

ISSN 1817-7204(Print)

ISSN 1817-7239(Online)

UDC 338.43:316.334.55(477)

<https://doi.org/10.29235/1817-7204-2019-57-3-277-285>

Received 02.05.2019

Поступила в редакцию 02.05.2019

**A. S. Danylenko, T. V. Sokolska, P. I. Yukhymenko, V. I. Lobunets***Bila Tserkva National Agrarian University, Bila Tserkva, Ukraine***MULTIFUNCTIONAL AGRICULTURE AND ITS EFFECT ON RURAL TERRITORIES DEVELOPMENT**

**Abstract:** The paper deals with the main conceptual approaches to the definition of agriculture multifunctionality, indicates positive changes towards multifunctionality of rural territories in Ukraine and substantiates the main restraining factors such as low level of innovation activity of economic entities operating in this sphere, related sectors of economy, moral ageing of social and communal infrastructure of the village, lack of relations with universities which are the main generators of knowledge. The paper proposes to establish the Regional Coordination Centers for Rural Development in the structure of the Agro-industrial Development Departments. The main function of the centers should be obtaining multifunctional agriculture due to interaction of enterprises and the state shifting the emphasis from production to rural development. It is noted that the establishment of such centers in the conditions of decentralization will allow ensuring interaction of enterprises, state and population and implementing properly multifunctionality of agriculture. It is proved that forming the conceptual foundations of rural development, it should be borne in mind that sustainable multifunctional development should be based on effective rural economy, extended reproduction of human capital and productive employment of rural population, on improvement of people's quality of life, rational use of natural resources and their reproduction.

**Keywords:** agriculture, multifunctionality, food security, international trade, rural territories, agrarian policy, innovation activity, investment, rural development, regional coordination center

**For citation:** Danylenko A.S., Sokolska T.V., Yukhymenko P.I., Lobunets V.I. Multifunctional agriculture and its effect on rural territories development. *Vesti Natsyonal'nyy akademii nauk Belarusi. Seryya agrarnykh nauk = Proceedings of the National Academy of Sciences of Belarus. Agrarian series*, 2019, vol. 57, no 3, pp. 277-285. <https://doi.org/10.29235/1817-7204-2019-57-3-277-285>

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**Аннотация:** В статье рассматриваются основные концептуальные подходы к определению многофункциональности сельского хозяйства, констатированы положительные сдвиги в направлении многофункциональности сельских территорий в Украине и обоснованы основные сдерживающие факторы, среди которых: низкий уровень инновационной активности субъектов хозяйствования, работающих в этой сфере и смежных с ней секторах экономики; моральное старение социальной и коммунальной инфраструктуры сельской местности; отсутствие связи с университетами – основными генераторами знаний. Предложено создание в структуре департаментов агропромышленного развития региональных координационных центров развития села, основной функцией которых должно стать достижение многофункциональности сельского хозяйства путем взаимодействия предприятий и государства со смещением акцента от производственной функции к сельскому развитию. Отмечено, что в условиях децентрализации создание таких центров позволит обеспечить взаимодействие предприятий, государства и населения и в должной мере реализовать многофункциональность сельского хозяйства. Доказано, что при формировании концептуальных основ развития сельских территорий необходимо иметь в виду, что устойчивое многофункциональное их развитие должно быть основано на эффективной сельской экономике, расширенном воспроизводстве человеческого капитала и продуктивной занятости сельского населения, повышении уровня и качества его жизни, рациональном использовании и воспроизводстве природных ресурсов.

**Ключевые слова:** сельское хозяйство, многофункциональность, продовольственная безопасность, международная торговля, сельские территории, аграрная политика, инновационная активность, инвестиционная деятельность, сельское развитие, региональный координационный центр

**Для цитирования:** Даниленко, А. С. Многофункциональное сельское хозяйство и его влияние на развитие сельских территорий / А. С. Даниленко, Т. В. Сокольская, П. И. Юхименко, В. И. Лобунец // Вест. Нац. акад. навук Беларусі. Сер. аграр. навук. – 2019. – Т. 57, № 3. – С. 277–285. <https://doi.org/10.29235/1817-7204-2019-57-3-277-285>

**Introduction.** The rationale for multifunctionality of agricultural activity has recently become one of the most significant innovations in agrarian economy. Despite the fact that the theory of multifunctionality appeared not so long ago, agriculture has always been multifunctional, since being the most important component of the biosphere, it is closely connected with natural ecosystems, and its multifunctionality contributes to the ecological balance of the global ecosystem.

