SCIENTIFIC ACHIEVEMENTS IN AGRICULTURAL ENGINEERING, AGRONOMY AND VETERINARY MEDICINE

PERSPECTIVES OF INFRASTRUCTURE SUPPORT OF AGRICULTURAL PRODUCTION AND COMPLEX DEVELOPMENT OF RURAL TERRITORIES

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ABSTRACT

In modern conditions, infrastructure is an important factor in intensifying the economy of agriculture and the development of rural areas. Management of the development of infrastructure services is an important part of the overall problem of managing production efficiency.

On the basis of the studied literature, the essence of the infrastructure was defined, its place and role in ensuring the effective functioning of agricultural enterprises and the development of rural areas.

1. INTRODUCTION

Under the new conditions of management, agrarian production and its infrastructure operate in an aggressive competitive environment, in the context of their diverse motivational behavior, which causes the problem of ensuring the effectiveness of interaction between the manufacturing sector and the infrastructure. in practice, economic relations between them are realized through a system of technical and technological support and provision of production, marketing and information and consulting services for agricultural production.

2. ANALYSIS OF LAST PUBLICATIONS AND RESEARCHES

The methodological foundations of the formation of the infrastructure of agricultural production and its impact on the efficiency of agricultural enterprises and the development of rural areas are based on the generalized theoretical positions of scientific developments of the scientists M. Demyanenko, S. Dusanovsky, R. Iochimsen, O. Krisalny, I. Lukinova, M. Malika, P. Mosiyuka, P. Sabluk, A. Hirschman, I. Chernyavsky, O. Shpichak, V. Yurchyshyn and other scientists. These scientists created a solid theoretical foundation of this problem, solved many of its practical aspects.

3. PURPOSE OF RESEARCH

The aim of the research is to substantiate theoretical and methodological principles and to develop practical recommendations for infrastructure support for the effective functioning of agricultural enterprises and integrated development of rural territories.

4. RESULTS

Infrastructure as an economic category reflects economic relations in the process of activities of various objects of both productive and non-productive nature, functioning of which is aimed at creating a set of conditions for the development of various industries, ensuring living standards, conditions of employment, cultural and intellectual development of personality [3].

The infrastructure includes those objects whose functioning creates the general conditions for the development of social production and social activities. as social development, this set of objects is constantly changing and supplemented, as the role of general conditions of activity increases [1].

Proceeding from the current realities of agricultural production and rural areas, we consider that in the agricultural sector, infrastructure is a set of enterprises, institutions and services that, by performing specific functions for each function, are not limited only to the servicing of agricultural enterprises, but also ensure the development of rural areas within the limits of agricultural land use. in the current conditions, rural areas are considered not only as a place of residence for about a third of the population of Ukraine, but also as an integral part of the country's agrarian sector.

In the market conditions, the need for intensive development of infrastructure sectors is dictated by the qualitatively new state of the agro-industrial sectors, which requires clear and uninterrupted logistics, technical and transport services, and scientific support. the need for accelerated development of infrastructure is determined primarily by the fact that its level of development lags behind the level of development of the main sectors of the national economy.

In modern conditions, the links of the infrastructure act as connected links between agriculture and other blocks of the agro-industrial complex, which depends not only on the development of production but also on the continuity of the food flow, the speed of supply of goods to the consumer, and the efficient use of the produced products [4].

The peculiarity of the establishment of the infrastructure is that, on the one hand, the emergence of its branches is a consequence of further deepening the division of labor, which is expressed in isolation from the main production of new industries and activities, on the other - the tendency towards the integration of branches of infrastructure with the main production is becoming more and more tangible.

In the process of service activity, the main question that determines the feasibility of its implementation is the efficiency of service of agricultural production. it can be reflected in indicators of lowering costs, reducing product losses, increasing production volumes, and so on. in this case, it is important to consider only the branches of infrastructure that have a primary (direct) impact on the production process in agriculture.

Formation of indicators of the efficiency of economic activity of agricultural enterprises is presented in Fig. 1

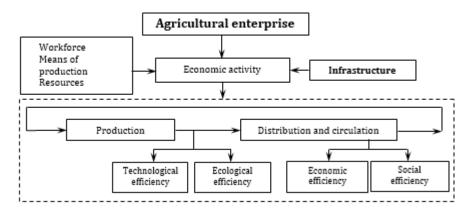


Fig. 1. Formation of efficiency of economic activity of an agricultural enterprise

Increasing the economic efficiency of production is the main problem, the major factor in the growth of agrarian enterprises in the use of limited resources. it obliges enterprises to use resources rationally and thoroughly, to produce high-quality products.

