

# STATE REGULATIONS FOR THE DEVELOPMENT OF ORGANIC CULTURE BY ADAPTING EUROPEAN PRACTICES TO THE RUSSIAN LIVING STYLE

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## ABSTRACT

*Human health and living conditions largely depend on the quality of food. This is why the demand for green products is increasing in the world. To satisfy this demand, organic agriculture is rapidly developing, which is a system of production that helps preserve the state of ecosystems, lands and people due to cessation of application of chemical plant protection agents and mineral fertilizers and replacement of these with biological and technological methods. This article reviews the essence, peculiarities, prerequisites, problems and benefits of organic agriculture. The analysis of the development of this sector of the agrarian economy in other countries has been carried out, in comparison with the trends taking place in Russia. The capacity of the market of organically produced products, as well as the production and consumption in various countries have been estimated: the largest amount of organic manufacturers are located in Asia due to less complex transition to this quality from the existing production manufacturing method; the leaders in organic production consumption are USA and European countries. The process of shaping of the state regulation of the development of organic agriculture in European countries has been studied, including the legal framework and a wide range of support measures. Russia is at the starting step of forming organic agriculture but has the potential capabilities in strengthening its positions in the international market of organically produced products have been substantiated, provided that the necessary legislative, institutional and financial conditions for that were created. The conceptual model of formation of organic agriculture in Russia has been developed and its core elements at the federal and regional levels have been defined, along with the necessary activities of organic producers and consumers. It has been proposed to include into the agrarian policy of the country the active measures of state support for organic manufacturers, the most important of which being regulatory and program target regulation, organization of specialized scientific studies and education in organic agriculture.*

**Keywords:** Organic Agriculture, Market for Organically Produced Products, Foreign Practice, State Regulation and Support.

## INTRODUCTION

The Constitution of the Russian Federation states that the national policy is aimed at creating conditions that ensure decent living standards and unhindered development of people. As is known, the living conditions are an integrated indicator summarizing the results of numerous factors that have impact on people. The primary needs include food, its physical and

economic accessibility and quality. Medical research of the influence of various factors on human health has shown the following: it depends on heredity by 15-20%, on healthcare provision by 10-15%, on harmful environmental factors by 20-25% and on the nutrition quality by 50-55%. According to the Scientific Research Institute of Nutrition of the Russian Academy of Medical Sciences, 30-50% of all diseases in Russia are associated with malnutrition, with annual economic loss of which amounting to nearly 13 trln rub. (Polushkina, 2016). It is important that the number of these diseases can be reduced thanks to better nutrition. Russia ranked 119th with an average score of 54 out of 100 possible in the ranking of health and well-being of the nation, compiled by the medical publication *The Lancet*, based on the 2015 sustainable development goals (SDG) developed by the UN (for reference: the leaders of the ranking are Iceland, Singapore and Sweden-score of 85 each).

The concept of healthcare development of the Russian Federation until 2020 involves provision of the population with healthy nutrition, along with increase in population up to 145 mln people (it already amounted to 146.5 mln people in 2015), increase in the life expectancy up to 75 years (actual figure was 71.4 years in 2015), decrease in the overall mortality rate down to 10 (figure of 13 deaths per 1,000 people was achieved in 2015, while the world average is 8.6 deaths). Solution to this problem involves two measures: promotion of healthy lifestyle and healthy nutrition among Russians (demand for environmentally safe products) and support of the production of environmentally safe food and quality control system. Both areas are currently at the initial stage of formation-the society and real economy are forming a request for solution of this problem. Much is to be done as the first steps: creation of the food quality control system that includes a network of modern laboratories that are able to detect all harmful substances (chemical fertilizers, plant protection products, GMOs, growth hormones, antibiotics, food additives, trans fats, etc.); development and adoption of technical regulations and national standards to ensure the food quality; compulsory comprehensive (readable and detailed) product labeling, development of production of green food products and formation of an adequate regulatory framework in this area. This article pays the most attention to the problem of development of organic agriculture as the basis for the production of green food products and formation of the Russian state policy in this area of activity.

Development of agricultural production and rural areas in Russia is regulated by the state within the multiple laws and regulations among which are the Federal law about the State Program for the Development of Agriculture and Regulation of Agricultural Products, about personal household farms and also, Raw Materials and Food for 2008-2012 and Strategy of Sustainable Development of Rural Areas of the Russian Federation for the period until 2030 All the above laws and regulations regulate rural development in general, without focusing on economic, technological, environmental and social issues of organic agriculture. The following adopted National Standards of the Russian Federation have recently introduced some regulating into definitions and essence of organic production regulating the rules of manufacture, storage, transportation, processing, marking and realization of the organic manufacture production and also the way of carrying out voluntary certification. This is why this segment of the Russian market develops spontaneously, giving way to imports (up to 90%, according to experts estimates) and falsification. The question of adoption of the Federal Law "Concerning the production and circulation of organically produced products", which was drafted by the Ministry of Agriculture of the Russian Federation but never entered the State Duma, has been on the agenda since 2012. Scientific research on organic agriculture in the country have been initiated by individual researchers on private issue-in particular, economists study foreign

practice, the system of state regulation of production, certification and exports of organically produced products and formulate the basic conditions and ways of activation of the development of this segment of the agrarian economy in our country. In our opinion, that such important problem should be solved in a short time with the active participation of the state, science and business. The present study is dedicated to justification of ways to solve this problem.

