Caspian Journal of Environmental Sciences
Online ISSN: 1735-3866
Print ISSN: 1735-3033

Prospects for the development of organic animal husbandry in the Russian Federation

Yusupzhan A. Yuldashbaev, Anna P. Olesyuk*, Nadezhda A. Sergeenkova

Russian State Agrarian University – Moscow Timiryazev Agricultural Academy, 49 Timiryazevskaya St., Moscow, 127434, Russian Federation

* *Corresponding author's E-mail: olesyuk@rgau-msha.ru*

ABSTRACT

Increased interest in a healthy lifestyle stimulates the growth of consumption of organic products, which makes the development of organic agriculture a priority in Russia. As part of the strategic plan for scientific and technological development of the Russian Federation, a transition to highly productive organic agriculture is planned for the coming years. According to the FIBL Institute, the global organic market is estimated at 230 billion US dollars with an annual growth rate of 7-8%. About 187 countries are engaged in the production of organic products. Organic livestock farming, being a key component of organic agriculture, implies compliance with special conditions for keeping, breeding and feeding animals using humane methods and without the use of synthetic substances, antibiotics and hormonal drugs. In the organic product segment of the Russian Federation, dairy and meat products account for 9%. Organic milk production in 2021 amounted to 17,275 tons, which is equivalent to 0.05% of the total milk production in the country. Organic producers are required to meet higher requirements, which has led to the development of Russian and international standards regulating technological processes and the quality of final products. In accordance with the Strategy for the Development of Organic Production in the Russian Federation, by 2030 the share of organic products should reach 5% of the global agricultural market. The Russian Federation has significant land and labor resources, which creates favorable conditions for increasing the volume of organic livestock production.

Key words: Organic livestock farming, Organic products, Enterprises, Standards, Principles of organization
Article type: Perspective.

INTRODUCTION

The organic sector in the global food market is showing dynamic growth due to the increasing interest in a healthy lifestyle and responsible nutrition (Boora *et al.* 2021). Environmentally friendly products certified as organic require fundamentally new methods of organizing production (Rana & Paul 2020; Sugar & Brscic 2020). According to estimates by the Institute of Organic Agriculture (FIBL), the international organic market is valued at $ 230 billion and is growing by 7-8% annually (Fund for Support of Organic Producers 2024). According to the planned development strategy, the organic market is expected to grow to 5% of the global agricultural market by 2030. About 191 countries with more than 750 thousand organic farms are engaged in the production of environmentally friendly products (Bykov *et al.* 2024). The leading producers of organic products are Australia, China, Argentina, USA, Germany and France (Konovalenko *et al.* 2021). In the European Union, since 2000, organic livestock farming must comply with the Animal welfare criteria established by EU Directive 2018/848 (European Parliament 2018). These criteria include: humane maintenance that meets the behavioral needs of animals and guarantees a high level of welfare; breeding and using animals in conditions as close to natural as possible; prevention of stress associated with feeding and keeping animals; exclusion of feed antibiotics from the diet; prohibition of tail docking, beak trimming, forced molting, as well as requirements for humane slaughter of

Caspian Journal of Environmental Sciences, Vol. 23 No. 3 pp. 771-780 Received: Nov. 06, 2024 Revised: Feb. 14, 2025 Accepted: April 22, 2025
DOI: 10.22124/cjes.2025.8955

Publisher: University of Guilan

animals. In the early 19th century, Russia's organic market was about EUR 16 million solely due to imports; today it has reached 200 million Euros, with 30–35% accounted for by domestic certified products. As for the export of organic products from Russia, according to FIBL, in 2023 it was 55 thousand tons, which in value terms is estimated at 1.5 billion rubles (Fund for Support of Organic Producers 2024). The plan for the development of organic production presented in March 2021 provides for a 25% increase in the volume of organic products by 2030, with funding through specialized government programs and subsidies (Union of Organic Farming 2021b). Increasing consumption of organic products has a positive impact on public health. Studies show that among people who actively consume organic products, there are fewer cases of infertility, birth defects in children, allergies, cancer, cardiovascular diseases and strokes. The COVID-19 pandemic has also played an important role in increasing the demand for organic products, which are often seen as a source of "natural immunity". In accordance with the strategic plan for scientific and technological development of Russia, the priority direction in agriculture by 2030 is the production of environmentally friendly products (Government of the Russian Federation 2023). Organic livestock farming technologies fully align with this scientific strategy. Federal Law of 03.08.2018 No. 280-FZ "On Organic Products and Amendments to Certain Legislative Acts of the Russian Federation" defines organic products as environmentally friendly agricultural products that meet the required production parameters (State Duma 2018). These requirements provide for a ban on the use of agrochemicals, pesticides, antibiotics, growth promoters and animal fattening, hormonal drugs, with the exception of those permitted by standards, as well as the rejection of embryo transplantation, cloning and the use of genetic engineering methods. Confirmation of product compliance with organic standards is carried out through voluntary certification.