Agricultural production is a specific industry, where, at times, there are quite significant fluctuations in the volume of production due to the effects of natural factors. in addition, the characteristic feature of agricultural production in modern conditions is that the important factor in its development is the consumption of services. the development of services provided to agricultural production by serving its branches is an objective condition for the effective use of means of production, an increase in the economic potential of the entire agricultural sector of the economy. This situation requires the advance development of branches of infrastructure support, primarily selection and breeding, agrochemical services, procurement and storage sectors. the development of the sphere

of services provided to the main production service industries, is an objective condition for the effective use of means of production, increasing the economic potential of the entire agrarian sector of the economy.

Based on the analysis of the current state of infrastructure support for the functioning of agricultural producers, we consider it appropriate to allocate factors that have a destructive effect on the interaction of agrarian commodity producers and service enterprises in order to minimize their negative impact. Among these factors, it is necessary to highlight:

- imperfect mechanism of interaction between production and service enterprises;
- ineffective state regulatory policy and support of the agrarian sector;
- monopolization of channels for the promotion of products from manufacturer to consumer by numerous intermediaries.

In modern conditions, it is important to avoid disparities and disproportions in relations between agrarian commodity producers and service enterprises that provide services in many areas. This can happen when the activity of the service structures are approaching (especially the logistics system) to the interests of agriculture, as the commercial structures currently engaged in servicing agricultural enterprises are guided by the possibility of free formation of prices. at the same time, agriculture is in very difficult conditions:

- enterprises that produce material and technical resources, set prices for them, using their monopoly position;
- suppliers that are intermediaries between agriculture and industry operate exclusively on a commercial basis, freely forming prices for the provision of these services;
- processing enterprises that buy agricultural raw materials are also the overwhelming majority monopolists in , therefore they dictate agrarians the price of their products.

Organizational structures that provide services to the agrarian sector are under the influence of the established monopoly in the past regarding the consumer of services agricultural enterprises. at the same time, monopolism did not break, and intensified narrowsector economic interest, which caused distrust of agricultural producers to provide services.

As a result of such relations, the disparity of prices for material and technical resources and services increases, they grow faster than the prices for agricultural products. in this case, the normal function of the market mechanism "supply and demand" is violated, when agricultural commodity producers are not able to master the market of material and technical resources, and domestic producers gradually lose it because of the impossibility to withstand in a competitive struggle with foreign counterparts. the existing market

of material and technical means for the village does not take into account the purchasing power of agrarians, and is oriented only to profitability.

As a result of the reform, the agrarian sector had lost a significant part of fixed assets that belonged to the internal economic infrastructure (workshops, warehouses, etc.). This could be a stimulus for the growth of higher-level infrastructure services. However, there was a rejection of this opportunity and the formation of direct distrust of consumers by imposing many types of services and volumes of work, delaying service time, high cost and excessively high tariffs for work performed.

Infrastructure sectors, on the one hand, serve as means of efficient use of accumulated production potential, on the other hand - ensure continuity of flow of agricultural products from producer to consumer and elimination of losses. Practice shows that insufficient infrastructure development is a deterrent to utilizing the full potential of both direct production development and the achievement of the end result.

The role of the infrastructure sectors is also growing due to the development of new organizational and technological forms of agricultural production. General trend in the industry is agro-industrial integration on the basis of which the specialization and concentration of agricultural production are carried out. in comparison with industry, in the agricultural sector there are almost no changes in the range of products produced. Changes are mainly in their structure and quality. They are more dependent on the efficient functioning of industries, enterprises and infrastructure. During this achieves a synergistic effect (the combined impact of infrastructure on the efficiency of economic activity of agricultural enterprises).

There are a number of features of infrastructure development that stem from the seasonal nature of agricultural production. as in the production sector, industrial funds and labor in the infrastructure sectors will also operate at different levels of tension at different times. the seasonal production causes a different burden on individual infrastructure. Thus, the system of harvesting in a short period should ensure the purchase of large volumes of crop production and, as a rule, works with overload. Agrochemical service has a clear seasonal character, whereas for the services of repair and technical, logistical, veterinary and other services, the relative uniformity of their functioning is characteristic. These features are very significant and should be fully taken into account in the formation of industrial infrastructure.