## BACKGROUND/LITERATURE REVIEW

The concept of "organic agriculture" was introduced by Lord Northbourn (1940) in the book "Look to the Land", inspired by the system of biodynamic farming of Steiner (1924). Howard (1940) & Balfour (1939), whose works were devoted to the negative effect of chemical fertilizers on the health of animals and plants and the development of practical proposals for organic farming, were among the founders of organic agriculture. Major contribution to the development of this area of agriculture against the general background of its intensification with the use of chemicals and GMO was made by (Fukuoka, 1975; Buck, 2011; Kleinmann, 2011; Lang, 2005; Prokopchik, 2011; Paul, 2007; Richter, 2005; Hilfiker & Malitius, 1995; Veko & Ravino, 2016).

Organic farming in Russia has deep roots in agricultural science, laid down in 18<sup>th</sup> to 20<sup>th</sup> centuries by well-known agrarian academics (Bolotov, 1786; Vilyams, 1924; Dokuchaev, 1953; Maltsev, 1985; Fokin, 2002). These works have laid the basis for the soil-maintaining technologies, crop rotations, optimization of local and regional agrarian landscapes, biological methods of plant protection etc. Today this field is developing rather slowly; attention to it is paid by (Altukhov, 2013; Kozlova, 2005; Koshelev, 2013; Paptsov, 2009; Peshkova, 2013; Sokolova, 2012; Ushachev, 2009; Kharitonov, 2014; Khodus, 2013; Yablokov, 2007) and other authors. The main attention of agrarian scientists is directed to the problem of providing food safety of the country, growth in the agricultural production due to intensive technologies. Organic agriculture is viewed in their works in the aspect of solving environmental problems of stable field development, not as the main task, but as a possibility of involving unused land areas into the rotation. Numerous problems and mechanisms for the development of organic agriculture in the country have not been sufficiently studied yet. Most of the scholars analyze world trends in development of organic production market and try to assess perspectives and conditions of Russian participation in this process.

The International Federation of Organic Agriculture Movements (IFOAM) plays an important role in the academic and practical development of organic agriculture.

Organic agriculture promotes a sharp reduction in the negative effect on nature due to the refusal to use synthetic fertilizers and pesticides, genetically modified organisms and medicines and control over pests and diseases by natural methods and substances. Crop rotations, organic fertilizers (manure, compost, siderates, etc.), soil-free tillage and other measures are applied in this system of farming in order to preserve soil fertility and increase crop yields. It follows the worldwide principles that are applied under local socioeconomic, climatic and cultural conditions.

If the environmental and social benefits of organic agriculture are obvious, since it is about preservation of the environment (environmental safety) and improvement of living standards (through healthy food), its economic efficiency is not so unambiguous. This is associated with the technological features of organic production. According to Peshkova, they include: increase in production costs due to increase in manual labor, abandonment of mineral fertilizers, pesticides, growth regulators and feed additives with simultaneous shift towards

biological protection agents and introduction of additional legumes planting; decrease in crop yields; costs of certification, search for distribution channels, advertising and promotion of products, associated with a higher price for organically produced products. The existence of a conversion period must also be taken into account, where the costs have already been incurred, but there is no economic return yet (Peshkova, 2013).

Summarizing scientific research and world practice of organic production of agricultural products, (Ushachev, 2009; Paptsov, 2009; Tarasov, 2009) state that the average yield of ecocultures is 20% lower than those grown by traditional (intensive) methods; similar trend can be traced in livestock production. The cost of organically produced (green) products is 20-30% higher than traditional ones, but their prices are correspondingly higher as well. (Ushachev, Papcov & Tarasov 2009). It must be taken into account that the profitability of organic agriculture in the EU and North America is largely ensured by state support, which ensures the growth of this segment of the agrarian economy. This circumstance dictates a necessity of using protectionist measures with respect to development of organic agriculture in Russia, contents of which have been justified in this study.

## **STATE HYPOTHESES AND THEIR CORRESPONDENCE TO RESEARCH DESIGN**

The current hypothesis of the study is aimed to justify the possibilities of life quality growth and promotion of Russian health due to ecological food products and expansion of organic food exports. The country has rich resources for that, the traditions of organic agriculture in small businesses have not been lost (farmers and personal gardens and farms of the rural population). However, without active participation of the state it is impossible to solve the problem of making the agricultural production moiré ecological, which is indicated by the experience of European countries and USA. One should develop a conceptual model of formation of organic agriculture in Russia, which should be reflected in the state policy of rural development, where the priority is given to the increasing role of the environmental component of sustainable development of rural territories. The main elements and required conditions for their interaction (actors, institutes and instruments) should be defined in the model. The mechanism of state regulation of the development of organic agriculture should not involve administrative measures (restrictions and controls) only, but also encouraging, as well as protectionist measures in the near future.

The study is devoted to the substantiation of the system of state support for the development of organic agriculture, its main elements at the federal and regional levels, formation of the prerequisites and institutional environment.

