

Artículo de investigación

Regional aspects of research of agricultural enterprises of ecological orientation

Региональные аспекты исследования сельскохозяйственных предприятий экологической направленности
Региональные аспекты исследования сельскохозяйственных предприятий экологической направленности

Aspectos regionales de investigación de empresas agrícolas de orientación ecológica

Recibido: 22 de agosto del 2019

Aceptado: 18 de septiembre del 2019

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Abstract

The article is devoted to the study of the economic phenomenon of eco-settlement in the regional economy. The author's interpretation of the concept of regional economy is introduced, the classification of regional farms according to a number of criteria is carried out. A new definition of eco-settlements is proposed. The classification of modern eco-villages is given. A number of new and traditional eco-settlements have been thoroughly investigated. The importance of eco-settlements for the economy, ecology and society is shown. The study was performed within the research work of the educational-scientific laboratory of regional economy cooperation and integration, agriculture, development of rural territories of the Belgorod state agricultural UNIVERSITY named after V. Gorin, supervisor-associate Professor R. V. Kapinos (in the framework of the agreement No. 6.9.30 of 28 March 2018.) in the framework of the internal grant of Belgorod state agricultural UNIVERSITY (order No. 202-3 from 18.04.19).

Аннотация

Статья посвящена исследованию экономического феномена экопоселения в экономике региона. Введено авторское толкование понятия региональной экономики, проведена классификация региональных хозяйств по ряду критериев. Предложено новое определение экопоселений. Дана классификация современных эко-сел. Ряд новых и традиционных эко-поселений были тщательно исследованы. Показана важность экопоселений для экономики, экологии и общества. Работа выполнена в рамках научно-исследовательской работы учебно-научной лаборатории регионального экономического сотрудничества и интеграции, сельского хозяйства, освоения сельских территорий Белгородского государственного сельскохозяйственного университета им. В. Горина, научного руководителя-доцента Р. В. Капиноса (в рамках договор № 6.9.30 от 28 марта 2018 г.)

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Key Words: Regional economy, eco-settlements, economy, ecology, definition, classification of farms, principles of eco-settlements.

в рамках внутреннего гранта Белгородского государственного сельскохозяйственного университета (приказ № 202-3 от 18.04.19 г.).

Ключевые слова: региональная экономика, экопоселения, экономика, экология, определение, классификация хозяйств, принципы экопоселения.

Resumen

El artículo está dedicado al estudio del fenómeno económico del eco-asentamiento en la economía regional. Se introduce la interpretación del autor del concepto de economía regional, se lleva a cabo la clasificación de las granjas regionales de acuerdo con una serie de criterios. Se propone una nueva definición de eco-asentamientos. Se da la clasificación de las ecoaldeas modernas. Se han investigado a fondo varios asentamientos ecológicos nuevos y tradicionales. Se muestra la importancia de los eco-asentamientos para la economía, la ecología y la sociedad. El estudio se realizó dentro del trabajo de investigación del laboratorio educativo-científico de cooperación e integración de la economía regional, agricultura, desarrollo de territorios rurales de la UNIVERSIDAD agrícola estatal de Belgorod que lleva el nombre de V. Gorin, profesor supervisor asociado RV Kapinos (en el marco de el acuerdo n. ° 6.9.30 de 28 de marzo de 2018) en el marco de la concesión interna de la UNIVERSIDAD agrícola estatal de Belgorod (orden n. ° 202-3 del 18.04.19).

Palabras clave: Economía regional, eco-asentamientos, economía, ecología, definición, clasificación de fincas, principios de eco-asentamientos.

Introduction

The concept of regional economy, despite what was proposed in the middle of the last century, is still in the process of its final formation.

By regional economy can be understood:

- 1) Part of the territorial (local, regional) economy – the economy of the village, town, city.
- 2) Part of the national economy-the economy of the region, the Republic, the land.
- 3) Part of the world economy – the national economy.

But "region" we can allocate not only on territorial coverage, but also by degree of influence on:

- Other economic entities;
 - On all society (society):
- 1) Points of active (intense) influence;
 - 2) Points of passive (short-term, intermittent) influence;
 - 3) Indifferent point – have no effect.

By degree of difficulty:

- 1) Simple regions;
- 2) Regions-conglomerates.

From the point of view of the ecological situation:

- 1) Ecologically clean regions.
- 2) Moderately polluted regions.
- 3) The Regions most dangerous to human life.

In terms of environmental impact:

- 1) Regions with low environmental impact.
- 2) Regions with an average degree of environmental impact.
- 3) Regions with a high degree of environmental impact.

By the degree of influence on public policy:

- 1) Regions that determine state policy;
- 2) Regions-lobbyists of local interests;
- 3) Regions that are politically indifferent.