It should be noted the connection of the development of infrastructure sectors with the characteristics of production in agriculture. So, products that are spoiled, require such

a level of development of the system of procurement and organizational forms of implementation that would ensure immediate sales. Unlike most types of industrial products, untimely realization of agricultural products always leads to loss of quality, partial or complete loss.

Developing business activities, the manufacturer pays much attention to technology and its improvement, increasing product quality, improving the organization of production and labor. These concerns restrict its activities in other related spheres of the market. the situation is especially complicated if the size of production does not allow to maintain their own services for the organization of sales of products, logistics, processing. in this case, the combination of production and market activity is possible provided that the services of the partners that can perform the relevant market functions are utilized. Agricultural service cooperatives should become such partners for agricultural enterprises. Their creation will allow agricultural enterprises to be liberated from functions that are not specific to them and focus on their main activities.

Servicing cooperatives are a special organizational and legal form of entrepreneurial cooperative activity. Unlike commercial organizations, it consists in the fact that the main purpose of their activities is not profit, but the satisfaction of the economic needs of their members and increase their incomes through the collective (joint) conduct of business operations. Agricultural servicing cooperatives are established in accordance with the Law of Ukraine "On Agricultural Cooperatives" [2] by combining efforts of agricultural producers.

The EU Member States, the United States, Canada and others have solved the problem of sales of peasant farm produce by supporting the establishment of their transparent supply, procurement and marketing infrastructure on the basis of cooperation and integration with trade, food processing and processing industries.

The solution of this issue in Ukraine is possible provided that the network of agricultural cooperatives is developed as an important factor in increasing the competitiveness of individual peasant and farm enterprises and individuals-agricultural commodity producers, improving their socio-economic status and expanding their self-employment. This provides comprehensive development of rural areas.

The vast majority of labor-intensive agricultural products of daily consumption (potatoes, vegetables, fruits, milk and meat) is produced in private peasant and farm enterprises and individuals-agricultural commodity producers who do not have permanent channels for the sale of such products. as a result, a significant part of the cultivated agricultural production, especially in remote rural areas, is fed to cattle or spoiled. Some

of it comes to the end consumers, but through intermediaries, whether sold by peasants in the spontaneous markets.

Creation within the district of several service cooperatives in different areas of activity is problematic and will require significant expenses of the participants to create them. Therefore, we consider it expedient to create multifunctional agricultural service cooperatives (Fig. 2).

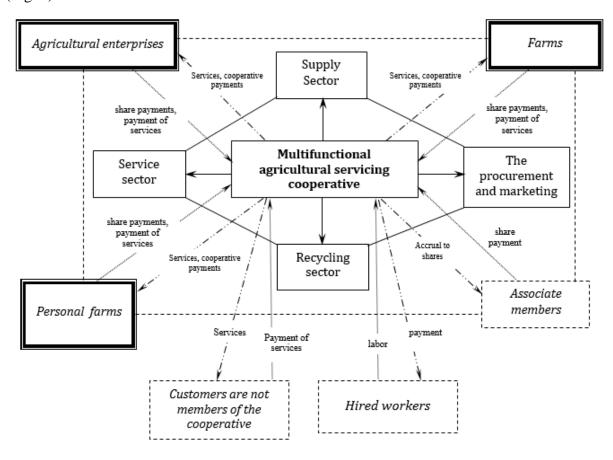


Fig. 2. the structure of a multifunctional agricultural servicing cooperative

Practice shows that in today's economic conditions, the most viable are multifunctional servicecooperatives. Diversification of business activity reduces the entrepreneurial risk of such cooperatives.

It is important to keep in mind that agricultural servicing cooperatives are a special organizational and legal form of cooperative activity. it consists in the fact that the main purpose of their activities is not profit, but the satisfaction of the economic needs of their members and increase their incomes through joint management of economic activity.