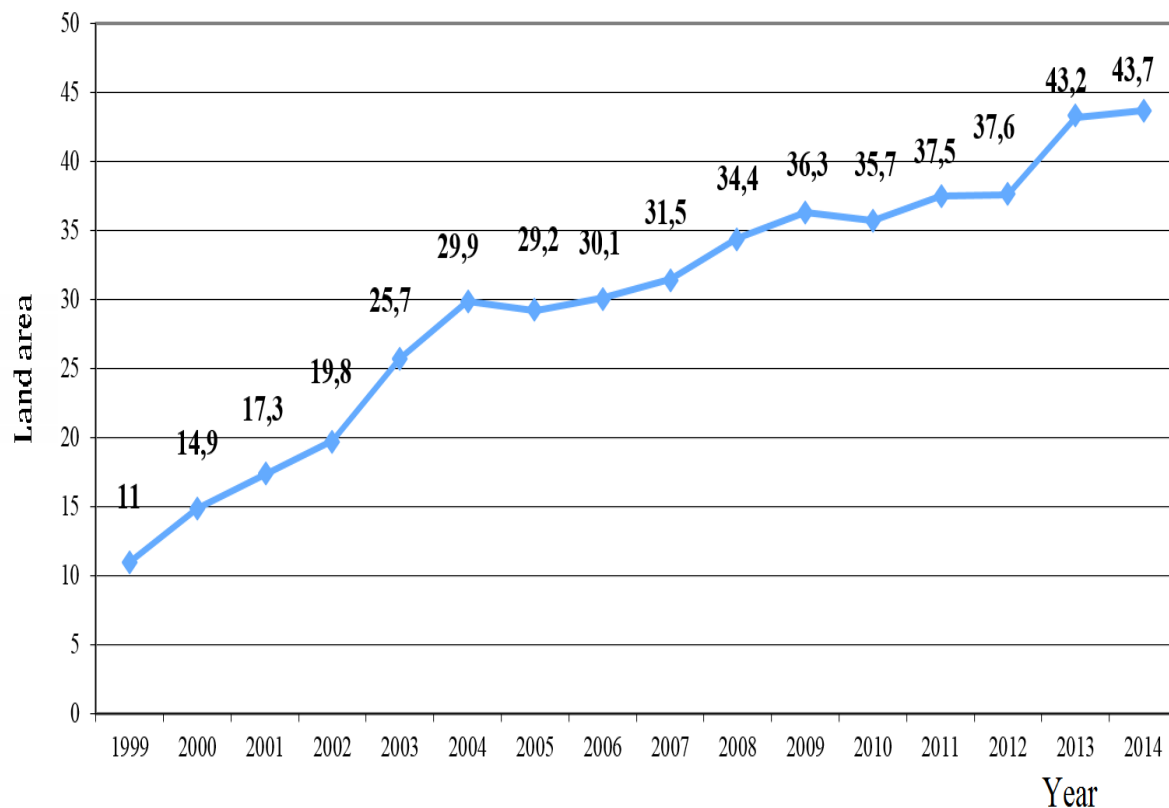
## **METHOD**

The study was conducted on the basis of data from Euro monitor International, Organic Monitor, FiBL, Federal State Statistics Service, policy documents, analytical reports and reports of the Ministry of Agriculture of the Russian Federation and the Union of Organic Agriculture of Russia allowed for identifying the main trends in developing organic production manufacture in the main countries of the world. The database on organic production (organic land areas, their percentage in total area of agricultural lands in the countries, number of organic manufacturers) and the market for organically produced products (manufacture and consumption amount) in the countries of the world were processed using the statistical groupings methods and cluster analysis. This allowed to define the world leaders in terms of the level of development of organic

agriculture, to clarify the main trends and patterns in this segment of the economy and to determine the place and role of Russia in the current period and in the long term and also to justify a possibility of achieving these perspectives with the proviso of substantial alteration of current agricultural policy in the country.

## RESULTS

Organic agriculture is one of the most rapidly developing sectors of economy. Its parameters can be described by the areas of organic land, number of organic producers and volume of the market for organically produced products. According to the studies of FiBL (the Research Institute of Organic Agriculture, Switzerland) and IFOAM published in February 2016, organic agriculture is developing: while data on this field in 1999 were available only in 77 countries, in 2014 they were available already in 172 countries, i.e. it was 2.2 times growth. The total area of organic farmland in 2014 amounted to 43.7 mln ha (1% of all farmland), which is 0.5 mln ha more than in 2013. As can be seen on Figure 1, the area of organic land in the world has almost quadrupled since 1999. Organic farmland is distributed across the continents as follows: 7.1% in North America, 15.6% in South America, 26.6% in Europe, 8.2% in Asia, 1.3% in Africa and 39.6% in Oceania.