MATERIALS AND METHODS

The data for the article were obtained during an internship in 2024 at Savinskaya Niva - EkoNiva-APK Holding. Additionally, an analysis was carried out of the Unified State Register of Organic Product Producers and of regulatory documents governing various issues in the agro-industrial complex of the Russian Federation.

Organic production in Russia

Today in Russia, according to experts, for small enterprises that are unable to compete with leading agricultural holdings, the production of organic products is the main opportunity that will allow them to occupy their niche in the country's food market due to the high quality of environmentally friendly products (Zhevora *et al.* 2021). A distinctive feature of Russian certified organic producers is their strong commitment to the "organic idea," that is, a responsible approach to the production of high-quality organic products. Nevertheless, many producers receive government subsidies and also have the right to set an appropriate price range that allows them to sell their products profitably. In Russia, as in European countries, organic producers mainly grow crop products (30%), as well as fruits, vegetables, berries (21%; Bykovskaya *et al.* 2021). Dairy and meat products account for 9% (Fund for Support of Organic Producers 2024). The ratio of organic products on the Russian market is presented in the diagram (Fig. 1). About 70% of companies (farms) supply goods to the domestic market while large crop producers mainly work for export. Organic livestock farming, being the most important component of organic agriculture, includes humane maintenance, feeding with plants grown without the use of agrochemicals and pesticides, breeding, as a rule, only natural mating. No growth stimulants or synthetic chemicals are used for animals. This ensures the production of environmentally friendly, high-quality, and safe dairy and meat products compared to conventional farming. The history of the emergence of organic livestock farming began in the 1920s, and over the course of a century, technologies that enable compliance with eco-standards have advanced significantly. Of course, at the first stages, our country often had to adopt the experience of foreign countries, carefully study organic production technologies and standard requirements. However, today Russia has its own scientific and production base, which allows for the expansion and modernization of this area within the agricultural sector. Since 2020, the Ministry of Agriculture of Russia has been maintaining a unified State Register of organic enterprises certified according to GOST 33980-2016 (Interstate Council on Standardization, Metrology and Certification 2018). The market for organic dairy products is developing actively. Milk production is the fastest growing segment of the organic sector, with the amount of organic milk increasing by 50% annually. In 2021, certified producers received 17,275 tons of organic milk, including 11,229 tons of drinking milk (Government of the Russian Federation 2023). The profitability of processing such milk is beyond doubt, making it a highly attractive area of organic animal husbandry from an investment perspective (Gnezdilova & Pozyabin 2020). The Russian registry as of February 4, 2025, contains 242 enterprises producing organic products (Union

of Organic Farming 2025a) and this number is growing rapidly every year. Table 1 presents the leading enterprises engaged in organic livestock farming.

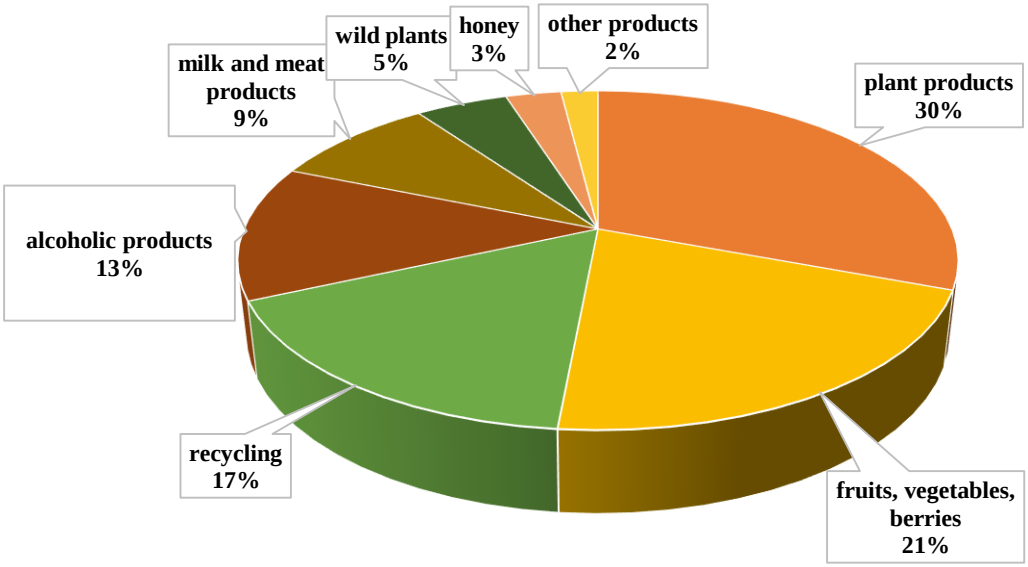

Fig. 1. Russian organic producers by type of activity (for 2023).