Taking into account that this issue is one of the most topical in the scientific community as well as among the authorities and agribusiness in 2008, the Concept of multifunctional agriculture was presented by the Organization for Economic Cooperation and Development [1]. It is the Concept that recognizes agriculture as a specific area of economic activity, unique in its various social outcomes. In the process of agricultural production not only food products and food for animals, fibers, agrofuels, medicinal and decorative products are manufactured, but also public goods of non-commercial nature, such as ecological services, landscapes, cultural heritage, etc. They can be used as diverse spheres of economic activity in rural areas, turning into specific types of local assets, the capitalization of which creates a means of subsistence for rural communities outside the agricultural production [2].

During the Uruguay Round, a number of countries stressed that recognition of multifunctional agriculture in the process of reforming agrarian policy would contribute to the establishment of an appropriate model for the development of rural areas. Rural areas are engaged not only in agricultural production but are used as a source of public goods and have an important economic, environmental and social effect [3]. This institutional recognition and implementation of the multifunctional role of agriculture (productive and non-productive) creates favorable conditions for rural entrepreneurship, which is the factor of rural economic development.

**Research methods.** The methodological basis of the research comprises general scientific and special methods: dialectical method of cognition, method of system analysis of theoretical and methodological principles of agriculture, multifunctionality theory development. The study of the issue was carried out on the basis of multidimensional study of the mass phenomena of rural areas functioning and development in Ukraine and in the world, on application of a wide range of theoretical methods of cognition (monographic, graphic, analysis, synthesis, induction, deduction, analogy, abstraction, concretization, formalization, observation, experiment, etc.).

**Research results.** A study of literature sources on agriculture multifunctionality shows that this idea has both supporters and opponents (inconsistency is mainly related to the international division of labor and to international trade) [4, 5].

The supporters of agriculture multifunctionality concept prove that due to the specific nature of agriculture, which differs from other sectors of economy, external effects that have economic, social, ecological, cultural and political significance arise in the course of the activity promoting rural communities development, people welfare etc.

On the one hand, agriculture is a fundamental branch for rural areas existence and development, since it forms both rural population employment and income level to a considerable extent, it reflects the course of demographic process in the countryside, ensures the development of the countryside and its settlement as well as the preservation of ecological and landscape characteristics of the territory. On the other hand, it plays a crucial role in the development of the national economy as a whole due to ensuring the fulfillment of geopolitical function, preserving its territorial integrity and national identity. This is predetermined by its importance for the society survival.

The overwhelming majority of countries with the leading role of agriculture in their economy support multifunctional development of agriculture and motivate this with variety of its functions, including non-productive factors [6].

The opponents of the multifunctionality concept claim that agricultural subsidies in their current state, international trade and relevant political ideas do not stimulate the transition to fair trade in agricultural products and food or to the systems for the sustainable food production and land cultivation. In their opinion, it leads to negative consequences for natural resources and agroecology as well as for human health and nutrition.

In international debate two main approaches to multifunctional agriculture are singled out. The first one is the approach to agricultural and trade policy. It was discussed within the framework of the WTO

and the OECD. The second one is the sustainable development format which was discussed within the FAO framework [7, 8].

The OECD/WTO approach is based on three central elements: environmental protection, food security and viability (profitability) of rural areas (including economic and social functions).

The OECD and WTO principles mainly focus on multifunctionality impact on agricultural trade and on domestic agricultural policies. In particular, they focus on the development of tools that can be used to support and enhance the multifunctional nature of agriculture [9, 10].

In 1999, FAO introduced the Multifunctional Character of Agriculture and Land (MFCAL) concept, which was further developed into the SARD concept (“Sustainable Agriculture and Rural Development”). The concept aimed at promoting the sustainable development through running agricultural practices that are environmentally friendly, technically acceptable, economic and social [11, 12].

European Union defines multifunctional agriculture through the “European model of agriculture”, which bears a strategic function, stable (sustainable) management of rural territories and satisfaction of the needs of citizens [13]. At the same time, the term multifunctionality synthesizes the link between sustainable agriculture, food security, territorial balance, landscape and environment preservation as well as food safety.

Being a tool for the rural village’s territorial potential development and its sustainability, multifunctional agriculture is reflected in the CAP (The Common Agricultural Policy) reform 2014-2020 with rural areas, effective management of the territory and preservation of the cultural heritage as topical issues [14].

Socio-economic literature gives different definitions of the concept of multifunctionality [5, 15]. The feature matrix of different interpretations is that multifunctional activities contribute to increasing the autonomy of agrarian farms and the rational use of available resources.