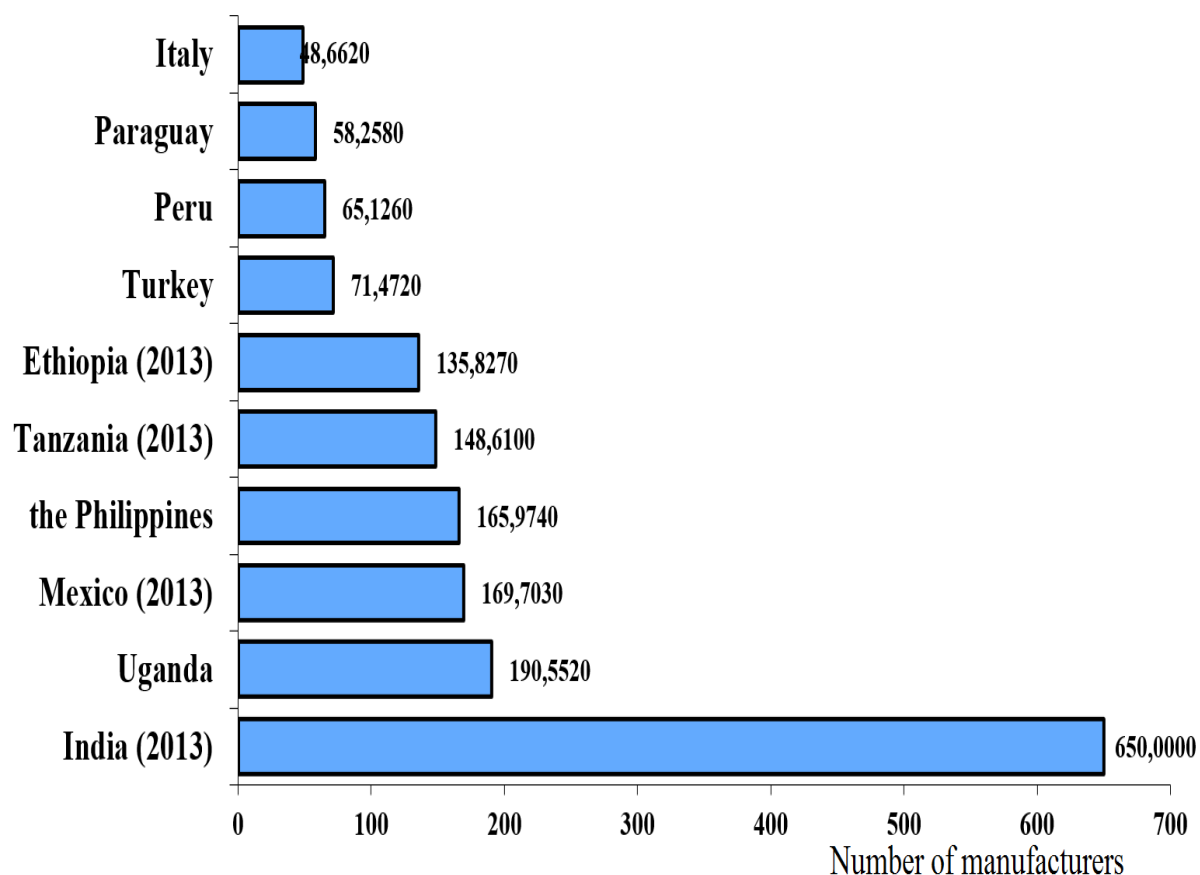
Source: FiBL-IFOAM-SOEL research.

**Figure 1**  
**EXPANDING AREAS OF ORGANIC LAND, 1999 TO 2014**

Top 10 countries with the largest areas of organic farmland include Australia (17.2 mln ha), Argentina (3.1 mln ha), the USA (2.2 mln ha), China (1.9 mln ha), Spain (1.7 mln ha), Italy (1.4 mln ha), Uruguay (1.3 mln ha), France (1.1 mln ha), Germany (1.0 mln ha) and Canada (0.9 mln ha).

11 countries have more than 10% of organic agricultural land: the Falkland Islands (Malvinas) (36.3%), Liechtenstein (30.9%), Austria (19.4%), Sweden (16.4%), Estonia (16.2%), Samoa (14.3%), Switzerland (12.7%), Sao Tome and Principe (12.0%), Latvia (11.2%), the Czech Republic (11.1%) and Italy (10.8%).

As of 2014, 2.3 million organic producers were registered in the world and provided that not all certification bodies report their number of producers (according to FiBL information), there is likely to be more of them. The number of registered organic producers has increased 11.5 times since 1999. The structure of organic producers across continents is as follows: 40% are located in Asia, 26% in Africa, 17% in Latin America, 15% in Europe and 1% in North America and Oceania. More than 3/4 of their total numbers are located in developing countries, which is explained by the general low level of development of agriculture close to the traditional, where it is easier to start this process from scratch than to move the existing intensive farming into a new format. Figure 2 shows countries with the largest number of organic producers. India, Uganda, Mexico, Turkey and Italy can be seen among the leaders.



Source: FiBL research (The World of Organic Agriculture 2016).