Each enterprise has its own unique path to transformation into an organic farm. The largest number of farms producing organic livestock products are located in the Kaluga and Yaroslavl regions. Obviously, this is due to favorable climatic conditions, as well as regional support for organic producers.

Organic cattle breeding

Among the leading enterprises are Savinskaya Niva LLC (EkoNiva brand; Kaluga region) and Ecofarm Jersey LLC (brand "Stories from Bogimovo", Kaluga region). Currently, both farms have international certification according to the organic standards of the EU countries (European Union 2018) and the USA (USDA ORGANIC). The main principles of organizing organic animal husbandry can be illustrated by the example of Savinskaya Niva LLC (Mosalsky district, Kaluga region), where active scientific research is conducted on studying and implementing organic animal husbandry technologies. The enterprise began operations in 2010, and from 2012 to 2015 the farm underwent a number of changes, moving from traditional farming and livestock farming to organic farming. Savinskaya Niva LLC has confirmed its authority in the Russian organic market and is now capable of producing organic products on a large scale. The area of agricultural land managed by this farm is 6,000 hectares. The total number of cattle at the enterprise is 540 heads, over 360 of which are dairy cows fed on fodder. Daily milk yields reach about 5 tons. The main standards governing organic livestock farming exceed the requirements of conventional livestock farming in all respects: breed, maintenance and feeding of animals, handling them (Fig. 2). Traditional methods of feed preparation and using feed additives are not acceptable in organic animal husbandry (Nasatuev 2008). The primary goal is the humane keeping of animals in conditions as close to natural (pasture-based) as possible. Using synthetic feed additives and artificial insemination are prohibited in organic livestock farming, which contribute to maintaining animal health. Unlike traditional livestock farming, where the main emphasis is on maximizing productivity, the organic approach prioritizes animal welfare. These formed the basis for the development of standards and requirements for environmentally friendly livestock production.

Key principles of keeping in organic livestock farming include: freedom of movement, access to natural light and warmth, social interaction (avoiding isolation and overcrowding), availability of rest areas (mud baths, play and exercise areas) and sleeping areas, as well as provision of balanced nutrition, clean water and conditions for natural reproduction. Not all feeds that are allowed in traditional livestock farming can be used in organic farming.

Table 1. List of leading agricultural enterprises of the Russian Federation included in the Unified State Register of Organic Product Producers.

