic activity (subsidies not included) made only 0.7%, whereas the loss ratio in 2011 accounted for 0.8%.

Marketing of Plant Products remains unprofitable. Livestock profitability level (even including subsidies) is three times below the norm necessary for the expanded reproduction. Milk yield is insufficient, beef production is unprofitable. Only poultry meat profitability is close to the level, necessary for ensuring expanded reproduction. Venison is notable for high profitability rate (*tab. 4*).

Livestock and swine-breeding modernization is constrained due to the lack of own financial sources for investment. Beef unprofitability, low yields of milk, pork and eggs do not allow the agrarian economic entities, producing these products to switch to the latest technologies without increasing the volume of state support.

Measures on agrarian economy adaptation to new conditions

The conditions of Russia's accession to the WTO are unfavourable for the northern agrarian sector, particularly for the leading branch of livestock-breeding. This fact certainly affects beef and milk production. While broilers and eggs producing poultry plants functioning on an industrial basis since the 1970s, have conducted or have been accomplishing modernization with the application of the latest technologies during the implementation of the priority national project 'Agro-Industrial Complex Development', the production intensification had not been accomplished and the switch to industrial technologies was not completed in dairy and meat cattle-breeding. During the reform years the technical equipment of cattle-breeding farms significantly worsened, the number of milking machines for the 1990 – 2011 period reduced 10 times; the number of implemented cattle premises dropped 7 times. The transition to innovation technologies was not completed in swine-breeding, as well. Agricultural organizations, specializing

Figure 2. Profitability, unprofitability (-) of the assets and production on farms in the Komi Republic, %

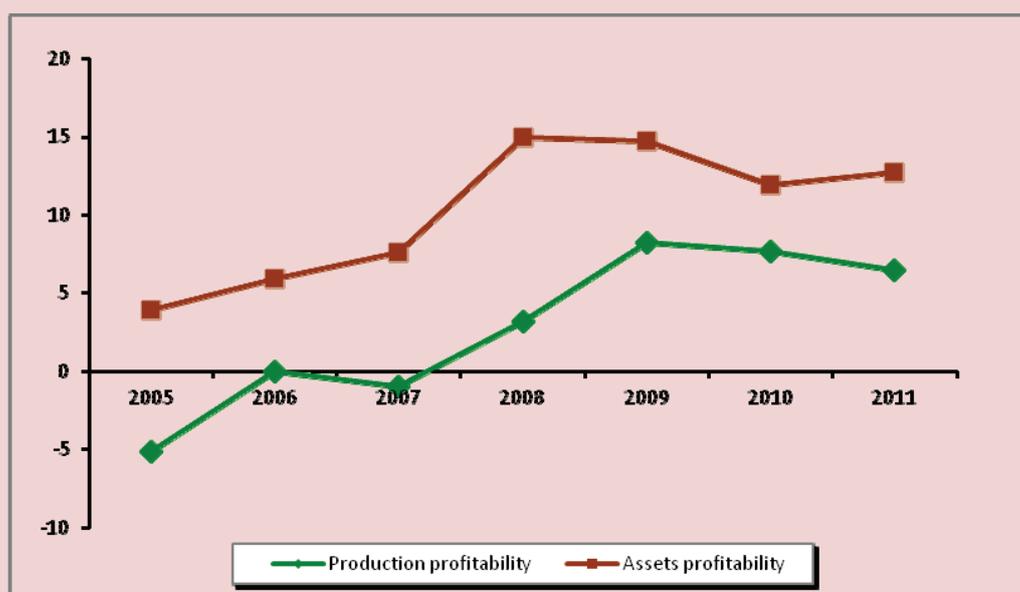


Table 4. Profitability, unprofitability (-) of products produced on farms in the Komi Republic, %

Indicator	Without subsidies		Including subsidies	
	2010	2011	2010	2011
Total profitability	5.3	4.1	12.5	13.3
Plant-growing	-13.7	- 15.2	-13.5	- 6.8
Livestock-breeding	7.3	5.9	15.3	15.2
Potato	8.5	- 9.3	11.2	-7.9
Outdoor vegetables	-8.7	- 56.3	-	-
Indoor vegetables	-21.7	- 15.1	-	- 4.0
Unprocessed livestock products				
Milk	-26.5	- 27.4	10.1	9.0
Beef	-28.8	- 21.4	-	-
Pork	1.2	10.8	15.4	-
Venison	51.7	62.8	-	-
Poultry	62.9	22.7	-	-
Eggs	5.5	7.7	10.3	16.0
Processed livestock products				
Dairy products	-28.2	-20.9	1.6	2.6
Cattle	-48.3	- 48.9	-	- 47.8
Swine	-6.2	- 8.2	6.3	9.6
Poultry	36.4	29.5	36.6	31.1
Deer	9.6	9.7	-	-

in production of cattle-breeding and swine-breeding products, will not be able to carry out modernization processes that require vast financial resources without the state assistance.

All this must be taken into account while improving the state agrarian policy with regard to the agriculture functioning of the northern and subarctic territories under the conditions of Russia's accession to the WTO. In order to boost profitability and investment opportunities of the northern farming, a significant increase in direct state support is required. In case the revenues of agricultural producers are not supported through price subsidies on production, investment efficiency will be extremely low, and may not even be paid back.