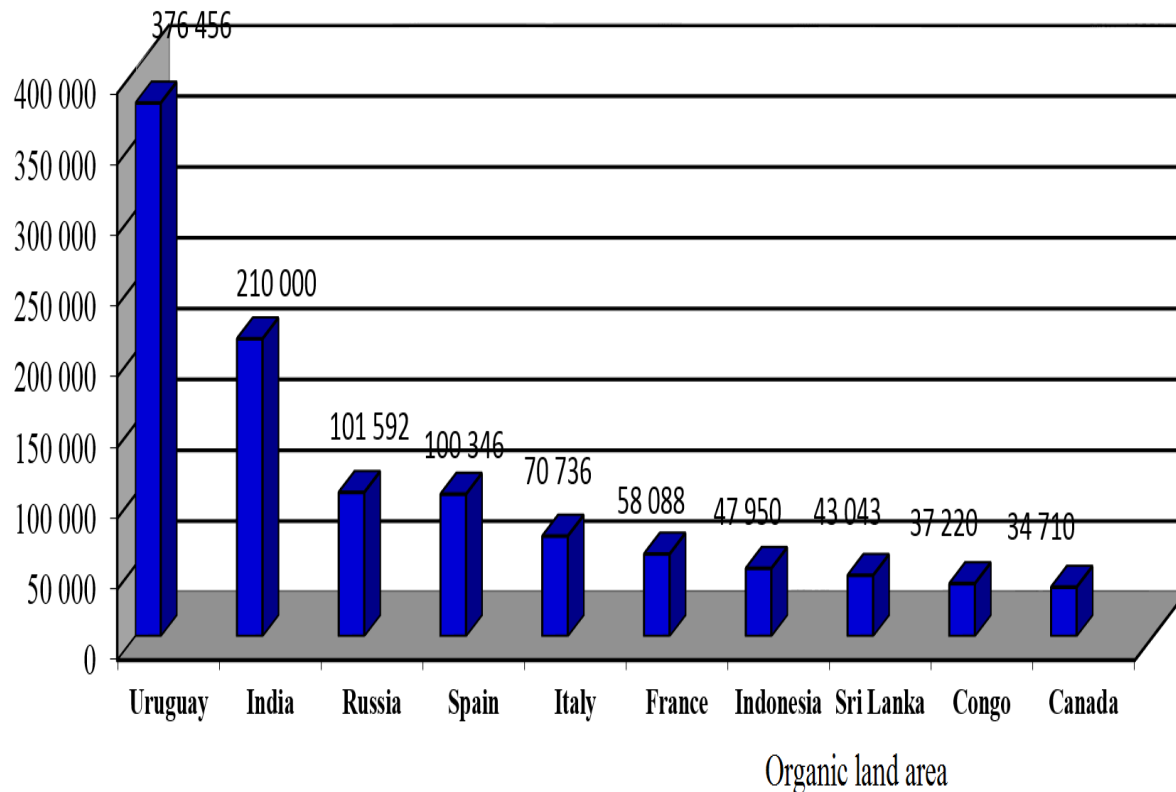
**Figure 2**  
**10 COUNTRIES WITH THE LARGEST NUMBER OF ORGANIC PRODUCERS (2014)**

Several large companies-Euromonitor International, Organic Monitor, FiBL-study the global market for organically produced products on a regular basis. Their evaluation criteria somewhat diverge, but the overall conclusions are similar. According to data from the media outlet Euromonitor International, volume of the global market for organically produced products in physical terms amounted to 6,725.5 thous. tons in 2015, which is 6.4% higher than in 2013. According to data from Organic Monitor, volume of the global market for organically produced food reached 80 bln US dollars in 2014 (more than 60 bln euros), which is 5.3 times more than in 1999. Its growth in 2014, as well as in the previous year, amounted to 11%, which is associated with the growth in popularity of healthy lifestyle in many countries. Leading countries include the US with the market volume of 35.9 bln US dollars (27.1 bln euros), Germany (10.5 bln US dollars or 7.9 bln euros) and France (6.8 bln US dollars or 4.8 bln euros). World average consumption of organically produced products per capita amounted to 11 US dollars in 2014, while in such leading countries as Switzerland it was 210 euros, in Denmark-163 euros, in Luxembourg-157 euros.

The study revealed that the structure of consumption of organically produced products varies significantly across countries. For example, in the USA, 40.5% falls on consumption of fruits and vegetables, 14.6% on dairy products, 1.8% on meat, 7% on bread and cereals and 12.1% on beverages. France is dominated by green fruit and vegetables-73%, eggs-63%, dairy products-49%, bakery products-41%, poultry-24%, wines and beverages-23%. Market for organically produced fruit and vegetables grows rapidly in Italy, Ireland, Norway, Sweden and Germany. In the Nordic countries, milk and dairy products make up the bulk of organically produced products sold. In Belgium, the Netherlands, Finland and France, sales of organically produced meat and meat products make up approximately 10% of the market share. Bread and bakery products play an important role in the organic range of products in Switzerland, the Netherlands, France, Sweden, Finland and Germany [European organic market continued to grow in 2012 (FiBL & IFOAM, 2015)].