Company	Region	Specialization	Certifying organization
EU countries certified according to international organic standards (Regulations 848/2018, 889/2008) and USA (USDA ORGANIC)			
Savinskaya Niva LLC	Kaluga region	Milk, wheat, winter wheat, peas, dairy cows, spelt, barley, pasture/pastures, oats, meadow, buckwheat, oat mix and peas, slaughter and dressing, cattle, rye	Kiwa BCS
KFH Nova Russa	Novgorod region	Livestock and poultry farming (260 ha – poultry, eggs, lamb)	Kiwa BCS
Jersey Eco Farm LLC	Kaluga region	Dairy Farming	Control Union
Agrofirm Ostrozhka	Perm region	cattle breeding, production of premium quality dairy products, certified organic crop production	Ekoagros
Limited Liability Company History in Bogimovo	Kaluga region	Dairy Farming	Control Union
Remit LLC SIA «Meat processing factory Remit»	Moscow region	Beef, deep frozen, beef cuts, deep frozen	Kiwa BCS
Certified according to the interstate standard GOST 33980-2016 "Organic production products. Rules for production, processing, labeling and sales" (for the Russian market)			
Savinskaya Niva LLC	Kaluga region	Milk, cattle, green mass, grain mixture, winter rye, hay, haylage, barley, oats, peas, clover, wheat, corn	Russian Quality System
Jersey Eco Farm LLC	Kaluga region	Milk, cattle, hay, haylage, green mass, grain mixture, straw	Organic Expert LLC
AgroNova JSC	Krasnodar region	Raw cow's milk, cattle	Russian Quality System
Ecofarm Ryabinki CJSC	Moscow region	Milk, dairy cattle, kefir, fermented baked milk, yogurt, cottage cheese, sour cream, cream, butter, cheese, eggs, flour, veal	Russian Quality System
Breeding farm Rassvet JSC	Smolensk region	Milk, cattle, alfalfa, clover, annual forages, perennial grasses, oats, wheat	Russian Quality System
Agrofirma Knyazhevo LLC	Yaroslavl region	Milk, cattle, oats, wheat, green mass, perennial grasses, spring triticale, beans, hay, haylage, silage	Organic Expert LLC
Agrofirm Farmer LLC	Yaroslavl region	Milk, cattle, oats, green mass of perennial grasses, beans, hay, haylage	Organic Expert LLC
Shulgino LLC	Moscow region	Cattle, dairy products, bread and baked goods, drinks, meat and sausages, poultry meat, eggs	Russian Quality System
KFH Nova Russa	Novgorod region	Livestock and poultry farming (260 ha – poultry, eggs, lamb)	Organic Expert LLC
Parisar LLC	Samara region	Production of organic chicken eggs, broiler and laying hens meat (1200 tons of broilers, 11000 tons/piece of chicken eggs)	Organic Expert LLC
Individual entrepreneur (peasant farm) Zhgun Oleg Ilyich	Krasnoyarsk region	Plant growing; Dairy cattle; Beef cattle; Poultry farming Collection and processing of wild plants	Organic Expert LLC
State Farm Enterprise Khramtsova V.V.	Oryol region	Colored chicken eggs (600 pcs per day)	in accordance with the principles and standards of organic agriculture
SPK "EcoKhutor"	Oryol region	Quail eggs (packaging from 10 pcs to 50 pcs)	Organic Expert LLC
LLC "Agrofirm Khrustali"	Kaluga region	Breeding and growing turkeys, turkey hens and turkey cocks and domestic hens and roosters, production of poultry meat	Organic Expert LLC
Private household farm "ARRA"	Oryol region	Poultry meat	Russian Quality System
Farm YAchmenka - IP Stetsky Dmitry Leonidovich	Ivanovo region	Poultry meat, eggs	Russian Quality System
Ecofarm "Vyukhovo"	Moscow region	Poultry farming, large and small cattle, pigs. Production of meat, stewed meat and dairy products (milk, fermented milk products, various cheeses), chicken eggs	Russian Quality System

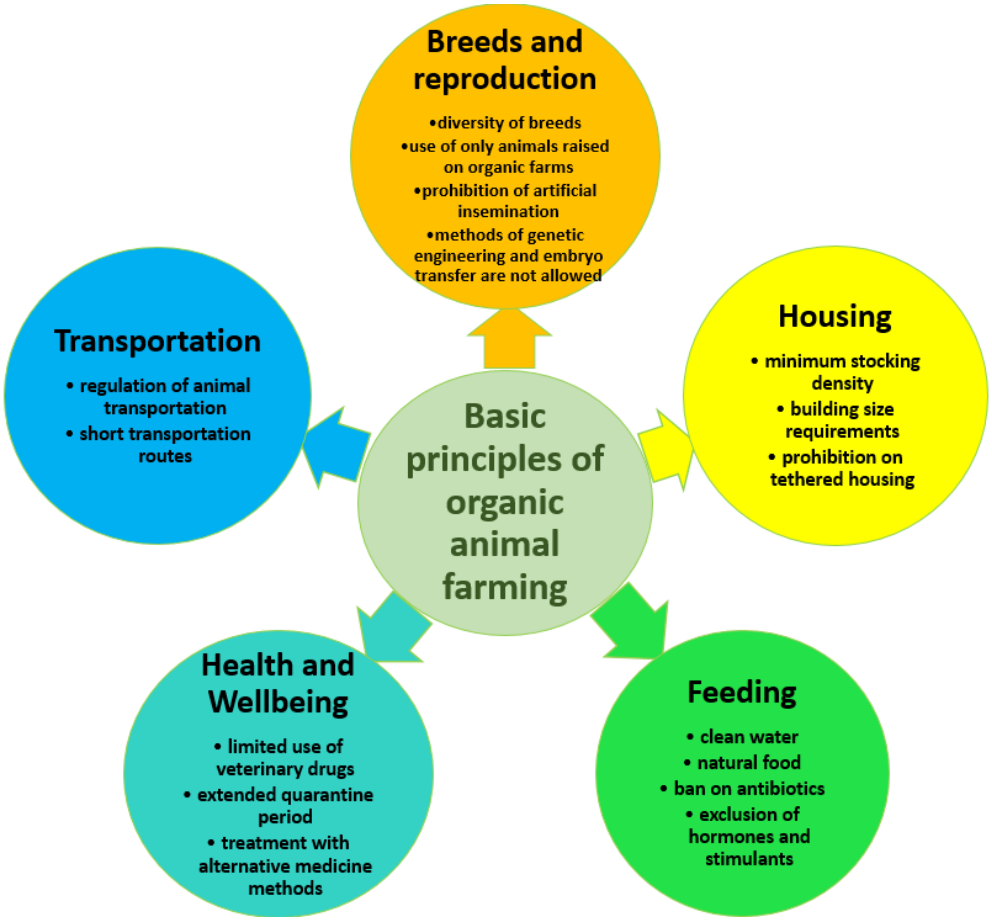

Fig. 2. Basic principles of organizing organic livestock farming (complited by authors).