Economic evaluation of innovation and investment projects on the construction of dairy farms for 100 and 200 head of cattle in the peripheral rural areas of the Komi Republic applying the latest technologies and at achieving high cows productivity (5500 kg), as well as projects consistent with the principles of organic production, showed that under the existing volume of state support

the given projects will be recouped in 12.49 and 11.25 years. Only the increase in direct state support through subsidizing cattle meat and milk prices, ensures an optimum level of profitability (42 – 48%), the payback period of projects (8 years) will be smaller than the loan period [2, p. 160-165]

So that not to limit the volume of direct support, i.e. the so-called 'yellow basket', adjustments to the WTO obligations on agriculture of the Far North regions and equated areas are needed. Under the WTO membership conditions the amount of direct support, which does not exceed 5% of agricultural production cost, is not taken into account.

Out of the total Russia's agricultural output 4.0% of potatoes, 2.8% of vegetables, 2.5% of milk, 2.0% of meat (slaughter weight) are produced in the Northern zone. It is necessary to make amendments to the Federal Law 'On Agricultural Development', stipulating that the funds aimed at the direct support of agriculture for the territories unfavourable for agricultural production are not subject to direct WTO norms and rules regulation.

The Ministry of Agriculture of the Russian Federation plans to make such amendment to the Law 'On Agricultural Development' to support the regions, which are in the conditions unfavourable for the agrarian production development [6, p. 8].

The prompt transfer of cattle-breeding on a new technological basis requires allocations from the federal budget subsidizing the growth of milk and beef volume, as well as subsidies for cattle and deer livestock expansion. Our country has four years (2013 – 2016) for increasing significantly direct state support for the development of agriculture. Agricultural producers of the Northern zone are to get partial compensations for purchasing modern technology and efficient equipment, mineral fertilizers, fuel, spare parts, mixed fodders; tariffs in the amount of 50% for railway and water transporting of material and technical resources; subsidies for interest rates on loans given after 1 January, 2013.

Since the State Programme 'On Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020' adopted in June, 2012 by the Government of the Russian Federation does not stipulate sub-programmes on the development of reindeer breeding and on poverty elimination among the rural population, the development of similar federal target programmes is required. Funding from the state budgets of the programme on the development of reindeer herding will enable to expand livestock, to store venison, to improve the production of valuable and profitable endocrine-enzyme raw materials, which are in great demand abroad. Implementation of the industry development programme will contribute to growth of employment among native population of the North. The state support provided to rural population that lives below poverty line, is included in the system of 'green basket' measures.

Under the WTO conditions, it is advisable to exempt the farmers from paying any taxes for 5 years, as it is done in a number of China's regions, as well as to enhance the role of long-term credits. Soft loan for the construction and modernization of cattle-breeding premises in the North should be given for 20 – 25 years, and for the purchase of machinery and equipment for 6 – 8 years.

The analysis of the possible negative consequences of Russia's accession to the WTO allows making several suggestions on the reduction of agricultural sector modernization risk in the northern regions.

1. Modernization of agriculture is necessary due to the suspension of agricultural production decline, the consolidation of agriculture positions ensuring the population food security, the rational use of natural and human capital, raising the living standards and quality of life of the rurals, the youth assignment to rural areas, the need to eliminate the substantial differentiation of the socio-economic development in peripheral and suburban areas.

2. There are certain preconditions of the technical, technological and socio-economic development of the agrarian sector in the Komi Republic: availability of labor resources, natural fodder base (large areas of floodplain meadows); the possibility of organic products production; the demand for fresh dairy and meat products.

3. The main factors hampering modernization and innovation development of the agrarian sector include low investment attractiveness of the sector, the lack of own financial resources of the economic entities, insufficient amounts of state support provided in the agrarian sphere, the shortage of qualified personnel, low level of management, weak development of the production, market and social infrastructure.

4. During the next four years it is necessary to raise the volume of the country's consolidated

budget financing of direct support measures on the State Programme on Agriculture Development and Agricultural Products, Raw Materials and Food Markets Regulation for 2013 – 2020 to the level settled under the WTO accession terms, paving the way for agricultural transition on a new technological basis.

5. The main risks of Russia's accession to the WTO posed to the agrarian sector of the Northern and Arctic territories arise from direct state support reduction. Subsidies to farmers enable them to receive incomes additional to sales proceeds, not affecting food prices growth. Rising income will allow increasing investment opportunities for modernization of agricultural production.

6. It is necessary to remove restrictions within the 'yellow basket' with regard to agri-

culture in extreme conditions of the Northern zone. In the nearest future the Ministry of Agriculture of the Russian Federation is expected to make amendments to the Law 'On Agricultural Development', with regard to the volume of direct state support for the agrarian sector of the Far North regions and equated areas, and which are not subject to the WTO norm and regulations.

7. It is necessary to work out federal targeted programmes for the development of reindeer breeding and on poverty elimination among the rural population, to enhance the role of long-term credits to facilitate modernization and innovation development of agricultural production and to exempt agricultural organizations and farms from taxes for the term of 5 years.

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