In terms of growth rates:

- 1) The most developed regional economies;

- 2) Regressive regions;
- 3) Stagnant regions.

At the same time, eco-settlements can operate within any of the following types of regional economy: at the village level, the town, even within the city, often acting as a backbone of the settlement; both within the region with a growing economy, and in conditions of stagnating and even regressing regions.

Latest research and publications analysis

W. Isard (1952, 1956, 1960, 1971, 1975, 1979, 1986, 1988, 1992) the concept of "regional economy" is introduced and an attempt is made to show that the regional economy is a deeply integrated entity, including an economy based on demographic and social changes, and a society based on economic transformations. Various eco-settlements have always been an integral part of such a regional integrated economy. Among modern theorists of development of regional farms it is necessary to name widely known V. Megre (1996, 1997, 1999, 2000, 2002, 2005, 2006, 2010), who proposed the original concept of ancestral possessions. Thanks to scientific expeditions and theoretical research of associate Professor R. V. Kapinos (2014, 2015, 2018) and Academician M. Ya. Lemeshev (2013) problem ecovillages in recent years, it has become increasingly relevant in economic science.

The purpose of the research

give a clear definition of the concept of eco-settlement and determine its place in the regional economy.

Key results of the research

The very concept of eco-settlement (eco-village, ancestral estate, organic village) to date remains uncertain in economic and in General world science – despite the fact that such an economic phenomenon has existed throughout the history of mankind.

We can say that eco-settlements are agricultural settlements based on the principles of:

- 1) Ecological purity of the produced;
- 2) Minimal impact on the environment of the surrounding region;
- 3) Revival of folk crafts;
Use of natural materials, raw materials and natural fertilizers;
Minimizing the impact of technology on the soil;

Minimum use of technical devices in everyday life;
Religious ideology that unites a group of settlers;
Maximizing collective labor;
Maximization of collective property.

However, not in every eco-village we can find all the signs listed by us: in some eco-villages there is no or very little collective property, collective labor, folk crafts, while the technique can be widely used both in the economy and in everyday life. Among the characteristic features of almost all eco-villages can be identified:

- 1) Environmental cleanliness of products, products and services;
- 2) Striving for maximum minimization of the impact on the environment;
- 3) Confessional ideology, forming a team of like-minded people.

Classifying eco-settlements from the point of view of ideology, it is possible to distinguish:

1. Ideological – a classic example-Tolstoy community, all economic life which was based on the ideas of Leo Tolstoy. In the last century were extremely common around the world – from Siberia to Japan, from the United States to South Africa.
2. Religious-monasteries, old believer communities. Some of the old believer farms have existed for two or three hundred years continuously, some of the monastery farms for 1,000 years or more.
3. Political – the kibbutzim. To this day, more than a hundred years, remain the most important economic form of Israel.
4. Cultural – ancestral homes Megre.

At the same time, any of these forms of management can be quite, and in some cases, extremely stable. It is noteworthy how the economy, based on artistic fiction – the image of Anastasia Megre – can be durable, existing for decades, and every year expanding the number of members and spreading around the world. This economic sustainability is explained by:

- 1) The reality of the described situations.
- 2) The truth of the doctrine that can positively transform society.
- 3) The reality of prototypes (Anastasia is a collective image of real people living in maximum proximity to the wild).

- 4) The personal charisma of the author of the idea – the charm of a thinker.
- 5) The embodiment of the author of his ideas in his personal life.

In the modern Russian economy, there is a tendency to believe that eco-movement originated and developed to the greatest extent in agriculture in Western Europe and North America.

In fact, the entire thousand-year history of the development of agriculture in Russia, and then Russia was based on the principles of environmentally friendly, organic farming.

It is necessary to pay special attention to stimulating the growth of eco-settlements in the Belgorod region as an agricultural region. We recommend:

- 1) Create a map of eco-settlements of Belgorod region;
- 2) Continue scientific expeditions to eco-settlements organized on the basis of the faculty of Economics of Belgorod state UNIVERSITY named after V. Ya. Gorin;
- 3) To provide real financial support to the program of development of patrimonial farms;
- 4) To develop cooperation between eco-settlements;
- 5) To deepen the integration of UNITS "Agrotechnopark" a and eco-settlements of the region.

It is necessary to organize a large-scale expedition to study the experience of organic farming of eco-villages of the Belgorod region and other regions of the black earth region of the Russian Federation, and use the information for the development of the regional economy.