This approach allows animals to exist in harmony with themselves and the environment. Conveyor systems or scraper units are used to remove manure. Optimal conditions are ensured by deep bedding, which is periodically refreshed and cleaned. This minimizes injuries and diseases, emphasizing the strengthening of animals' natural immunity. Synthesized amino acids, synthetic growth stimulants and hormones, as well as mineral fertilizers for growing fodder crops are prohibited. Ecological feeds generally contain significantly lower levels of digestible protein and essential amino acids. Therefore, to properly formulate balanced rations, homegrown feeds from the enterprise's own agricultural lands are tested for their energy feed units (EFU) content. The main components of a proper ration include grains, legumes, grasses, leaves, and root crops. In organic animal husbandry, more than 50% of feed must come from the farm's own production, and herd size must match the farm's fodder production capacity. All animals must have sufficient water and mineral intake. A lack of water drastically reduces feed digestibility and worsens animal health. Wet feed (grass and root crops containing 80-90% water and silage: 65-70%) plays a major role in ensuring the normal water balance of the body.

At an air temperature of +10 °C, the need of ruminants for water is 2-3 litres per 1 kg of dry matter of feed, at a temperature of +30 °C the need increases 3 times, lactating animals need an additional 0.87 litres per kg of milk. It is especially important to ensure that animals have unlimited access to clean water. A fundamental feature of organic livestock farming is on-farm breeding. Artificial insemination is only used in exceptional cases; typically, animals reproduce naturally (natural mating). Genetic engineering methods and embryo transfer are not allowed. One bull services 20–25 cows. Bull sperm activity in organic systems must be at least 92%, and sires are tested quarterly for *Chlamydia*. The acquisition of animals for herd repair and prevention of inbreeding from non-organic enterprises is strictly regulated and only in accordance with the 2003 ECO-EU regulation. Renewal of producer bulls on organic farms is carried out at least once every 2 years, for this it is necessary to transfer or buy producers from other organic enterprises. Attention is paid to the similarity of natural conditions to minimize stress and ensure rapid adaptation. All these measures aim to maintain animal health and prevent epizootics. The productivity and health of animals directly depend on the interaction of the organism with the environment, freedom from diseases. Using veterinary drugs on organic farms is limited. The possibility of minimizing the use of drugs is

created due to the conditions of proper feeding, housing and care of animals. The pasture period is fundamental in organizing proper animal husbandry. In spring, animals are first adapted to fresh grass (for one to two weeks) before being taken to pasture. Pasture areas are equipped with shelters to protect from sun, wind, and rain. Pasture biomass must meet the needs of animals of all age groups. In organic systems, 1 hectare of pasture land is allocated per 2 head of cattle. After grazing, pastures are restored by mowing remaining green mass within two days, applying organic fertilizers (manure), and returning animals after 27 days. Clean drinking water should always be available in sufficient quantities. Despite correct feeding, housing, and disease prevention, including against endoparasites, animals can still fall ill. In some cases, alternative medicine methods are used: neurotherapy, acupuncture, various types of massage, logotherapy, bioresonance, music, magnetic and ozone therapy, and homeopathic preparations.

A special group can also be distinguished - phytogenic feed additives (basil, cloves, cinnamon, oregano, thyme, rosemary, sweet chestnut), inhibiting the proliferation of pathogenic microorganisms, minimizing the risks of intestinal disease, providing an anti-inflammatory effect on the mucous membrane of the gastrointestinal tract, improving palatability and taste of food, increasing stress resistance and immunity of the body. The widespread use of probiotic preparations is one of the methods of carrying out preventive measures to prevent animal diseases. Most often, they are used for young animals in order to ensure the correct formation of intestinal microflora. In severe cases, the use of chemical veterinary drugs is allowed by prescription from a veterinarian. After treatment, the animal is kept in quarantine (excluded from organic production) for a period twice as long as specified in the drug's instructions.

Organic poultry farming

The development of the organic poultry farming sector, alongside increasing poultry meat production volumes and saturating the domestic market, also prioritizes diversification of the product range and support for small-scale production. When analyzing the existing types of agricultural enterprises – agroholdings or small farms – it is important to understand that under modern market conditions, synergy and coexistence of different forms are necessary, rather than opposition. Such diversity makes it possible to expand the range of poultry products, create offerings for all price segments (premium, mid-range, economy), and thus maximize demand both in domestic and foreign markets.