It must be noted that an organically produced product differs from the traditional one by the fact that it has certain production and quality control standards governed by special inspections. As of 2015, 87 countries had national standards that are consistent with the overall objectives and requirements for organically produced products (EU members, Switzerland, Turkey, China, India, Israel, Japan, New Zealand, Argentina, Canada, Costa Rica, the USA, Tunisia), as well as the standards approved by IFOAM (Norway, Serbia, Armenia, Australia, Azerbaijan, Greece, Indonesia, Iran, Mexico, Chile, Peru, Uruguay, etc.). Russia joined these countries in June 2015, when the relevant national standard was adopted. 117 countries participated in the International Federation of Organic Agriculture Movements, where 784 IFOAM branches operated, including 91 in Germany, 57 in China, 44 in India and 40 in the United States. The leading countries in production of green products (for example, the UK, Germany, France, Canada, the USA, Japan) have very high requirements for producers. The product should contain 99% organic matter to be considered green.

After having analyzed the world trends in the development of organic agriculture, we can assess its condition, problems and prospects in Russia. According to data from FiBL-IFOAM, agricultural land areas certified for organic farming have grown in Russia by 94% in 2011-2014- from 126.8 to 245.8 thous. ha; the increase in organic areas in 2014 amounted to 70.4%. The Russian Federation entered the top 10 countries with the largest increase in organic lands in 2014 (Figure 3).



Source: FiBl research.

**Figure 3**  
**10 COUNTRIES WITH THE LARGEST INCREASE IN ORGANIC LAND**

Ifoam experts estimated that some of these areas are used for beekeeping (13,723 ha), production of grain crops (10,415 ha), legumes (850 ha), oil crops (170 ha), vegetables (96 ha), fruit and berries (31 ha), grapes (16 ha). It must be noted that some areas are in the process of transformation into organic (they are conversion areas), for example, 329 ha of grain or 166 ha of oil crops. Organic areas are located in various parts of Russia: in the black-earth areas (Tula, Kursk and Belgorod regions), in Siberia (Omsk and Novosibirsk regions), in the northeast (Arkhangelsk region) and in the south (Stavropol region). Russia grows and exports organically produced buckwheat, millet, medic, wheat and flax. Besides, the country has 1,835.4 thous. ha of forest area (7.5% in the world) for picking wild berries, mushrooms, cedar nuts and herbs.

A method of comparison with the condition of this sector of the agrarian economy in other European countries will help to fully assess the development of organic agriculture in Russia. Low priority of the ongoing processes of greening of agriculture in our country is obvious from the indicators provided in Table 1. Out of 220 mln ha of agricultural land in Russia, the area of organic land does not exceed 0.1%, while in Sweden it is 16.7% (out of 3 mln ha), in Germany-6.3% (out of 16.7 mln ha), in Poland-4.6% (out of 14.4 mln ha), in Ukraine-1.1% (out of 36.4 mln ha).



**Table 1**  
**INDICATORS OF THE DEVELOPMENT OF ORGANIC AGRICULTURE IN RUSSIA AND SEPARATE EUROPEAN COUNTRIES IN 2014**

Indicators	The Russian Federation	For reference:			
		Ukraine	Poland	Germany	Sweden
Area of organic agricultural land, thous. ha	245.8	400.8	657.9	1,047.6	501.8
Proportion of organic land in the total area of the country's agricultural land, %	0.1	1.1	4.6	6.3	16.7
Supply of population with organic farmland, ha/1,000 people.	1.7	9.4	17.3	12.8	51.7
Number of organic agricultural producers, ea.	68	182	24.829	23.398	5.406
Volume of retail sales of organically produced products, mln euros	120	15	120	7.910	1.402
Average retail sales of organically produced products per capita, euros	0.8	0.4	3	97	145
Proportion of sales of organically produced products in the total volume of sales of food products, %	0.4		0.2	4.4	6.0
Degree of organic legislation development	In process	Fully developed and operational			

The total supply of population with agricultural land per 1,000 people is 1,504 ha in Russia and 309 ha or 4.9 time less in Sweden, while the supply of organic farmland is contrariwise: 30.4 times less in Russia than in Sweden.

As of 2014, there were 2,260.4 thous. producers of organic (green) products in the world, of which 339.8 thous. were in Europe. According to the data of the Russian organic agriculture union in Russia, there are only 68 manufacturers engaged in organically produced products, 36 companies are in the process of moving to a new format, 2 organizations are exporters and 120 retailers. As you can see, their number is incomparable with other countries listed in the table. In the absence of Russian certification centers the manufacturers obtain the organic status according to European and Chinese standards. The production manufactures is forage wheat, corn, spelt, sunflower seeds, brown linen, gingelli, soybean, barley, rye, farry etc. Simultaneously, according to the data of Russian Agriculture Ministry the most part of the Russian organic production present in the Russian market (about 98%) is not such ion reality.

Currently, a growth of organic production market in the world in observed. The demand grows faster than the production does. The most consumption of organic products is noted in USA and EU; manufacture in these countries grows slowly, due to resource limitations. Manufacture in Mexico, Turkey, India grows but the internal consumer demand is low. For Russia the organic agriculture is still a young manufacture sector and state standards in the organic agriculture field have been ratified only in 2016. The percentage of Russian organic production in the world market is low.

The turnover of the market for organically produced products in Russia in 2014 amounted to 120 mln euros or 0.8 euros per capita, which is only 0.4% of the total food market. For comparison: these indicators are respectively 66, 121 and 11 times higher in Germany.