The newly created cooperative is divided into sectors of activity, each of which has its own specialization:

- service sector carries out technological, transportation, agrochemical, reclamation, repair, construction, ecological restoration works, veterinary and tribal services;
- the supply sector makes purchases and supplies of means of production, logistical and energy resources necessary for the production of agricultural products;
- procurement and marketing sector carries out procurement, storage, sale of products;
- recycling sector is engaged in the processing of agricultural raw materials (production of bakery, macaroni, vegetable, fruit and berry, meat, dairy, fish products, products and semi-finished products of flax, hemp, timber and sawdust, etc.).

The risk in the cooperative is distributed among all members jointly. the commitments to conduct the activity allow the cooperative to concentrate significant volumes of products, which allows access to more profitable markets, to purchase means of production at wholesale prices, to fully utilize the capacities of the material and technical base and the processing sector.

Agricultural producers wishing to use the services of a cooperative must become members of the cooperative. Upon joining the cooperative, each member pays the entry fee in cash in a fixed amount to the established charter to ensure its organizational activity.

As a result, agricultural producers-members of the cooperative will be able to:

obtain the necessary fuel, high-quality seeds, chemical protection products of plants, mineral fertilizers, machinery, spare parts, mixed fodders at reasonable prices from the manufacturer (supply sector);

- to receive operative agrochemical, veterinary, pedigree, repair-technical, informational and advisory services at affordable prices (service sector);
- to procure products and find profitable channels of sales of their products and sell them on favorable terms, to form commodity lots for sale through commodity exchanges (stock-marketing sector);
- -store products in warehouses in order to sell them at a more favorable price (stock-marketing sector);
- carry out processing of own raw materials (processing sector).

A promising direction for the development of a multifunctional agricultural servicing cooperative will be the creation of a processing sector (vertical integration), which will allow the processing of agricultural raw materials of the participants and sell ready-to-eat products (oil, flour, cereals, bakery, meat and dairy products, etc.).

During the creation a processing sector, a combination of agricultural and industrial production is being pursued - agro-industrial integration. it means convergence and the branches of agriculture and industry, which ensures the organic synthesis of these most important areas of material production, their harmonious socio-economic unity. These processes are developing along the ascending line: from the technology of obtaining, processing and bringing to the consumer products of agricultural origin and ending with the emergence and formation of certain production structures of agro-industrial production.

During the creation a processing sector in a multifunctional agricultural service cooperative, the agricultural-farming direction of agro-industrial integration is realized, when within the framework of the cooperative there are created workshops (mini-factories) of industrial processing of raw materials. in real life, they can be technologically interconnected or isolated.

In addition, the integration process is carried out in the inter-sectoral direction, which integrates agricultural and processing enterprises, organizations and kinds of activities of production and market infrastructure.

Particular importance when combined in a cooperative of different sectors and kinds of activities is given to a certain food specialization, which prevents territorial sprawl, excessive distance of transportation of products and raw materials, reduces the time between stages of the passage of raw materials and products, narrows the range of intermediaries. as a result, the territorial community of the raw material base is achieved, product losses are reduced, rationally loaded production capacity, reduced transport costs, expanding scope of agricultural labor.

In the framework of a multifunctional cooperative, an organic merger of agriculture, processing, marketing, supply, and agro-services is ensured, that is, a certain economic and production formation of a closed character is created. Here the technological process of obtaining the final product is due to the combination of pre-agricultural, agricultural and after-agricultural units, the fewer parts in the product path from the field to the consumer, the less losses in quantity and quality of products, lower costs and higher efficiency of production, the significance of this form of co-operation lies in the fact that the manufacture of the product ready for use is carried out here in a single technological process and arranged in the common interest.

Due to the creation of multi-functional cooperatives, real integration takes place, a single process of production of agricultural production, its processing and realization

is provided, and such composition and structure of the material and technical base, which provide comprehensive utilization of resources, of all production and economic potential, is formed regardless of their species and origin.

5. CONCLUSIONS AND PERSPECTIVES

Cooperation in today's conditions is probably the only way to bring agricultural production and rural areas to a qualitatively new level of development. Given the low solvency of the population, the lack of working capital in agricultural enterprises, and the scarcity of local and state budgets, it is cooperation that should become an affordable alternative to commercial structures in servicing agricultural producers and the population with the services they need. This will give a positive impetus to increase the efficiency of agricultural production and improve the integrated development of rural areas.

At the level of each district, such a mechanism of interaction between agricultural producers, people with infrastructure objects should be formed, which would ensure the effective functioning of production and ensure food security.

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