The main requirements for organic poultry farming include: the use of chickens from organic farms, feeding exclusively certified organic feed, excluding animal by-products from the diet, providing birds with sufficient space to move, maintaining sanitary standards in poultry houses, as well as a ban on the use of antibiotics, growth stimulants, hormones and GMOs (genetically modified organisms). The key aspect of organic production is to provide an environmentally safe and comfortable environment for raising chickens and obtaining organic products. To obtain organic certification, chickens must be of exclusively organic origin. Young stock is either purchased from local organic farms or certified eggs are bought for in-house incubation.

Growing chickens requires the creation of special conditions: equipped resting areas, stable heat, constant access to fresh drinking water and specialized organic feed containing all the necessary nutrients to support growth and development. "Starter" feed for organic chickens is allowed only in the first 12 weeks. After 4-5 months, chickens must have the opportunity for free-range outdoor access (Konstantinov 2022). Organic standards prohibit keeping chickens in cramped cages or confined spaces. The design of livestock buildings must meet the natural biological needs of birds and ensure stress-free conditions (Table 2).

Table 2. Stocking density, area of livestock buildings, size of walking area.

Type of buildings	Inside buildings		Outside the buildings (for outdoor access)
	Stocking density (heads m^{-2})	Maximum live weight (kg m^{-2})	Area (m^2 $head^{-1}$)
Fixed buildings	10	21	4 (chickens and guinea fowl) 4.5 (ducks) 10 (turkey) 15 (geese)
Movable buildings	16	30	25

The poultry is kept on a solid floor, with sawdust or straw used as bedding material. Manure is collected across the entire floor area. The area of the poultry house should be sufficient for free movement during the day and for satisfying natural needs: running, plucking grass, hunting for insects. In addition to outdoor access, birds require shelter at night and in bad weather. A night rest period of at least 8 hours is ensured by switching off artificial lighting. The henhouse must be spacious, with separate areas for roosting and laying eggs. Good ventilation and lighting are essential to maintain bird health, especially since they are sensitive to clean, fresh air. When choosing breeds and species of animals for organic production, it is important to consider their adaptation to local conditions, vitality and disease resistance (Interstate council on standardization, metrology and certification 2018). The choice should be aimed at preventing specific diseases and health problems characteristic of some high-intensity production breeds. Preference should be given to local breeds and species that are better adapted to the rearing conditions. For example, at LLC “Parisar” in the Samara region, Naked Neck, Foxy Chick, Master Grey, and Redbro M breeds are used. "Redbro M" is a meat four-line cross of chickens developed by the French company Hubbard SAS by crossing roosters of the Hubbard Redbro cross (lines Hubbard A and B) with hens of the Hubbard Redbro M cross (lines Hubbard C and D). The cross is officially registered in the State Register of Breeding Achievements approved for use in the Russian Federation since 2018. The chicks have a fawn-colored down and are feather-sexable: cockerels feather more slowly than pullets. According to the manufacturer, by day 63 broilers achieve the following performance: survival rate 94.0%, live weight 2.71 kg, feed conversion ratio 2.34 kg of feed per kg of live weight, dressing percentage 69.7%, and breast yield 15.3% (Konstantinov 2022). Unlike conventional broilers, the meat of Redbro M chickens has a yellowish skin tone, denser texture, excellent taste qualities, and produces a fragrant broth. Feed for organic poultry farming is prepared independently from purchased ingredients and stored in a special room. Compound feed must consist of 95% organic grains. The remaining 5% may include non-organic additives such as limestone meal, natural chalk, and salt. All grain components must comply with organic production standards, meaning the supplier must hold a certificate of conformity (Interstate council on standardization, metrology and certification 2018). Adding meat and bone meal and various premixes to feed is prohibited. Feed for laying hens contains more proteins and calcium to form strong eggshells, while feed for broilers raised for meat is more nutrient-dense for efficient muscle mass gain. Feeds may be enriched with natural vitamins and minerals. Ready-made organic mixes of whole grains (wheat, corn, and oats) with added high-protein crops (alfalfa, seaweed, flaxseed, and sunflower seeds) are available on the market. In organic poultry farming, which is focused on preventing diseases by creating healthy conditions, the incidence of chicken diseases is lower than in industrial poultry farming.