Some authors [16, 17] emphasize that multifunctional agriculture is a prerequisite for sustainable agriculture and the concept of sustainability primarily focuses on preserving resources and meeting the needs of present generations and causes no harm to future generations [18]. This implies that multifunctionality is basically a result-oriented concept. It is based on various agricultural activities for the territory development and can be a tool for the concrete achievement of the goals of sustainable development [19].

The views of some countries on multifunctional agriculture and the relevant political steps to support and enhance its multifunctional nature are presented in Table 1 [20].

Table 1. Elements of multifunctional agriculture in some countries

Country	Elements of multifunctional agriculture in some countries				
	Food security	Environment protection	Income (rural territories profitability)	Animals protection	Food safety
EU	+	+++	+++	++	++
Norway	+++	+++	+++	?	?
USA	+	+++	++	?	?
Japan	+++	+++	+++	?	+
Switzerland	+++	+++	+++	?	+
Australia	–	+++	+	?	?

\*Support for an element or policy steps from weak (+) to strong (+++) support. Resistance to an element or an event from a weak (–) to a strong (–) resistance. The country has no position for or against an element or policy step (?).

The table shows that the EU pays significant attention to food security, farms and animals welfare in the concept of multifunctional agriculture, since they make a fundamental basis of the European model of agriculture and are considered to be the future way of rural development. It also reflects the challenges of ageing labor on farms and the outflow of the youth from rural areas, which is a serious challenge for the sustainability of the European rural economy.

It is obvious that environmental problems and economic benefits are the most supported and least contradictory elements of multifunctional agriculture. For Norway, the USA and Australia, food safety is a somewhat controversial element of multifunctionality.

In general, countries view food security as legitimate non-trading activities, but there are conflicting views on the importance of domestic food production to ensure national food security. For some countries (especially Japan and Norway) domestic food production is to some extent important for national food security, while some other countries regard food security as a common international trade product rather than a joint product of domestic production. In addition, some countries have questioned the public aspect of food security (Table 2) [20].

T a b l e 2. Political tools enhancing the multifunctional nature of agriculture

Country	Political tools enhancing the multifunctional nature of agriculture			
	Green box	Production support	Prices support	labelling
EU	++	++	?	+
Norway	+	+++	+	?
USA	+++	--	---	?
Japan	++	+++	?	?
Switzerland	++	+	?	+
Australia	+++	---	---	?

\* Support for an element or policy steps from weak (+) to strong (+++) support. Resistance to an element or an event from a weak (–) to a strong (– –) resistance. The country has no position for or against an element or policy step (?).

On the whole, the analysis of the EU common agricultural policy on multifunctionality shows that it has undergone a series of changes related to both internal pressure (the need to reduce the resource costs and environmental protection) and external requirements [13]. The external requirements were mainly directed against the high use of export subsidies and the protection of the EU's borders and markets.

Despite the fact that agriculture in Europe is undergoing a process of change at the economic, social, political, ecological and cultural levels, it must invariably meet rapidly changing needs and expectations of European countries and society [21].

In the process of integrated rural development, multifunctionality in the EU involves making decisions on the size of an effective group of farms, which can take place through “broadening”, “deepening” or “re-grounding” [22]. The “expansion” step involves the development of new non-agricultural activities, including agrotourism, support and protection of rural landscapes, diversification of activities in the countryside. Social economy as one of the types of the “expansion” deserves attention. It includes health and treatment services, education and counseling, rehabilitation and social sphere.

Social economy contributes to the well-being and social integration of the disabled through agricultural products manufacture and provides sympathy and mutual assistance. Being engaged in a social farm (social agriculture), people recover contacts with the environment and the nature, which contributes to their health improvement, facilitates their learning, increases self-esteem and mediates their participation in public life.

Consequently, generalization of conceptual approaches to the definition of agriculture multifunctionality makes it possible to perceive it as an economic activity, which in addition to its basic function of food production, promotes the welfare of society through the production of non-food products and the creation of non-agricultural workplaces in the countryside as well as the environment protection. In spite of different interpretations of the new term “multifunctionality”, the environmental issues, food security and rural areas viability (including economic and social functions) are three most frequently cited elements and functions of multifunctional agriculture. Multifunctionality allows changing the traditional production orientation of agriculture to new types of activities, and it is a concept for forming a village development strategy, in particular, for supporting non-agricultural activities of its inhabitants [13, 16]. Local business makes the basis for multifunctional development; it is aimed, on the one hand, at various forms of capital attraction, expansion of agrarian activities and the development of other or new

agricultural areas of production, and, on the other hand, at the establishment of business not related to the agrarian sector of the local economy [23].