According to data from [www.dietolog.org](http://www.dietolog.org), despite such small current volumes of organic agriculture in the Russian Federation, the country has a great potential for its development, namely: 20% of the world's fresh water reserves, 9% of the world's arable land, 58% of the world's reserves of black earth, 28 mln ha of agricultural land that has not been treated with

chemicals for a long time (for comparison: the world organic farming has a total area of 43.7 mln ha) and the low cost of agricultural labor.

The potential market for organically produced products in Russia, with population of 146.4 mln people, should also be taken into account. According to the research "High-quality economy" of ROMIR (Research Rethink React), Russians pay increased attention to the quality of products and the demand for organically produced products is growing: 56% of respondents are ready to pay more for them and 46% of respondents are ready to pay more for products without GMOs. The potential market of organically produced agricultural products for Russia is estimated at 700 bln rubles. Besides, the country has an advantageous geographical location for the production and export of green products. However, over 90% certified organic production in Russia is imported. There is no exact data on the issue of import and export of organic production, because no such statistics is carried out in the Russian Customs Service. Most of organic products in Russia are imported from the EU countries, Germany, France and Italy. The imported certified production is mostly realized in Moscow and St. Petersburg.

According to expert estimates, Russia may occupy 10-15% of the world market for organically produced agricultural products by 2020 in case of the active development of organic production and creation of a civilized market. This is possible in case of solving a range of problems, the most important of which, according to the Executive Director of the Union of Organic Agriculture of Russia Lubovedsky (2013) is the lack of legal framework and a system of generally accepted certification. With the adoption of the regulatory framework in the field of organic agriculture, a number of certified producers of organic agricultural products may exceed 15 thous. with the creation of 750-1,000 thous. new jobs in the village with a high level of income.

## DISCUSSION

Despite the fact that Russia has deep historical traditions of conducting agricultural production in "harmony with nature", laid down by the famous Russian scientists (Bolotov, 1833; Vilyams, 1939), which are still preserved in the households, there is a lack of modern scientific and practical research in the country and lack of training of specialists in organic farming, which leads to a deficit of competent specialists, consultants and stations for consultation, which are necessary for active development of this sector of agriculture. Only in 2016 an Institute of Organic Agriculture has been created in Moscow and within its scope consultations are being carried out on using ecoagrotechnologies and seminars on organic agriculture but still the entire complex of scientific and practical problems has not been studied. In Russia there is no system for collecting and processing information about organic agriculture which could have simultaneously rendered information and consultation aid to all parties of interest. Today almost all Russian scholars studying the issues of organic agriculture and its development are of the opinion that the obstacle to the development of organic agriculture, other than those listed above, is the lack of state support compensating for a large part of the cost of organically produced products, which is associated with additional costs for conversion (transition to a new management system takes at least 3 years), certification of the entire technological process flow, more expensive natural fodders and fertilizers, more manual labor, lower yields due to the exclusion of technologies for intensification of production of agricultural products, a complex logistics system due to a short shelf life, etc. Due to subsidized production, organically produced products become 30-50% more expensive and are affordable for the

general population. In Russia, difference between traditional and green products ranges from 50 to 650% (Shvanskaya, 2014).

Russia's leading agrarian academics (Altukhov, 2013; Nechaev, 2013; Porfirev, 2013; Sokolova, 2013; Mikhailushkin, 2013; Taran, 2013; Zakrevsky, 2011; Repeshov, 2011; Sokolova, 2012; Kundius, 2015; Voronkova, 2015) formulated the necessary measures of state regulation for the development of markets for organically produced agriculture products, including:

1. Adoption of a general concept for the development of the market for organically produced agricultural products;
2. Adoption of federal laws on organic agriculture and regulation of markets for organically produced products;
3. Establishment of a special center for standardization, accreditation of certification authorities and monitoring of the organic market condition;
4. Financial, information and marketing support of producers of organic products.

The authors of the paper have early studied the problem of increasing competitiveness of Russian agriculture territories due to application of organic methods of agriculture. A necessity of developing a system of state influence means on development of organic agriculture in the fields of manufacture, regulation, exchange and consumption has been proven and efficiency of these would severely affect the vector of further development of Russian rural territories, competitiveness of the Russian goods on the international market, providing food safety realization of the universal right for quality and safe foods (Kovalenko, Polushkina & Yakimova, 2017).

Taking into account the position of Russia at the initial stage of establishment of organic agriculture and the priority so far given by the state to large-scale intensive production, as well as the multifaceted foreign practice, the country can develop this segment of the agrarian economy in a short time, provided there are active targeted and consolidated actions of the state, business and the community involved. In the country it is necessary to form a system for strategic management of the development of organic agriculture, where the priorities should be changed and the set of currently limited funds should be substantially expanded. Its key elements have been reflected in the conceptual model of the development of organic agriculture are shown in Table 2 proposed by the authors.