The causes of diseases in industrial poultry farming are crowding and intensive rearing, which is excluded in organic production, where sanitary standards are observed, sound environment is regulated, pasture rotation is practiced to prevent pests, and balanced nutrition is provided. If birds become ill, they are immediately isolated and treated with products permitted by organic standards. The specifics of organic poultry farming lead to a higher price range for its products compared to conventional ones. Naturally, this directly affects consumer preferences. If the price of organic products does not exceed 10-25% above the average price of industrial goods, consumer willingness to purchase rises to 60%. For the development of organic poultry meat production in Russia, a set of measures is needed, including legislative regulation (law on organic products, technical regulations, and national standard). Despite efforts, the volumes of organic poultry and egg production remain low, forcing producers to use marketing strategies such as certification under halal and kosher standards. It is important to consider risks related to food safety and possible national recalls, which could undermine consumer trust in organic products. To combat counterfeiting and protect consumers, it is necessary to establish an industry regulation system, develop regulatory documents with requirements for the quality and safety of organic products, and implement a product traceability system at all stages of production. The main principle should be maintaining a balance between supplying the market with organic products, environmental well-being, and animal welfare.

Organic sheep farming

In organic sheep and goat farming, the transition period for pastures is 24 months. This period begins after the last conventional use of animals (grazing, and movement) as well as from the time of sowing annual crops. After 12 months without prohibited treatments, grass and shrubs are considered “feeds/feed materials” suitable for

organic livestock production (Morgera *et al.* 2015). Table 3 presents the conversion periods for pastures and the timeline for obtaining products compliant with organic livestock farming.

Table 3. Transition period for organic animal farming.

Elements of organic production	Transition period
Pastures	24 months
Dairy production	90 days during the period of implementation of new methods established by the competent authority, and then for a further 6 months
Meat production	12 months
Poultry meat production	10 weeks
Egg production	6 weeks

All animal products must come only from animals born and raised according to the principles of organic farming. Regulations that allow purchasing livestock only from organic farms are aimed at preventing any possible contamination arising from conventional farming practices. If young stock must be purchased from conventional farms, the maximum age at the time of purchase must not exceed 45 days for lambs and kids (immediately after weaning). One exception permits the annual purchase of up to 20% of female small ruminants from conventional farms if they are unavailable from organic farms, provided this is done before their first birth. Males leased from conventional farms may be used under certain conditions and with approval from the certifying body. In organic sheep and goat farming, there are restrictions on the use of feed that is allowed in conventional production. Synthetic amino acids, growth stimulants and hormones, as well as mineral fertilizers for growing feed are prohibited. One of the key requirements of organic livestock farming is the predominance of home-grown feed, the share of which should exceed 50%. Grains grown on the farm should supply concentrated feed and straw. Additionally, forage crops are introduced into crop rotation, including white and red clover. The use of artificially synthesized vitamins is not allowed.

Only vitamins derived from naturally occurring feed sources are permitted. During the winter period, a deficiency of vitamins A, D, and E may occur, as natural conditions (sunlight) and feed (the small amount of roughage in winter) cannot fully meet the animals' needs. Vitamins A and E are components of roughages. These synthetic vitamins may be administered to high-producing goats and sheep (dairy animals) with veterinary justification and approval from the inspection body. The maximum stocking density for sheep and goats raised under organic systems in EU countries is 13.3 head per hectare (Table 4). This is calculated based on the equivalent amount of manure produced, ensuring that nitrogen input does not exceed 170 kg N ha^{-1} (Morgera *et al.* 2015).

Table 4. Requirements for keeping sheep and goats in organic sheep and goat farming.

Animal species	Indoors (sheepfold, m^2 $animal^{-1}$)	Outdoor walking (m^2 $animal^{-1}$)
Sheep/goat	1.5	2.5
Lamb/kid	0.35	0.5

In Russia, organic sheep and goat farming is a poorly developed sector of animal husbandry, although there is resource potential to increase the production of organic milk and lamb. To stimulate the development of this sector in the Russian Federation, it is necessary to introduce state support measures for producers at both the federal and regional levels, and to include organic products in government procurement plans.

CONCLUSIONS

Currently, organic livestock farming is a dynamically developing branch of agriculture in the Russian Federation. Russia has large land and labor resources to increase the production volumes of organic livestock products. Today, organic products are predominantly handicraft goods – items produced in small batches, often manually, without the use of large-scale industrial facilities. The cost of such products exceeds that of the average price segment.