The inseparability of market goods production and public goods production or the generation of positive effects by agriculture complicates the use of agriculture support tools that do not affect its commercial results. But non-market effects of agriculture are often very significant and sometimes they are even more important than market ones [24]. This means that agriculture should be considered as a complex dynamic natural socio-economic system entrusted with a number of basic functions and conditioning its emergence (Table 3).

**Table 3. Differentiation of the emergence effect manifestations in agriculture multifunctionality**

Function of agriculture	Emergence effect manifestations		
	General	Consumer	Producer
Basic	Harmonization of social, economic and national control of rural areas	Providing the necessary conditions for balanced development of society	Conditions for successful business activity
Social	Social development of rural population	Social protection	Preservation and development of labor resources
Economic	Sustainable development of agrarian economy	Meeting the demand for agricultural products	Conditions for successful business activities
Agrifood	Sustainable provision of high-quality food products	Food security	Guaranteed distribution of food products
Agricultural raw materials	Flexible and sustainable raw materials provision for industry	Food security	Food industry development
Ecological	Preservation and development of agro-landscapes	Proper living conditions, ecological compatibility of food products	Ecologization of production
Integrating	Development of the proper structure of agroindustrial complex	Food security	Provision of the systemic nature of the agro-industrial complex functioning

Source: drawn up by the authors.

Thus, multifunctionality contributes to the development of agriculture, mainly through its mechanization, modernization and implementation of innovative technologies. In addition, non-agricultural function of the village is currently an important condition for its social security. Not only economic, social and cultural, but also environmental views speak well for this form of development [25]. In particular, the agenda issues of the need to establish effective land, water and air resources management, to follow the requirements for food production safety and food security arise.

The study of the possibilities to achieve agriculture multifunctionality in Ukraine has revealed that the introduction of the power decentralization reform results in a significant revival of the development of non-agricultural activities in rural areas. There is a favorable precondition for the use of tourist and recreational potential of rural areas. Taking into account that 15 % of the territory of Ukraine consists of resorts, mountain and coastal landscapes, the Dniper banks green areas [26], which are mainly concentrated in the rural areas and have a unique historical and cultural heritage, rural, green tourism, ecotourism and agrarian tourism are becoming particularly popular. Rural tourism is considered to be a type of entrepreneurial activity and includes an individual peasant farm management, organization of various forms of recreation in a private manor house with a wide range of opportunities to use the nature as well as material and cultural potential of the region [27]. An important feature is that this type of entrepreneurship can be carried out by villagers who are diversified into a new type of business in order to improve their material security and are given the opportunity to sell their products on the site. After appropriate processing and preparation these products are not regarded as agricultural raw materials, but as ready-made food. N. Ye. Kudla [28] notes that those families who host tourists improve the crops structure on a farm taking into account the needs of the guests, expanding the range of vegetable crops, fruit trees, berries, etc.; they develop and diversify farm animal products, grow greenhouse crops, and



are engaged in apiculture and fishing. Moreover, owners of shops, gas stations, craftsmen who provide their services to tourists gain profit from agro-tourism besides farm owners. In addition, such activities promote the countryside, develop its cultural potential through restoring partly forgotten traditions of a certain region. This includes souvenir and handicraft production, food production, providing various services, work on the landscapes improvement, etc. At the same time, it is good that the income from agro-tourism activities is mainly reinvested in the economic development and expansion of the range of provided services.

Small milk processing and bakery enterprises, forest berries and mushrooms, wood processing are promising areas for small business development in rural areas.

Development of folk crafts, establishment of tailoring companies, providing interregional road transport services (recreation facilities, hot food, vehicles refueling and current repair, etc.) are becoming more popular nowadays. In the Carpathian region, folk crafts are quite developed (wood products, weaving, pottery, knitting, embroidery as well as sewing, jewelry, stone, leather, wool crafts).

While pointing out significant positive aspects to multifunctionality of rural areas in general, the role and place of decentralization and local self-governance should be underlined. However, despite the fact that the Law of Ukraine “On Stimulating the Regions Development” [29] provides the foundations for cooperation between public authorities and local self-governance, the mechanism for coordinating activities of central and local executive authorities and local self-governance bodies in stimulating the development of regions and implementation of regional development strategies has been worked out. The existing levers of state governance of regional development haven’t been able to overcome yet the contradiction between the need to finance current expenditures and costs for achieving strategic goals.