Certain developments in this area already exist. In June 2018, the group of students of Belgorod state UNIVERSITY scientific guidance of associate Professor of Department of economic theory and Economics of AIC Kapinos Roman Valerevich (Kapinos, 2014, 2018) researched the most developed eco-village in the Belgorod

region, located on the farm HREM'yache - Korenskie sources. The results showed that the following organizational and economic principles should be used in the experience of other eco-villages and rural settlements in General:

1. The presence of an initiative group, the "ideological core", initially organizing the settlement and then actively promoting information about it on the Internet. The economic organization of an ecological settlement, usually built either in remote areas or in virgin forests, is impossible without an active, physically and mentally prepared group, initially ready to endure difficulties and unpredictable situations. At the same time, such a group should have considerable experience in the use of modern social networks and computer technologies in General.
2. Partnerships with local authorities. Eco-settlement for its rapid development should not be locked in itself, but try to immediately, at the initial stage, to build cooperation with the local authorities.
3. The existence of the initial skills and knowledge necessary for occupations in agriculture. The most important principle for eco-settlers is the availability of inclinations, skills, knowledge and, most importantly, the desire to engage in physically difficult, especially in the initial period, agriculture.
4. Common ideology, ethical and traditional attitudes among all settlers. The experience of eco-settlements in other countries shows that without a common worldview it is impossible to organize an effective, long-term economy.

How wide is the potential for future eco-settlements of the Belgorod region (currently there are 21 in the region), can be judged by our survey (table. 4). The survey was conducted in 2018-2019 in 3 Universities of the Belgorod region. The number of respondents participating in the survey - 300 people.

Table 1. Results of the study of the attitude of modern Russian youth to development eco-villages of Russia, in%, 2018-19

Groups	need eco-village in Belogorye is it	Possible to implement the project of the academician M. Y. Lemeshev about 100 thousand eco-villages in Russia	Should the eco-villages of Russia to be		
			Orthodox	not religious	pagan
1st year of NRU BelSU	100	50	35	35	30
2nd year masters students of the Belgorod GAU	100	57	57	43	0
2 year correspondence students of the Belgorod state agricultural UNIVERSITY	83	0	33	67	0
1 course BDSM	69	38	56	13	0
On average, the groups	88	36	45	40	8

Source: compiled by the author.

Eco-settlements with their further wide spread and strong state support may well solve most of the long-standing economic, environmental,

social and cultural problems of Russia and all mankind.

Table 2. Eco-settlements as a form of solving long-standing environmental and economic problems of the twentieth century

Ecological and economic problems of the twentieth century	Method of solutions
"Environmental diseases". Environmental factors form up to 25% of human pathologies (who). Among the most common in Russia environmental diseases: asthma (caused by the high content in the air, chemicals); immune-depression (in cases of poisoning with heavy metals and dioxins, peculiar inhabitants of industrial areas); "Kirishi" syndrome (Allergy caused by the high content in the air of protein-vitamin concentrates); the disease jusko (the result of high content in the body of polychlorinated biphenyls); chronic fatigue syndrome (a disease caused by	Search for environmentally friendly sources of water-this event usually begins the creation of any eco-settlement. In the future, eco-settlers are taking measures to preserve the purity of water sources. New eating habits characteristic of all eco-settlers: the transition to simple food and periodic starvation (according to German researchers From the center for joint research at the University of Kiel Christian Albrecht).

weakening of the human immune system due to deteriorating environmental conditions); a number of new diseases (symptom of "clapping foot", "yellow children").

Each human body consists on average 70% of water – but water from the source of life is increasingly turning into a life-threatening substance: today, water contains 13 thousand potentially toxic elements (who): heavy metals (lead, mercury, cadmium, zinc, Nickel, chromium) cause atherosclerosis, polyneuritis, hypertension, bone marrow damage, visual impairment; radioactive uranium, plutonium, thorium, strontium lead to cancer, genetic changes, weakened immunity, congenital defects; nitrogen and phosphorus in the human body weaken its immunity, in addition-in water utilities and artesian wells cause the growth of blue-green algae, poorly filtered and producing toxins. Pathogenic microbes that have got into the water together with sewage, cause gastroenteritis, hepatitis, myocarditis, polio and various types of intestinal disorders. Fluorine, chlorine and its compounds-bromine and chloroform, present in water, cause nephritis, hepatitis, toxicosis of pregnancy and congenital anomalies of the fetus, mutagenic effects, weakening of the immune system, damage to the reproductive functions of men and women, cancer of the internal organs.

Inflammatory bowel disease - Crohn's disease and ulcerative colitis, the reason is the imbalance between host immunity and microbes: excessive hygiene, heavy use of antibiotics, the main thing – constant access to a varied diet with a balanced, nutritious diet low in fiber disrupts the symbiotic relationship between the bacteria and organisms-owners, the bacteria begin to develop by themselves, independently of man, microbes

switch from human metabolites for a more luxurious menu of foods of the human diet, thereby avoiding interaction with the host organism; excessive nutrition of bacteria contributes to their rapid growth

70-75 thousand microparticles of plastic on average swallows each person for one year (staff of the University of Victoria, Canada).