The price range between industrial and handicraft goods varies from 15% to 200% across different countries. Consumer preferences are directly influenced by the price gap between industrial and organic products. Given the current level of consumer awareness and existing price differentials, the willingness to switch to organic products is only about 7%. However, if the cost of organic products does not exceed 10-25% above the average cost of industrial goods, consumer willingness to purchase them increases to 60% (Fund for Support of Organic Producers 2024). In order to further develop organic livestock farming in the Russian Federation, it is necessary to form the following strategic indicators:

– application of alternative measures of state support for organic producers at the federal level;
– inclusion of organic products in the state procurement plan and their delivery to social institutions;
– revision of regulatory documents on organic livestock farming;
– expansion of marketing networks of biological products approved for use in organic livestock farming;
– improvement of technologies for obtaining highly nutritious feed and introduction of innovative methods of their processing;
– promotion of organic products on the Russian market through social advertising and agrotourism;
– development of educational and methodological recommendations for students of agricultural universities (in the field of training "Animal Science", specialty "Veterinary Science") on organic livestock farming.

REFERENCES

Boora, K & Sharma, V 2021, Value chain analysis of organic food industry: A worldwide review of empirical evidences. *International Journal of Value Chain Management*, 12: 357-369, https://doi.org/10.1504/IJVCM.2021.119399.

Bykov, AA, Khoruzhy LI & Zaruk NF 2024, Prospects for development of organic crop production and its impact on the ecology of the region. *Caspian Journal of Environmental Sciences*, 23: 343-354, https://doi.org/10.22124/CJES.2025.8706

Bykovskaya, NV, Poddubnaya, ZV & Sapegina, MV 2021, Organic agriculture in Russia - effective practices and scientific and technical developments. *Economics of agriculture in Russia*, 5: 59-62, https://doi.org/10.32651/215-59.

European Union 2018, Regulation (EU) 2018/848 of the European Parliament and of the Council of 30 May 2018 on organic production and on the labelling of organic products. Available at: https://fsvps.gov.ru/sites/default/files/npa-files/2018/05/30/2018-848.pdf.

Fund for Support of Organic Producers 2024, Review of the global organic market and the Russian market at the end of 2023. Available at: https://organicfund.ru/new/obzor-mirovogo-organicheskogo-rynka-i-rynka-rossii-na-konec-2023-goda.

Gnezdilova, LA & Pozyabin, SV 2020, Basic requirements for organic livestock farming and obtaining organic products. *Veterinary Science, Animal Husbandry and Biotechnology*, 5: 86-90, https://doi.org/10.26155/vet.zoo.bio.202005013.

Government of the Russian Federation 2023, Strategy for the development of organic production in the Russian Federation until 2030. Available at: http://static.government.ru/media/files/8tjynen7plvlfdqql6p3bharptcqw9aw.pdf.

Interstate Council on Standardization, Metrology and Certification 2018, Standartinform 2018: GOST 33980-2016. Organic products. Rules for Production, Processing, Labeling and Sale, Moscow, Russia.

Konovalenko, LYu, Mishurov, NP, Gridnev, PI, Korshunov, SA & Lyubovedskaya AA 2021, Organic animal husbandry: experience and development prospects, FGBNU 'Rosinformagrotech', Moscow.

Konstantinov, V 2022, Prospects for the development of organic poultry farming in Russia. Available at: https://agro-inform.ru/files/broshury/2022-organik_ch.pdf.

Morgera, E, Bullon, K, Gracia, K, Duran, M 2015, Organic agriculture and law. Food and Agriculture Organization of the United Nations, Rome.

Nasatuev, BD 2008, Organic animal husbandry, Buryat State Agricultural Academy named after V.R. Filippov, Ulan-Ude.

Rana, J & Paul, J 2020, Health motive and the purchase of organic food: A meta-analytic review. *International Journal of Consumer Studies*, 44: 162-171, https://doi.org/10.1111/ijcs.12556.

State Duma of the Russian Federation 2018, Federal Law of 03.08.2018 No. 280-FZ on organic products and on amendments to certain legislative acts of the Russian Federation. Available at: http://www.kremlin.ru/acts/bank/43456.

Sugar, T & Brscic, K 2020, View of consumers' perceptions of organic food products in Croatia, Srce.hr. Available at: https://hrcak.srce.hr/ojs/index.php/ekonomski-vjesnik/article/view/8636/5694

Union of Organic Farming 2021, The EU increases the area under organic agriculture by 25% by 2030. Available at: https://soz.bio/es-uvelichivaet-ploshhadi-pod-organiches.

Union of Organic Farming 2025, Unified state register of organic producers. Available at: https://soz.bio/edinyy-gosudarstvennyy-reestr-proiz-3.

Zhevora, YuI, Donetsky, DS, Lebedev, AT *et al*. 2021, *Organization of innovative activities in agribusiness*, Stavropol, Agrus Publishing House.

Bibliographic information of this paper for citing:

Yuldashbaev, YA, Olesyuk, AP, Sergeenkova, NA 2025, Prospects for the development of organic animal husbandry in the Russian Federation. Caspian Journal of Environmental Sciences, 23: 771-780.