Agricultural production is currently making the basis of agrarian policy in Ukraine, while non-agricultural activities remain neglected. In particular, the country does not have a holistic, scientifically based system of rural development management that meets new economic requirements and covers all levels of the management hierarchy (national, regional, sub-regional and local).

Low level of business entities innovative activity operating in this sphere and related sectors of economy have been the most acute problems of the development of agriculture multifunctionality in recent years. The problem is aggravated by the actual lack of innovative non-agricultural enterprises in rural areas as well as by deterioration in social and communal infrastructure of the village. This leads to the reduction in investments in rural development, loss of resource and human capacity of rural areas, especially in the regions with specific natural and climatic conditions and shortage of arable land.

In the studied rural settlements of Uman and Korsun-Shevchenkivsky district of Cherkasy region accounting less than 500 inhabitants, there are no any hints of non-agricultural activities. And although rural tourism is spreading in the Cherkasy region, the number of people is small in the rural settlements.

A completely different picture can be observed in the villages with more than 500 inhabitants. There are mills, bakers, cafes, consumer services centers in the villages. There is a transfer of small businesses to the production of furniture, roofing materials, and interconnect structures in the villages located near regional centers. Also, non-agricultural businesses provide up to 5 % of the community budget coverage in these settlements. This amount is very small and it shows that the resources of rural areas are not used to their full extent.

We believe that solution to the problem concerns the creation of new institutional forms in the agricultural sector, i.e. various agricultural organizations operating on the basis of collaboration, integration and diversification. Today, a network of powerful university centers has already been established in Ukraine, but unfortunately, their cooperation and interaction with communities have not been achieved yet. However, they play a key role in knowledge creation and transferring it to innovative products. Universities need not only to train professionals, but share knowledge, adhere to creative ideas and cooperate on projects that would have practical application in rural areas. And such interaction should be promoted by public private partnership. The mechanism of collaboration between public authorities, local authorities and private sector in the form of public and private partnership allows ensuring coordination and taking into account the mutual interests of the state and business in the implementation of joint innovation and investment projects, target purpose sectorial programs as well as intensifying investment activities towards the multifunctional development of agriculture, etc.

Cooperation on agrarian clusters development is one of the most promising forms of interaction between the government and business in the agrarian sector. It ensures increased competitiveness and profitability of products for entrepreneurs on the basis of specialization and concentration of production, attraction of innovative developments of research institutions, formation of closed production cycles. Stable socio-economic development of a region is achieved due to the arrangement of rural areas with modern agro-service, agro-industrial, residential and cultural zones (in the form of agro-sites) at the state level [30].

In our opinion, it would be reasonable to establish Regional Coordination Centers for Rural Development (RCCRD) within the Departments of agro-industrial development. Their main function should be obtaining multifunctional agriculture due to the interaction of enterprises and the state shifting the emphasis from production to rural development. The algorithm for setting up such centers involves the following stages: studying particular characteristics of a region; using national and foreign practical experience in non-agricultural activities development, determining the key areas of production activities diversification.

The center can effectively assess the need for investing in a particular social object or take an active part in interacting with villagers. Combining the effort of enterprises and the state, the RCCRD will be able to coordinate their activities in a proper way. Furthermore, developing production, market and social infrastructure such centers should place much emphasis on training and innovations which are seen as a bridge between universities and communities.

The tasks of the RCCRD would include finding investors, attracting specialists from different scientific fields as well as active cooperation with institutes engaged in developing new technologies for agriculture.

**Conclusion.** Rural development in Ukraine is currently at the stage of institutional formation, and the existing market relations somewhat inhibit agriculture multifunctionality, not because its importance is underestimated, but because the government and stakeholders engaged in different economic sectors have not developed an effective mechanism of interaction. Decentralization reform has become a significant impetus for the formation of territorial communities. It is the institutional formalizing of decentralization that will enable to create effective regional development focal points. The new institutional environment will enable to ensure the interaction of enterprises, the state and the population to use non-food effects of rural development at a socially desirable level, and to implement the multifunctionality of agriculture in a proper way.

It's necessary to underline that in the process of formation of conceptual foundations for the rural areas development sustainable multi-functional development should be based on effective rural economy, increased reproduction of human capital and productive employment of rural population, raising the level and quality of its life, rational use and reproduction of natural resources. This multifaceted nature requires interaction and collaboration of all the stakeholders while formulating national policies for multifunctional agriculture. It's a complex task requiring further research and analysis of the development of rural areas "social integration" policy.

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