Microplastic-the remains of products, under the influence of the sun, air and water disintegrated into tiny fibers.

Mass production of plastics began in the 1940s, and its pace is growing exponentially. Residents of the United States and other economically developed countries annually only drink 39-52 thousand microparticles of plastic, not counting plastic particles inhaled from the air. It is assumed that toxic substances enter the body through plastic, and the smallest particles can enter the circulatory system, lymph nodes and reach the liver. At the same time Russia more buys plastic waste abroad in 2017 to \$16.3 million in 2018 to \$20.3 million But only for the first half, 2019, the year Russia increased its imports of plastic waste by 41% — is conducted transactions on USD 12.6 million.

Cotton fields account for about 10% of all pesticides used in the world and about 25% of all insecticides. Chemicals in the cotton fields: the orthophosphate, trifluralin, toxaphene, methamidophos highly toxic.

Cotton processing also uses chemicals that contaminate soil, air and surface water. 55% of the world's cotton is grown from GMO seeds. When the fiber is bleached, toxic by-products are released into the environment. According to the WWF world wildlife Fund, the production of one kilogram of raw materials takes from 7,000 to 29,000 liters of water – it is the excessive exploitation of water for cotton cultivation that has become the

Transition to clay and glass ware of own production (the city of the Sun, p. Buddha in the Kharkiv region).

Organic cotton-0.76% of the total, grown in 22 countries, among the leaders-Turkey, Syria, China, USA, Egypt. As fertilizer – organic, to repel insects used garlic, chili and soap, to remove weeds used hand weeding, cotton is harvested by hand. Crop rotation is used: the first year the fields are sown with cotton and peanuts or chickpeas, the second year with vegetables, wheat and corn. Watering-drip, right under the root.

Firms: C&A has sold over 100 million garments (2013) from organic cotton, Levi's has released a collection of environmental jeans "Levi's Eco" (2008).

main cause of the disappearance of the Aral sea.

The list of cities with the dirtiest atmosphere, published in July 2019 by Roshydromet and the Ministry of natural resources, included more than 20 cities of Russia, in which a total of 5.1 million people live and there are large industrial centers. The largest volume of emissions from stationary sources of pollution was recorded in Siberia (30.6% of the all-Russian index), the lowest volume — in the North Caucasus Federal district (0.9%). From mobile sources most emissions in the Central part of Russia (25.2%), the least — in the Caucasus and the far East. Cities with the most polluted air in 2018 are recognized: Norilsk, Novokuznetsk, Magnitogorsk, Cherepovets, Abakan, Angarsk, Barnaul, Bratsk, Zima, Irkutsk, Iskitim, Krasnoyarsk, Kyzyl, Lesosibirsk, Minusinsk, Petrovsk-Zabaykal'skiy, Kostroma, Vologda, Ulan-Ude, Usolye-Sibirskoye, Cheremkhovo, Moscow, Chita, Novosibirsk. Iskitim and Abakan were included in this list for the first time in 2019. In addition, the list of cities with the most polluted soil included the settlements of Primorye, Novgorod region and St. Petersburg. The cities of Chelyabinsk and Kirov regions, as well as Sverdlovsk region, Krasnoyarsk region, Transbaikalia, North Ossetia are recognized as problematic.

Most eco-settlements are settlements with a population of 50-100 people, with a lack of large-scale industry and a focus on small innovative enterprises (kibbutzim) and folk crafts (ancestral estates).

Source: compiled by the author

Conclusions

On the basis of existing agricultural trends it is possible to speak about high degree of probability to the middle of the XXI century scenario, A. A. V. Chayanov on the decline of cities and the growth of the size and influence of rural communities of modern type-eco-settlements:

1. The food problem in connection with the steady growth of the World's population will only worsen, expressed in the need:
 - a) Increasing the quantity of food;
 - b) Food quality growth;
 - c) Reduction of time and Finance for their production.

At the same time, the food problem, as rightly noted by the rector of Belgorod state

UNIVERSITY. V. Gorin, Professor A. V. Tur'yanskij (2014) and Professor S. M. Yagutkin (2017), "in varying degrees, affects every country in the world".

2. The problem of ecological purity of food production – inextricably linked to the global food problem will be constantly aggravated.

At the same time, such a strategically important agricultural organizations of the eco-village Korenskii springs on the farm HREM'yache, will contribute to the prosperity of the whole countryside, carrying out in practice the ideal of organic farming and environmentally friendly.

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