<b>Table 2</b>			
<b>CONCEPTUAL MODEL OF THE FORMATION OF ORGANIC AGRICULTURE (OA) IN RUSSIA</b>			
<b>Federal level of state administration</b>			
Establishment of the OA legal framework: laws (with the necessary amendments to the current legislation), national standards, technical regulations, etc.	State support for the OA development through budgetary payments (subsidies, compensations), preferential loans and taxation.	Creation of the system of certification authorities and control over the technology of organic production and its quality with the participation of international organizations and auditors.	Arrangement of scientific research and training of personnel in organic agriculture in specialized research institutes, state universities and colleges.
<b>Regional level of state administration</b>			
Adoption of laws on OA, creation of registers of producers of organic products, definition of	Development and implementation of programs for the OA development, including the definition of	Establishment of accredited certification centers, approval of requirements for	Creation of centers for informatization, consulting and marketing support of organically produced

authorized bodies for regulating activities in the field of OA.	areas for organic production placement, support measures and terms.	production, processing, labeling and sale of organically produced products.	products.
<b>Producers of organic products</b>			
Assessment of conditions for the organization of production of organic products: ecological condition of the territory, land, productive capacity and markets.	Development of a business plan for the production of organic products, preparation of the paperwork and application to the certification authority to confirm the organic status.	Organization of production of organic products in accordance with organic principles, national and international standards.	Joining associations (unions), cooperatives of producers of organic products in order to optimize the marketing and sales system, pass certification and receive services.
<b>Consumers of organically produced products</b>			
Informing about organic products through the mass media, popular science and popular editions combined with the promotion of healthy lifestyle.	Arrangement of state and municipal procurement for social institutions, children's and therapeutic nutrition.	Setting up a system of trade via branded shops and online stores of green products.	
<b>Objective is to improve the living standards of population by health promotion through nutrition with green and safe products and environmental improvement</b>			

In our opinion, formation of organic agriculture in the country requires the establishment of legal, institutional and financial conditions. A mechanism for state regulation of the OA development at the state, regional and local levels is to be developed, by identifying the sectorial (product) and instrumental component of support. An example is the support of organic agriculture within the Common Agricultural Policy of the European Union, which is carried out as direct payments per 1 ha to producers from the EU budget and indirect support measures in the form of assistance in certification, provision of information and consulting services, funding of research and environmental protection measures co-financed from the budget of EU members and individual countries. The size of subsidies for development of organic agriculture in the EU countries varies from 7 to 314 euro per ha, i.e. by almost 45 times. Average EU government spending amounted to 163 euros per 1 ha (Sanders, Stolze & Padel, 2011). In Russia, they do not exceed 20 euro per ha across all funding areas, which is almost 10 times less than the average European level.

Agricultural producers of various sizes and legal statuses are the core of the system of organic agriculture. Small businesses (peasant (private) farm holdings, private entrepreneurs and private farm holdings of population) are closer to green farming by virtue of tradition and lack of funds for chemicals, but it is more difficult for them to undergo the certification procedure and have reliable distribution channels. For example, the cost of bio certification starts at 700 euros in the case of the supply of products to the Russian bio market, 1,200 euros in the case of the supply of products to the EU bio market (with Eco Control LLC) and 3,000 euros in the case of involvement of foreign inspection organizations (Khodus, 2013). Besides, it is important for this category of producers to develop knowledge and skills of conducting an organic land use system, as well as the availability of practical guides and handbooks on the organic production technology. Large agricultural organizations that apply intensive technologies with extensive use of chemicals can implement a partial transition to organic farming by attracting unused arable and fallow lands and lands of the redistribution fund, provided that it is possible to cultivate green products on them. These organizations need to adopt environmental management in order to obtain the status of an organic producer. Taking into consideration the production scale and

the high qualification level of management and specialists, businesses can focus on accessing foreign sales markets.

According to Voronkova (2014), the formation of a system for promoting green products through advertising, round tables, exhibitions, fairs, competitions, coverage of successful activities of domestic and foreign agricultural producers of organic products in the media and on an agricultural site is relevant for the country. It will allow both to expand the number of organic producers and to form a reliable segment of consumers of green products.

Thus, the establishment of a segment of organic agriculture in Russia can encourage the growth of the country's economy, improvement of living standards and sustainable development of rural areas, creating additional jobs and increasing the incomes of the rural population. The formulated proposals were discussed and approved at the All-Russian research-to-practice conference "Russian Economy in the Conditions of New Challenges of the Modern Epoch" held at the National Research Ogarev Mordovia State University (Saransk, 2017).

## CONCLUSION

As part of the concept of sustainable socioeconomic development in balance with the environment, put forward by the UN's World Commission on Environment and Development and formulated in the report "Our Common Future" (Report of the World Commission on Environment and Development, 2008), organic farming is developing at a rapid pace in many countries. Russia still gives priority to ensuring food security through the physical and economic accessibility of food products for population, i.e. the focus is on increasing food production volumes through intensification of the key agricultural sectors. A country that has rich natural resources holds unacceptably low positions in the production and turnover of organically produced products. This situation, in our opinion, can be changed through the formation of an appropriate state policy including legislation, targeted programs Russian standards harmonized with foreign ones, a system of measures to certify companies and products, support organic producers, as well as research and education in organic agriculture. If these conditions are met, Russia can take one of the leading places in the world in the production of green and safe food products. A complex approach in achieving these aims has found a reflection in the conceptual model of forming an organic agriculture in the country proposed by authors.

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